


ATTACHMENT 21

Spill Contingency Plan

(91 Pages)

	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 1 of 115
	Environment	Revision: For review purposes only 4	
		Document #: BAF-PH1-830-P16-0036	

Baffinland Iron Mines Corporation

DRAFT SPILL CONTINGENCY PLAN

Phase 2 Proposal Revisions – **FOR REVIEW PURPOSES ONLY**

This document provides revisions to:
Document # BAF-PH1-830-P16-0036
Rev 4
September 25, 2018

	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 2 of 115
	Environment	Revision: For review purposes only 4	
		Document #: BAF-PH1-830-P16-0036	

Baffinland Iron Mines Corporation

SPILL CONTINGENCY PLAN

BAF-PH1-830-P16-0036

Rev 4


Prepared By: Andrew Vermeer
Department: Sustainable Development
Title: Regulatory Reporting Specialist
Date: September 25, 2018
Signature:

Approved By: Tim Sewell
Department: Sustainable Development
Title: Head of Health, Safety and Environment
Date: September 25, 2018
Signature:

DOCUMENT REVISION RECORD

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 3 of 115
	Environment	Revision: For review purposes only 4	
		Document #: BAF-PH1-830-P16-0036	

Issue Date MM/DD/YY	Revision	Prepared By	Approved By	Issue Purpose
03/31/2008	1	N/A	DC	Approved for Use
03/31/2009	2	N/A	JM	Approved for Use
03/31/2010	3	N/A	JM	Approved for Use
03/31/2011	4	N/A	JM	Approved for Use
03/31/2012	D/5	AG	JM	New Document – Approved for Use
07/31/2012	6	AG	JM	Approved for Use
03/31/2013	0	AG	JM	Approved for Use (Old #)
03/31/2014	0	JM	EM	Issued for Use – BIM Number
03/16/2015	1	LW	JM	Issued for Use
03/07/2016	2	LW	JM	Issued for Use
03/30/2017	3	KB	WM	Issued for Use
09/25/2018	4	AV	TS	Issued for Use

Index of Major Changes/Modifications in Revision 4

Item No.	Description of Change	Relevant Section
1	Updated to reflect the increased fuel storage capacity at Milne Port and the operation of a 15 ML fuel tank at the Milne Port Fuel Storage Facility.	Section 7.0

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.



	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 4 of 115
	Environment	Revision: For review purposes only 4	Document #: BAF-PH1-830-P16-0036

TABLE OF CONTENTS

1	<i>Introduction</i>	<i>7</i>
1.1	Purpose and Scope	7
1.2	Approach to Spill Response.....	7
2	<i>Baffinland Policies.....</i>	<i>8</i>
2.1	Health, Safety, and Environment Policy.....	8
2.2	Sustainable Development Policy	10
3	<i>Levels of Emergency Spill Response.....</i>	<i>12</i>
4	<i>Emergency Spill Response Procedures.....</i>	<i>14</i>
4.1	Spills on Land	14
4.2	Spills on Freshwater.....	14
4.3	Spills on Snow and Ice.....	15
4.4	Wildlife Protection Procedures	16
5	<i>Disposal of Contaminated Material</i>	<i>18</i>
5.1	Milne Port Soil Landfarm and Contaminated Snow Containment Facility.....	18
6	<i>Training Requirements</i>	<i>19</i>
6.1	Qualifications	19
6.2	Training Content.....	19
6.3	Drills and Exercises	20
6.3.1	Tabletop Exercises.....	20
6.3.2	Functional Drills.....	20
6.3.3	Full-Scale Exercises.....	20
6.4	Preparation	21
7	<i>Potential Spill Analysis</i>	<i>22</i>
7.1	Fuel Spills on Land	22
7.1.1	Potential Fuel Spill Scenarios	23
7.2	Explosives Transport and Storage.....	28
7.2.1	Ammonium Nitrate Storage and Handling.....	28
7.2.2	Emulsion Storage and Handling	28

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 5 of 115
	Environment	Revision: For review purposes only 4	Document #: BAF-PH1-830-P16-0036


7.2.3	Potential Spill Scenarios Related to Explosives	30
7.3	Untreated Sewage	33
7.3.1	Potential Spills Scenarios Related to Sewage.....	33
7.4	Lubricants and Oils	35
7.4.1	Potential Spill Scenarios Related to Lubricants and Oils.....	35
8	Reporting Requirements.....	40
	Appendix A Site Layouts (Milne Port and Mine Site)	42
	Appendix B Emergency Spill Kit Supplies and Locations and Emergency Response Truck Inventory.....	45
	Appendix C MSDS Inventory.....	54
	Appendix D NT-NU Spill Report	80
	Appendix E Dyno Nobel Baffin Island Inc. – Emergency Response Assistance Plan.....	82
	Appendix F Transportation of Dangerous Goods Regulations Reporting Requirements, Guide and Form.....	83

List of Tables

Table 4-1: Emergency Contacts in Case of Spills Affecting Wildlife	17
Table 7-1: Maximum Fuel Storage Capacities for Permanent Fuel Storage Infrastructure at Project Sites	22
Table 7-2: Maximum Cumulative Quantities of Explosives and Ammonium Nitrate at Project Sites	29
Table 8-1: General Spill Reporting and Clean-up Requirements	40

List of Figures

Figure 3-1 – Emergency Spill Response Levels.....	13
---	----

	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u>	Page 6 of 115
	Environment	Revision: <u>For review purposes only</u> 4	Document #: BAF-PH1-830-P16-0036

This Plan is required for use in conjunction with Baffinland's Emergency Response Plan (BAF-PH1-830-P16-~~00070002~~). Table A provides a list of external contacts to which this Plan shall be distributed. Additional copies of this Plan may be obtained from:

Baffinland Iron Mines Corporation

2275 Upper Middle Road East, Suite 300


Oakville, ON L6H 0C3

Tel: (416) 364-8820

Fax: (416) 364-0193

Table A: External Distribution List for the Spill Contingency Plan

Department of Environment - Environmental Protection Division PO Box 1000 Station 200 Iqaluit, Nunavut X0A 0H0 Tel : (877) 212-6638, (867) 975-6000 Fax : (867) 975-6099	Department of Fisheries and Oceans Central and Arctic Region 520 Exmouth Street Sarnia, Ontario N7T 8B1 Tel : (519) 383-1813, 1-866-290-3731 Fax : (519) 464-5128
Qikiqtani Inuit Association Igluvut Building, 2 nd Floor PO Box 1340 Iqaluit, Nunavut X0A 0H0 Tel : (867) 975-8400, 1-800-667-2742 Fax : (867) 979-3238	Crown-Indigenous Relations and Northern Affairs Canada – Field Operations Division Qimugjuk Building PO Box 2200 Iqaluit, Nunavut X0A 0H0 Tel: (867) 975-4295 (Director, Lands and Field Operations: Erik Allain) Fax: (867) 979-6445
Crown-Indigenous Relations and Northern Affairs Canada – Water Resources Division Building 918 PO Box 100 Iqaluit, NU X0A 0H0 Tel: (867) 222-9278 (Manager, Water Resources: Ian Parsons) Fax: (867) 975-4585	Mittimatalik Hunters and Trappers Organization PO Box 189 Pond Inlet, Nunavut X0A 0S0 Tel : (867) 899-8856 Fax : (867) 899-8095
Nunavut Impact Review Board 29 Mitik Street PO Box 1360 Cambridge Bay, Nunavut X0B 0C0 Tel : 1-866-233-3033 Fax : (867) 983-2594, (867) 983-2574	Nunavut Water Board PO Box 119 Gjoa Haven, Nunavut X0B 1J) Tel : (867) 360-6338 Fax : (867) 360-6369
Hamlet of Pond Inlet PO Box 180 Pond Inlet, Nunavut X0A 0S0 Tel : (867) 899-8934, (867) 899-8935 Fax : (867) 899-8940	

	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u>	Page 7 of 115
	Environment	Revision: <u>For review purposes only</u> 4	Document #: BAF-PH1-830-P16-0036

1 INTRODUCTION

1.1 PURPOSE AND SCOPE

As required by Baffinland Iron Mines Corporation's (Baffinland) Type 'A' Water Licence No. 2AM-MRY1325 Amendment No. 1 ~~(Type 'A' Water Licence)~~ for the Mary River Project (Project), a Spill Contingency Plan (SCP) was developed for implementation at the Project. a review of Project Environmental Management and Monitoring Plans (EEMPs) was completed. This Spill Contingency Plan (Plan) was updated to meet the requirements of the Type 'A' Water Licence.

Further and continual modifications and revisions to this Plan shall be completed based on future work scope modifications, emergency and spill response procedures, and associated approvals. Updates to this Plan shall be completed in accordance to the terms and conditions of Baffinland's Type 'A' Water Licence, Commercial Lease with the QIA (Commercial Lease), Project Certificate No. 005 – Amendment No. 1 (Project Certificate), and any subsequent requirements which may be issued.

The purpose of this Plan is to identify the potential for an accidental release (spill) of a hazardous material to the environment (land, ice, or freshwater) throughout the lifecycle of the Project. This Plan provides spill scenarios and identifies protocols for their prevention, response to, and recovery and is required for use in conjunction with Baffinland's Emergency Response Plan (ERP; BAF-PH1-840-P16-0002).


Baffinland's ERP identifies potential environmental, health, and safety emergencies that could arise during the construction and operational phases of the Project. The ERP establishes the framework for responding to these situations and applies to all aspects of the Project. All Baffinland employees and contractors are required to comply with the requirements of the ERP.

The ERP also defines Baffinland's organizational roles and responsibilities, internal and external contact information, training, resources, and reporting requirements, to which all site personnel are directed.

1.2 APPROACH TO SPILL RESPONSE

A spill is defined as the release of a hazardous product out of its containment and into the environment. Such releases result in potential hazards to humans, vegetation, water resources, fish and wildlife which vary in severity, depending on several factors including the nature of the material, quantity spilled, location and season. Diesel and Jet Fuel (Arctic Diesel/P50 and Jet A) are the primary products at risk for potential releases to the environment due to its abundance and frequency of use. As a result, additional levels of spill response have been developed for these products. Other products with the potential for release include sewage water, anti-freeze, methanol, lubricants, oils, and ammonium nitrate (AN).

Baffinland requires all site personnel to be trained on the specific procedures required for spill response initiation and reporting. All site personnel must comply with the following procedure upon initiation of a spill involving a regulated substance:

	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u>	Page 8 of 115
	Environment	Revision: <u>For review purposes only</u> 4	Document #: BAF-PH1-830-P16-0036

1. Immediately warn other personnel working near the spill area;
2. Evacuate the area if the health and safety of personnel is threatened;
3. 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; and
4. Notify the Environmental Supervisor, who will initiate spill response operations.

Upon initiation of spill response, as determined by the Environmental Supervisor, the following procedure shall be completed by the spill response team:

Source Control – If safe to do so, reduce or stop the flow of product. This may include simple actions such as turning off a pump, closing a valve, or sealing a puncture with something nearby (e.g., a rag, piece of wood, tape), raising a leaking or discharging hose to a level higher than the product level inside the tank, or transferring the product from leaking containers.

Contain and Control the Free Product – If safe to do so, prevent or minimize the spread of the spilled product. 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 snow/ice).


Protection – Evaluate the risk of the impacted area to the surrounding environment. Protect sensitive ecosystems and natural resources at risk by isolating the area and/or diverting the spilled material away from sensitive receptors. Protection may be achieved by the effective use of various types of barriers.

Spill Clean-up – Recover and contain as much free product as possible.

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. Reports shall be completed as per Baffinland's Incident Investigation Form (BAF-PH1-810-FOR-0005).

2 BAFFINLAND POLICIES

2.1 HEALTH, SAFETY, AND ENVIRONMENT POLICY

	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u> Revision: <u>For review purposes only</u> 4	Page 9 of 115
	Environment	Document #: BAF-PH1-830-P16-0036	

This Baffinland Iron Mines Corporation Policy on Health, Safety and Environment is a statement of our commitment to achieving a safe, healthy and environmentally responsible workplace. We will not compromise this policy for the achievement of any other organizational goals.

We implement this Policy through the following commitments:

- Continual improvement of safety, occupational health and environmental performance
- Meeting or exceeding the requirements of regulations and company policies
- Integrating sustainable development principles into our decision-making processes
- Maintaining an effective Health, Safety and Environmental Management System
- Sharing and adopting improved technologies and best practices to prevent injuries, occupational illnesses and environmental impacts
- Engaging stakeholders through open and transparent communication.
- Efficiently using resources, and practicing responsible minimization, reuse, recycling and disposal of waste.
- Reclamation of lands to a condition acceptable to stakeholders.

Our commitment to provide the leadership and action necessary to accomplish this policy is exemplified by the following principles:


- As evidenced by our motto "Safety First, Always" and our actions Health and Safety of personnel and protection of the environment are values not priorities.
- All injuries, occupational illnesses and environmental impacts can be prevented.
- Employee involvement and active contribution through courageous leadership is essential for preventing injuries, occupational illnesses and environmental impacts.
- Working in a manner that is healthy, safe and environmentally sound is a condition of employment.
- All operating exposures can be safeguarded.
- Training employees to work in a manner that is healthy, safe and environmentally sound is essential.
- Prevention of personal injuries, occupational illnesses and environmental impacts is good business.
- Respect for the communities in which we operate is the basis for productive relationships.

We have a responsibility to provide a safe workplace and utilize systems of work to meet this goal. All employees must be clear in understanding the personal responsibilities and accountabilities in relation to the tasks we undertake.

The health and safety of all people working at our operation and responsible management of the environment are core values to Baffinland. In ensuring our overall profitability and business success every Baffinland and business partner employee working at our work sites is required to adhere to this Policy.



Brian Penney
 Chief Executive Officer
 April 2018

	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u>	Page 10 of 115
	Environment	Revision: <u>For review purposes only</u> 4	Document #: BAF-PH1-830-P16-0036

2.2 SUSTAINABLE DEVELOPMENT POLICY

At Baffinland Iron Mines Corporation (Baffinland), we are committed to conducting all aspects of our business in accordance with the principles of sustainable development & corporate responsibility and always with the needs of future generations in mind. Baffinland conducts its business in accordance with the Universal Declaration of Human Rights and ArcelorMittal's Human Rights Policy which applies to all employees and affiliates globally.

Everything we do is underpinned by our responsibility to protect the environment, to operate safely and fiscally responsibly and with utmost respect for the cultural values and legal rights of Inuit. We expect each and every employee, contractor, and visitor to demonstrate courageous leadership in personally committing to this policy through their actions. The Sustainable Development and Human Rights Policy is communicated to the public, all employees and contractors and it will be reviewed and revised as necessary on a regular basis. These four pillars form the foundation of our corporate responsibility strategy:

1. Health and Safety
2. Environment
3. Upholding Human Rights of Stakeholders
4. Transparent Governance

1.0 HEALTH AND SAFETY

- We strive to achieve the safest workplace for our employees and contractors; free from occupational injury and illness, where everyone goes home safe everyday of their working life. Why? Because our people are our greatest asset. Nothing is as important as their health and safety. Our motto is "Safety First, Always".
- We report, manage and learn from injuries, illnesses and high potential incidents to foster a workplace culture focused on safety and the prevention of incidents.
- We foster and maintain a positive culture of shared responsibility based on participation, behaviour, awareness and promoting active courageous leadership. We allow our employees and contractors the right to stop any work if and when they see something that is not safe.

2.0 ENVIRONMENT

- Baffinland employs a balance of the best scientific and traditional Inuit knowledge to safeguard the environment.
- Baffinland applies the principles of pollution prevention, waste reduction and continuous improvement to minimize ecosystem impacts, and facilitate biodiversity conservation.
- We continuously seek to use energy, raw materials and natural resources more efficiently and effectively. We strive to develop more sustainable practices.
- Baffinland ensures that an effective closure strategy is in place at all stages of project development to ensure reclamation objectives are met.

3.0 UPHOLDING HUMAN RIGHTS OF STAKEHOLDERS

- We respect human rights, the dignity of others and the diversity in our workforce. Baffinland honours and respects the unique cultural values and traditions of Inuit.
- Baffinland does not tolerate discrimination against individuals on the basis of race, colour, gender, religion, political opinion, nationality or social origin, or harassment of individuals freely employed.
- Baffinland contributes to the social, cultural and economic development of sustainable communities in the North Baffin Region.

	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u> Revision: <u>For review purposes only</u> 4	Page 11 of 115
	Environment	Document #: BAF-PH1-830-P16-0036	

- We honour our commitments by being sensitive to local needs and priorities through engagement with local communities, governments, employees and the public. We work in active partnership to create a shared understanding of relevant social, economic and environmental issues, and take their views into consideration when making decisions.
- We expect our employees and contractors, as well as community members, to bring human rights concerns to our attention through our external grievance mechanism and internal human resources channels. Baffinland is committed to engaging with our communities of interest on our human rights impacts and to reporting on our performance.

4.0 TRANSPARENT GOVERNANCE

- Baffinland will take steps to understand, evaluate and manage risks on a continuing basis, including those that may impact the environment, employees, contractors, local communities, customers and shareholders.
- Baffinland endeavours to ensure that adequate resources are available and that systems are in place to implement risk-based management systems, including defined standards and objectives for continuous improvement.
- We measure and review performance with respect to our safety, health, environmental, socio-economic commitments and set annual targets and objectives.
- Baffinland conducts all activities in compliance with the highest applicable legal & regulatory requirements and internal standards.
- We strive to employ our shareholder's capital effectively and efficiently and demonstrate honesty and integrity by applying the highest standards of ethical conduct.

4.1 FURTHER INFORMATION


Please refer to the following policies and documents for more information on Baffinland's commitment to operating in an environmentally and socially responsible manner:

Health, Safety and Environment Policy
 Workplace Conduct Policy
 Inuktitut in the Workplace Policy
 Site Access Policy
 Hunting and Fishing (Harvesting) Policy
 Annual Report to Nunavut Impact Review Board

If you have questions about Baffinland's commitment to upholding human rights, please direct them to contact@baffinland.com.



Brian Penney
 Chief Executive Officer
 March 2016

	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u>	Page 12 of 115
	Environment	Revision: <u>For review purposes only</u> 4	Document #: BAF-PH1-830-P16-0036

3 LEVELS OF EMERGENCY SPILL RESPONSE

To effectively manage emergency response, Baffinland has adopted a tiered emergency classification scheme. Each level of emergency, based on the significance of the event, requires varying degrees of response, effort and support. The impact on normal business operations will also differ as will the requirements for investigation and reporting. The ERP details each level of emergency; however, emergency spill response classifications are defined by the following three (3) levels:

Level 1 (Low) – Minor accidental release of a deleterious substance with:

- No threat to public safety; and/or
- Negligible environmental impact to receiving environment.

Level 2 (Medium) – Major accidental release of a deleterious substance with:

- Some threat to public safety; and/or
- Moderate environmental impact to receiving environment.

Level 3 (High) – Uncontrolled hazard which:

- Jeopardizes Project personnel safety; and/or
- Significant environmental impacts to receiving environment.


Emergency response levels are determined by the specific substance released, quantity spilled, receiving environment impacted, and risk to human health. This assessment also includes specific consideration given to spills occurring within engineered secondary containment. The following matrix provides guidance for Project personnel with regard to the level of response that is assigned to spill classifications.

SPILL RESPONSE LEVELS

	Level 1 (Low)	Level 2 (Medium)	Level 3 (High)	
Explosives	<100 kg	100 – 1,000 kg	>1,000 kg	in water
	<500 kg	500 – 5,000 kg	>5,000 kg	on land
Sewage	<1,000 L	1,000 – 10,000 L	>10,000 L	in water
	<10,000 L	10,000 – 100,000 L	>100,000 L	on land
Hazardous Materials*	<10 L	10 – 1,000 L	>1,000 L	in water
	<500 L	500 – 5,000 L	>5,000 L	on land
	<1,000 L	1,000 – 100,000 L	>100,000 L	in containment

*Include Fuels (Diesel/~~Jet A~~), Lubricants, Antifreeze, Hydraulic Oil, Waste Oil, Antifreeze, etc.

FIGURE 3-1 – EMERGENCY SPILL RESPONSE LEVELS

	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u>	Page 14 of 115
	Environment	Revision: <u>For review purposes only</u> 4	Document #: BAF-PH1-830-P16-0036

4 EMERGENCY SPILL RESPONSE PROCEDURES

4.1 SPILLS ON LAND

Response to spills on land will include the general procedures detailed in the Project's ERP.

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 spill and also serve as containment to allow for the recovery of the spill.

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 spill. 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 product 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 of floating oil (if applicable).

The use of large quantities of absorbent materials to recover large volumes of spilled fluids should be avoided. Large volumes of free-product should be recovered and containerized, as much as possible, by using vacuums and pumps appropriate to the material. Mixtures of water and fuel may be processed through the use of 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.

4.2 SPILLS ON FRESHWATER

Responses to spills on freshwater include the general procedures previously detailed. Various containment, diversion and recovery techniques are discussed in the following sections. The following elements must be considered when conducting response operations:

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

Containment of a hydrocarbon slick on water requires the deployment of mobile floating booms to intercept, control, contain and concentrate (i.e., increase thickness) the floating substance. For a large

	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u>	Page 15 of 115
	Environment	Revision: <u>For review purposes only</u> 4	Document #: BAF-PH1-830-P16-0036

lake, typically, one end of the boom is anchored to shore while the other is towed by a boat and use to circle the 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 fuel is spilled in a smaller water body such as a small lake or pond, it may not be possible to deploy booms using a boat. In this case, measures are taken to protect sensitive and accessible shoreline (spills resulting from traffic incidents). The hydrocarbon 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 are taken to block and concentrate the oil slick at the lake discharge using booms where it will limit spatial migration and subsequently allow for recovery 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) are used to stop and concentrate moving diesel fuel for collection while allowing water to continue to flow unimpeded. In the case of floating fuel, in a stream, heading for a culvert (i.e., at a road crossing), a culvert block is used to stop and concentrate moving fuel for collection while allowing water to continue to flow unimpeded. In both cases fuel would 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.


4.3 SPILLS ON SNOW AND ICE

In general, snow and ice will slow the movement of hydrocarbons. The presence of snow may also hide the fuel 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 absorbent material is to be limited as reasonably practical. 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 underlying water body.

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 for the 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

	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u>	Page 16 of 115
	Environment	Revision: <u>For review purposes only</u> 4	Document #: BAF-PH1-830-P16-0036

is placed in containers or within lined berms on land. The contaminated water and product will be treated on site utilizing available oily water treatment systems. Free phase product that is recovered will be utilized as a source of fuel onsite if possible or shipped offsite for processing.

4.4 WILDLIFE PROTECTION PROCEDURES

When required, the following audible and visual techniques shall be used to prevent wildlife from interacting with spilled product or a contaminated area(s) following a spill:

- Pyrotechnics, i.e. shell crackers, screamers, propane cannons for shore based spills;
- Visual scare tactics, i.e.: helicopters, emergency response vessels or other water vessels;
- Broadcast sounds, i.e. Breco Bird Scarer designed to float with an oil spill; and
- Exclusion, i.e. netting applied in smaller contaminated areas such as settling or evaporation ponds.


To minimize environmental impact, these devices are most effective when initiated immediately.

The size of the spill and location in relation to sensitive wildlife areas must be assessed at the time of the event as to correctly apply the appropriate level of deterrence. Only workers trained in the safe and proper use of certain hazing equipment will be permitted to haze wildlife. Personal protective equipment (PPE) will be worn by all personnel using deterrent equipment, as per manufactures instructions, with the minimum PPE requirements consisting of eye and ear protection. Other workers in the vicinity of such devices should also use ear protection or remain a safe distance away. Hazing through the use of pyrotechnics should not be used too close to dry vegetation or flammable spill materials due to fire hazard.

Hazing should be administered in such a way as to prevent wildlife from entering an area where they may become endangered. It is also important to ensure that hazing efforts do not cause already contaminated animals to scatter away before they are able to receive treatment. Techniques should be applied as soon as possible to prevent wildlife from interacting with spilled product or contaminated areas and becoming oiled or contaminated.

All emergency response vessels shall be equipped with deterrent devices to ensure timely response in case of a spill occurrence off-shore. To prevent habituation, variation of hazing techniques will be used such as changing the location, appearance and types of hazing or using a combination of hazing techniques.

Efforts shall be made to collect alive or dead oiled wildlife. In the event of a spill occurring in or around a water body, shorelines and beaches shall be inspected for contaminated wildlife to be collected. Emergency response vessels shall be equipped with dip-nets, large plastic collecting bags for dead wildlife, and cardboard boxes or cloth bags for live oiled wildlife. To ensure that live oiled wildlife are dealt with humanely, capture and handling of wildlife shall only be done by trained individuals. Gloves shall be worn


	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u>	Page 17 of 115
	Environment	Revision: <u>For review purposes only</u> 4	Document #: BAF-PH1-830-P16-0036

when handling contaminated wildlife (leather gloves for raptors and mammals, latex/rubber gloves for ducks and small shorebirds). Wildlife will be kept individually within cloth bags or ventilated cardboard boxes and label the date and time animal was found, name of finder, location and name of species, if known. Wildlife treatment facilities will then be contacted for advisement on treatment. All contaminated wildlife will be held in a warm quiet place until treatment. The Canadian Wildlife Services (CWS) will be consulted to determine the most humane treatment method (i.e. rehabilitation or euthanasia) to be implemented for live oiled wildlife.

For wildlife mortalities, all carcass are required to be bagged and labelled individually. The date and time animal was found, name of finder, location and name of species, if known shall be documented. CWS is required to be consulted and approval shall be obtained prior to disposing of any dead wildlife. Contact information for experts in bird hazing and bird exclusion, oiled bird rehabilitation, and, permits needed to haze, salvage, hold and clean, or euthanize birds, are provided in Table 4-1.

TABLE 4-1: EMERGENCY CONTACTS IN CASE OF SPILLS AFFECTING WILDLIFE

Name	Location	Phone Number	Purpose
Canadian Wildlife Services (CWS) Prairie and Northern Region	Eastgate Offices 9250 - 49th Street Edmonton, Alberta T6B 1K5	1-780-951-8600	Providing information on migratory bird resource and species at risk (under CWS jurisdiction) in the area of a spills (this includes damage assessment and restoration planning after the event); Minimizing the damage to birds by deterring oiled birds from becoming oiled; and Ensuring the humane treatment of captured migratory birds and species at risk by determining appropriate response and treatment strategies (i.e. Euthanasia or cleaning and rehabilitation).
Nunavut Emergency Management	P.O. Box 1000, Station 700 Iqaluit, NU X0A 0H0	1-800-693-1666	Responsible for developing territorial emergency response plans, coordinating general emergency operations at the territorial and regional levels, and supporting community emergency response operations.
International Bird Rescue	International	1-888-447-1743	Wildlife rehabilitation specialists, that manage various aspects of wildlife response.

	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u>	Page 18 of 115
	Environment	Revision: <u>For review purposes only</u> 4	Document #: BAF-PH1-830-P16-0036

5 DISPOSAL OF CONTAMINATED MATERIAL


Quatrex bags, overpack drums, or other appropriate containers as approved by the Environmental Department will be used to contain and transport contaminated soil for treatment. Depending on the nature of the spilled contaminant (hydrocarbon based spills), the soil may be treated for remediation at Baffinland's Landfarm and Contaminated Snow Containment Facility (Landfarm Facility) at Milne Port (refer to Section 5.1 below). Soil, contaminated from the spill of other hazardous chemicals will be treated as a hazardous waste and shipped offsite to a licensed facility for treatment and/or disposal. For additional information, refer to Baffinland's Hazardous Materials and Hazardous Waste Management Plan (BAF-PH1-830-P16-0011).

Used sorbent material is burned in Project incinerators as per incinerator standard operating procedures and contaminated snow from sewage releases are disposed in Polishing and Waste Stabilizations Ponds for treatment during the summer months.

5.1 MILNE PORT SOIL LANDFARM AND CONTAMINATED SNOW CONTAINMENT FACILITY

The Milne Port Landfarm Facility consisting of two geomembrane lined containment cells. The larger (3,383 m³) west cell (landfarm) was constructed for the containment and bio treatment of hydrocarbon contaminated soils. Treated soils that meet the appropriate criteria will be used as landfill cover material or other purposes following approval from the appropriate regulators and stakeholders.

The smaller (929 m³) east cell was constructed for the containment of hydrocarbon contaminated snow generated during the winter months. Contaminated snow collected will be treated during the summer months using an onsite mobile Oily Water Treatment Facility (OWTF). During treatment, monitoring will be completed to ensure compliance with prescribed water quality guideline criteria outlined in Baffinland's Type 'A' Water Licence.

	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u>	Page 19 of 115
	Environment	Revision: <u>For review purposes only</u> 4	Document #: BAF-PH1-830-P16-0036

6 TRAINING REQUIREMENTS

Emergency spill response training subject to the requirements of this Plan shall be completed in conjunction with Baffinland's ERP, whereby Baffinland's Emergency Response Lead (i.e. Emergency Rescue Coordinator), with support from the Environmental Superintendents, will identify Project training needs and the resources required to provide the necessary skills to personnel tasked with duties in emergency and spill response. Circumstantially, emergency spill responses often occur in parallel with emergency responses (i.e. an overturned fuel tanker accident along the Tote Road not only causes imminent hazards to site personnel, but also to the surrounding environment); to facilitate efficient response to overall emergency response and preparedness, Project personnel trained to respond to health and safety emergencies (Emergency Response Team) shall also receive sufficient training to effectively respond to accidental releases of hazardous materials. Emergency and spill response training shall be developed and implemented throughout the lifecycle of Project to ensure the following requirements are fulfilled:

- Meets or exceeds the requirements of NWT/Nunavut Mines Health and Safety Regulations;
- Enables responders to competently operate the equipment employed for emergency and spill response purposes; and
- Includes practices, drills and full scale exercises for responding to the types of emergencies that are reasonably predictable for the operation.


6.1 QUALIFICATIONS

All active MRT members must obtain:

- Certification within 12 months, by a physician or by a nurse in charge of a nursing station, to be fit to work in a breathing apparatus under arduous conditions;
- A valid Mine Rescue Certificate issued by the Chief Inspector;
- A valid Standard First Aid Certificate;
- Participation in training requirements subject to the direction of the Chief Mines Inspector; and
- Emergency Spill Response training; land based response training programs in addition to those completed as part of Baffinland's Oil Pollution Emergency Plan (OPEP) - Doc. No. BAF-PHI-830-0013.

6.2 TRAINING CONTENT

Emergency response personnel, as members of the ERT, have response requirements which may include administering first aid, firefighting, performing work at heights or in confined spaces, handling and transferring hazardous/controlled substances, and working in/around water. Each of these demands

	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u>	Page 20 of 115
	Environment	Revision: <u>For review purposes only</u> 4	Document #: BAF-PH1-830-P16-0036

must be supported with adequate training that will allow members to safety and effectively conduct their tasks.

Additional training requirements may be provided for specific roles within the ERP and for specific functions to be performed during an emergency response including:

- Aircraft Rescue Fire Fighting (ARFF) training;
- Incident command training;
- Cold water rescue and boat operators safety; and
- Boom deployment.

6.3 DRILLS AND EXERCISES

While drills and exercises can be used for training purposes, their primary function for this plan is to provide the means of testing the adequacy of the plan's provisions and the level of readiness of response personnel.

The Emergency Rescue Coordinator and Environmental Superintendents are responsible for coordinating the development of and assisting in conducting drills and exercises. The following types of drills and exercises shall be practiced:

6.3.1 TABLETOP EXERCISES


Tabletop exercises shall be completed and will involve presenting to key emergency personnel simulated emergency situations in informal settings to elicit constructive discussions as the participants examine and resolve problems based on this Plan. These exercises will be routinely performed during ERT training sessions conducted throughout the year.

6.3.2 FUNCTIONAL DRILLS

Functional drills are practical exercises designed to evaluate the capability of personnel to perform a specific function (i.e. communications, first aid, and spill response). Functional drills will be required to be performed at a minimum of twice annually. Deficiencies and competencies identified during functional drills are documented, and used as effective development tools in the preparation of response procedures required for full-scale exercises.

6.3.3 FULL-SCALE EXERCISES

Full scale exercises are intended to evaluate the operational capability of Baffinland's emergency response and preparedness. Full-Scale Exercises will be required to be conducted annually with sufficient notice to allow for the preparation of effective emergency response procedures and to identify and correct deficiencies in advance.

	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 21 of 115
	Environment	Revision: For review purposes only ⁴	Document #: BAF-PH1-830-P16-0036

6.4 PREPARATION


Preparation for emergency and spill response exercises will vary depending on the type and scope involved; however, planning for these events shall include:

- Plan review and identification of possible problem areas;
- Establishing objectives;
- Identifying resources to be involved including personnel;
- Develop exercise scenarios, a major sequence of events list, and expected action checklists; and
- Assigning and training controllers and evacuator.

Baffinland has committed to engaging local community representatives, the Government of Nunavut and the Canadian Coast Guard as applicable in training drills and exercises.

All scenarios shall be realistic and based upon current operating conditions. The primary event (i.e. fire, spill, etc.) shall be determined based on the objective of the exercise, and completed in accordance with the prescribed regulatory requirements.

Emergency Response Trucks are maintained at both the Milne Port and the Mine Site for immediate response to all emergencies. The Emergency Response Trucks are equipped with a comprehensive list of response equipment which include, back-up power supply, hydraulic power tools, fire-fighting and spill response equipment, containment and medical response supplies. In the event of an emergency, the Emergency Response Trucks will be immediately deployed carrying the necessary equipment responders will require upon arriving at the scene of the incident. For the complete Emergency Response Truck inventory, refer to Appendix B.

	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u>	Page 22 of 115
	Environment	Revision: <u>For review purposes only</u> 4	Document #: BAF-PH1-830-P16-0036

7 POTENTIAL SPILL ANALYSIS

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. This section examines spill scenarios as they relate to the types of Project activities.

Several types of materials have been identified as capable of causing environmental, health, and safety concerns should a spill occur while being transported, used, stored and/or handled. These include: fuel, explosives, untreated sewage and effluent, emulsion (ammonium nitrate-diesel), lubricants, and oils. These materials are planned to be utilized daily during Project operations, often in sufficiently large quantities, warranting the evaluation of potential spill scenarios. All other hazardous materials, chemicals or wastes are handled/used/stored in smaller quantities and packaged/transported in small containers that limit the magnitude of the spills that could occur at the Project.

7.1 FUEL SPILLS ON LAND

Fuel represents the greatest volume of hazardous material located onsite. For locations of the tank farms, temporary fuel depots and approximate spill kit locations at each of the Project sites, refer to Appendix B. Table 7-1 provides the maximum fuel storage capacities of permanent fuel storage infrastructure (i.e. tanks, tank farms) at Project sites.

TABLE 7-1: Maximum Fuel Storage Capacities for Permanent Fuel Storage Infrastructure at Project Sites

Location	Fuel Type	Total Fuel Inventory*
Milne Port	Jet- A	673.0 ML
	<u>Arctic Diesel</u>	<u>64.0 ML</u>
	<u>Marine Diesel</u>	<u>200,000 L</u>
Mine Site	Jet- A	32.1 ML
	<u>Arctic Diesel</u>	<u>47.6 ML</u>
	<u>Other</u>	<u>400,000 L</u>

*Does not include day (iso) tanks servicing buildings and accommodation complexes

At Milne Port the fuel dispensing systems consist of two prefabricated fuel dispensing modules: the Arctic Diesel Fuel Module, and the Jet-A1 Fuel Module, located on the east and west side of the tank farm, respectively. Both modules are insulated and heated 40 foot ISO shipping containers, complete with piping, fuel transfer equipment, temperature corrected delivery systems, electrical and control components, and code compliant fire suppression systems.

	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u> Revision: <u>For review purposes only</u> 4	Page 23 of 115
	Environment	Document #: BAF-PH1-830-P16-0036	

An additional, prefabricated diesel fuel dispensing module has also been installed at Milne Port to facilitate the fueling of Ore Haul Trucks leaving Milne Port. The prefabricated diesel dispensing module is situated within lined engineered containment and is comprised of a heated 20 foot ISO shipping container, with a 27,000 L double-walled diesel storage supply tank and associated fuel transfer equipment.

At the Mary River Mine Site, the fuel dispensing system consists of one prefabricated Arctic diesel fuel dispensing module located on the west side of the tank farm. The module is an insulated and heated 40 foot ISO shipping container, complete with piping, fuel transfer equipment, temperature-corrected delivery system, electrical and control components, and code compliant fire suppression system.

Baffinland has constructed and continues to operate its fuel storage/dispensing facilities in accordance with applicable guidelines and regulations such as the CCME “Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products (2003)”, Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations (Canadian Environmental Protection Act, 1999 SOR/2008-197 June 12, 2008) and National Fire Code of Canada as provided in Part D, Item 24 of Baffinland’s Type ‘A’ Water Licence. At all Project sites, drummed fuel is placed within engineered lined containment areas.


All bulk fuel storage areas are equipped with spill kits for emergency response (see Appendix B for approximate locations). Each spill kit contains the appropriate type, size and quantity of equipment for the volume/type of product present in the storage location as well as the environment likely to be affected by a spill (i.e., ground, river, lake or ocean). Refer to Appendix B for a list of emergency and spill response supplies.

Standard Operating Procedures (SOP’s) have been developed for each method of fuel storage and transfer. Proper containment and emergency response equipment shall be provided to meet or exceed regulatory requirements.

The ERP and SCP govern land-based and freshwater operations, the Spill at Sea Response Plan (BAF-PH1-830-P16-0042) governs marine spills and the OPEP (BAF-PHI-830-0013) defines ship to shore fuel transfers procedures and protocols at Milne Port.

7.1.1 POTENTIAL FUEL SPILL SCENARIOS

The tank farms located at Milne Port and the Mine Site are constructed in an impermeable secondary containment structure (lined and bermed containment area). The construction is in compliance with building codes and best practices for tank farm facilities. The low point of the secondary containment areas are fitted with sumps for the collection and disposal of runoff. The secondary containment areas have been designed to a capacity to contain the complete volume of the largest tank, as well as 10% of the volume of all the remaining tanks.

	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 24 of 115
	Environment	Revision: For review purposes only 4	Document #: BAF-PH1-830-P16-0036

Due to the capacities of the secondary containments, fuel spills outside these containment areas are unlikely to occur. Adequate procedures (site wide application) and work instructions (task specific) are in place as well as the Environmental Protection Plan (EPP) to deal with equipment and machinery entering and exiting the tank farms as well as dealing with contamination resulting from traffic in and out of the secondary containment areas.


SCENARIO 1: TANK FARM AREA SPILL

Description of Incident	Rupture or spill from 15 ML tank into containment area
Potential Causes	Tank or associated equipment failure. This may include failure as a result of human error, mechanical failure, inadequate maintenance, geotechnical issues, sabotage, etc...
Product Spilled	Diesel
Maximum Volume Spilled	15 ML
Estimated Time to Spill Entire Volume	1.5 hour
Immediate Receiving Medium	Lined containment area
Most Probable Direction of Spill Migration	The fuel will flow into the sump of the containment area.
Distance and Direction to Closest Body of Water	N/A
Resources to Protect	Must ensure fuel does not breach/overtop containment
Emergency Response Level	Level 3 (high) – Refer to ERP
Estimated Emergency Spill Response Time	20 minutes
Spill Response Procedures	If the spill is still occurring the hole/breach will be plugged or stopped, if possible. The lined containment will be inspected to ensure that it is safely containing the spill; if not it will be reinforced with temporary berms. Recoverable fuel will be collected via a vacuum truck and deposited in a suitable site (i.e. fuel storage tanks). Oily water generated by the spill will be processed onsite using an oily-water treatment facility or shipped offsite for disposal/treatment at a licenced facility.

SCENARIO 2: DAY TANK/TEMPORARY STORAGE AREA SPILL


All stand-alone day storage facilities, whether temporary (construction period) or permanent (mine pit), will be double-walled iso-tanks. There are approximately 30 double-walled day tanks at Milne Port and Mine Site camps with a capacity ranging from 5,000L to 20,000L. The iso-tanks will be contained in a restricted area so as to avoid collision from mobile equipment and placed such that they should not be damaged as a result of works.

Detailed procedures (site-wide application) and work instructions (task-specific) are in place, along with the EPP to deal with refuelling operations. The most likely source of spills is during refuelling or refilling of the day tanks with fuel. Only personnel trained in proper refuelling will have access to these tanks. The fuel transfer operation will be halted whenever a leak is detected; all dispensing will be done with auto shut off fuel dispensers, and drip trays will be utilized during all fuel transfers. In light of the robust nature of the day tanks and their built in secondary containment, and the use of proper refuelling techniques and drip trays, fuel spills are unlikely to occur. In the event that a spill does occur, a spill kit, containing adequate supplies given the volume of the tank it accompanies, will be available in close proximity. Given

	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u>	Page 25 of 115
	Environment	Revision: <u>For review purposes only</u> 4	Document #: BAF-PH1-830-P16-0036

the volume of these tanks, access to readily available spill clean-up materials and trained personnel, it is anticipated that staff will be able to identify, contain and mitigate any potential spills in an effective and time sensitive manner. The table below details the most severe incident that could occur.

Description of Incident	Puncture or rupture of Iso-tank
Potential Causes	Equipment failure due to faulty manufacturing or collision with mobile equipment.
Product Spilled	Diesel fuel.
Maximum Volume Spilled	20, 000 L
Estimated Time to Spill Entire Volume	10 minutes
Immediate Receiving Medium	Soil or surrounding environment. It is important to note that no iso-tank will be located within 100m of a water body.
Most Probable Direction of Spill Migration	As iso-tanks will be utilized around the Project, the direction of spill migration will depend on the specific location. Iso tanks will be placed on relatively flat laydown areas, where the potential flow of spills will be readily managed.
Distance and Direction to Closest Body of Water	Varies
Resources to Protect	Varies
Emergency Response Level	Level 2 (medium) or 3 (high) – Refer to ERP (depends on quantity and whether there is a potential to impact nearby water bodies and/or public safety)
Estimated Emergency Spill Response Time	15 minutes
Spill Response Procedures	In the event that both walls of an iso-tank are ruptured and a spill occurs the Emergency Response Team will be immediately notified. Personnel in the immediate area will act as first responders making every effort to plug the puncture point. Temporary berms, ditches, trenches and sumps will be set up downstream of the spill. The downstream wall of trenches will be lined with plastic material to ensure that exposed soil does not come in contact with the fuel. Absorbent material will be utilized where required. Once the spill has been contained it will be removed by a vacuum truck and brought to an appropriate storage/treatment facility. If necessary, contaminated soil will be removed and brought to the Project's landfarm facilities for treatment. New, uncontaminated soil will be laid down in the exposed area.

	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u>	Page 26 of 115
	Environment	Revision: <u>For review purposes only</u> 4	Document #: BAF-PH1-830-P16-0036

SCENARIO 3: TOTE ROAD ACCIDENT TANKER TRUCK SPILL

Description of Incident	Spill of the contents of a tanker truck or fuel re-supply truck to ground or stream. Spill occurs in an isolated area along the Tote Road between Milne Port and the Mine Site.
Potential Causes	Human error, vehicle mechanical failure, traffic accident, poor weather or visibility.
Product Spilled	1. Tote Road: Diesel fuel, Jet-A Fuel 2. Ice Road: Diesel fuel
Maximum Volume Spilled	20 000 to 50 000 L (content of a tanker truck) This would require the rupture of the tanker.
Estimated Time to Spill Entire Volume	Spillage can be limited depending on severity of incident/accident 10 minutes to 48 hours – depending on severity of rupture or piping/valves associated with the tanker truck.
Immediate Receiving Medium	Soil, streams, lakes
Most Probable Direction of Spill Migration	Varies with specific location of spill.
Distance and Direction to Closest Body of Water	1. Tote Road - Downstream and into Phillips Creek; the road between the Mine Site and Milne Port 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 Port. 2. Ice Road – depends on location of accident.
Resources to Protect	1. Tote Road: Streams, Phillips Creek and the ocean via Milne Inlet. 2. Ice Road: various water ways and lakes along the ice road.
Emergency Response Level	Level 2 (medium) or 3 (high) – Refer to ERP (depends on quantity and whether there is potential for impact to nearby water bodies and to public safety)
Estimated Emergency Spill Response Time	60 minutes after spill is reported to site personnel (assuming worst case scenario where the truck driver is injured and cannot commence spill response procedures).
Spill Response Procedures	1. Contain and recover diesel slick downriver and protect shorelines using sorbent booms. Collect free-product for temporary storage. Clean-up soiled shorelines. If the response crew arrives before the tanker/fuel truck has released all its contents, seal the leak where feasible, contain and recover spill on ground using dykes, trenches and spill berms. If the truck driver is not injured, he will act as a first responder and immediately initiate the Spill Contingency Plan SCP, as defined in Section 1 of this Plan, by using the spill kit kept in the fuel trucks. 2. Once the initial cleanup is completed, free product captured during response, as well as product still contained within the tanker/fuel truck bulk tank(s) will be pumped using a vacuum truck to be discharged at an approved facility/containment berm. Oily water captured during the response would be pumped into a vacuum truck and transported to a containment facility for treatment using the oily-water treatment facility. Impacted soils (if any) would be excavated and placed within the Project's landfarm facilities.

SCENARIO 4: MARINE RESUPPLY SPILL – MILNE PORT


Refer to Milne Port OPEP (BAF-PH1-830-P16-0013).

SCENARIO 5: SPILLS FROM LOCOMOTIVE DURING RAILWAY OPERATIONS

It is possible that a spill of diesel from the locomotive could will occur during railway operations or a rail accident or derailment.

	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 27 of 115
	Environment	Revision: <u>For review purposes only</u> 4	Document #: BAF-PH1-830-P16-0036

<u>Description of Incident</u>	<u>Spill during railway operation</u>
<u>Potential Causes</u>	<u>Operator error. Equipment failure. Poor visibility or adverse weather. Collision.</u>
<u>Product Spilled</u>	<u>Diesel</u>
<u>Maximum Volume Spilled</u>	<u>4,850 L</u>
<u>Estimated Time to Spill Entire Volume</u>	<u>10 minutes to 48 hours –depending on severity of incident/accident</u>
<u>Immediate Receiving Medium</u>	<u>Depends on location</u>
<u>Most Probable Direction of Spill Migration</u>	<u>Depends on area</u>
<u>Distance and Direction to Closest Body of Water</u>	<u>Depends on area</u>
<u>Resources to Protect</u>	<u>Any nearby water bodies.</u>
<u>Emergency Response Level</u>	<u>Level 2 (medium) or 3 (high) – Refer to ERP (depends on quantity and whether there is potential for impact to nearby water bodies and to public safety)</u>
<u>Estimated Emergency Spill Response Time</u>	<u>60 minutes after spill is reported to site personnel (assuming worst case scenario where mobile equipment operator is injured and cannot commence spill response procedures).</u>
<u>Spill Response Procedures</u>	<p><u>If the amount of fuel spilled is less than 100 litres (22 gallons) and is not a threat to a water body, the spill will be immediately contained and cleaned in the field as soon as possible.</u></p> <p><u>If the spill was caused in a derailment, the derailment procedure will be activated simultaneously (refer to the Railway Emergency Response Plan).</u></p> <p><u>In the event a spill occurs in a water body, the lubricants and oils will be contained and recovered downstream as described in Section 4, with shorelines protected using sorbent booms. All free-product will be collected for temporary storage and soiled shorelines cleaned-up. If the mobile equipment operator is not injured, he will act as a first responder and immediately initiate the SCP as defined in Section 1, utilizing the spill kit kept in the work area or on the mobile equipment. Once the spill is contained, contaminated water and recoverable free product will be removed by vacuum truck and transported to an appropriate storage facility for shipment offsite or treatment using the Project's onsite oily-water treatment facilities.</u></p> <p><u>Additional detail is provided in the Railway Emergency Response Plan.</u></p>

	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019 Revision: For review purposes only ⁴	Page 28 of 115
	Environment	Document #: BAF-PH1-830-P16-0036	

7.2 EXPLOSIVES TRANSPORT AND STORAGE

For an overview of the maximum cumulative quantities of explosives and ~~ammonium nitrate~~[AN](#), Baffinland is permitted to store at the Mary River Project, refer to Table 7-2. For the location of the explosives storage facilities at Milne Port, and the Mine Site, see the site layout drawings in Appendix A. For additional information on the storage locations, handling procedures and supportive emergency procedures for ~~Ammonium Nitrate (AN)~~, Dyno Nobel Baffin Island Inc. has prepared an Emergency Response Assistance Plan for the Project, provided as Appendix ~~FE~~.

7.2.1 AMMONIUM NITRATE STORAGE AND HANDLING

~~AN dissociates readily in water to form ammonia, which in its un-ionized form, is toxic to aquatic organisms and fish. Storage on land, away from water sources largely eliminates the risk of ammonia losses to water bodies.~~

The AN used at the Project is stored in containers in two locations; the KM 97 laydown and smaller quantities at the Mine Site Dyno Nobel Emulsion Plant. The AN prill is stored in 1,000 kg tote bags, 20 of which are stored double-stacked in each of the 20 foot ~~shipping~~ containers. AN (in any amount) shall not be stored outside at any time and shall only be withdrawn from the containers when required by plant production. The AN is loaded directly into the AN Handling Module of the plant to minimize any exposure of the product to the environment.


~~During rail construction, temporary storage of magazines will be required at three locations along the northern transportation corridor; KM 13, KM 52.4, and KM 59.3.~~

7.2.2 EMULSION STORAGE AND HANDLING

~~Emulsion materials are acutely toxic to aquatic life and therefore could have adverse impacts on fish and other aquatic life if released to surrounding water bodies and streams. Because of this, emulsion material is stored in either the form of pre-packaged explosives in an explosives magazine or at the Dyno Nobel Emulsion Plant. Project's emulsion plant where spills can be completely contained within the confines of the plant.~~

Emulsion is stored in a single, 36,000 kg capacity tank within the emulsion loading garage at the Dyno Nobel Emulsion Plant. Smaller quantities may be stored in the two bulk emulsion trucks (10,000 kg capacity each) which are parked in the ~~heated~~ garage when not in use, ~~to prevent freezing. An additional two explosives trucks will support construction.~~

~~Small spills shall be scooped up with non-sparking shovels, placed in bags and stored at the magazine site at km 105.5 until the spilled emulsion can be disposed of in blast holes. Large spills will be dealt with on an individual basis depending upon the size of the spill. Efforts shall be made to contain spills and secure the surrounding area before clean-up begins. The clean-up of large spills may involve pumping spilled~~

	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 29 of 115
	Environment	Revision: For review purposes only ⁴	Document #: BAF-PH1-830-P16-0036

~~emulsion into tanks or totes and/or scooping up product with shovels and storing it in approved containers/bags.~~

In addition, smaller quantities of AN emulsion pre-packaged explosives will be used to begin development of the quarry sites. Pre-packaged AN emulsions pose minimal risk to the environment given the hydrophobic nature of the emulsion explosives.


[Phase 2 requires the expansion of AN storage and explosives magazine storage facilities to support rail construction. Temporary storage of magazines will be required at three locations along the northern transportation corridor. This includes proposed magazine storage facilities at km 13, km 52.4, km 59.3 and km 78.2. Existing magazine storage facilities are located at km 7 and km 63, and AN storage at km 97.](#)

TABLE 7-2: Maximum Cumulative Quantities of Explosives and Ammonium Nitrate at Project Sites

<u>Storage Location</u>	<u>Material</u>	<u>Purpose</u>	<u>Storage Container</u>	<u>Maximum Quantity (kg)</u>
<u>Milne Port</u>	<u>AN</u>	<u>Temporary storage between unloading and transport to km97 storage</u>	<u>Seacans</u>	<u>15,000,000</u>
<u>Km 7 (existing/proposed)</u>	<u>Prepackaged explosives, boosters, detonators</u>	<u>Store explosives and hardware</u>	<u>Magazines/Bulk Truck</u>	<u>6,000/10,000</u>
<u>Explosives Area No. 1 Km 13 (proposed)</u>			<u>Magazines</u>	<u>200,000</u>
<u>Explosives Area No. 2 Km 52.4 (proposed)</u>			<u>Magazines</u>	<u>200,000</u>
<u>Explosives Area No. 3 Km 59.3 (proposed)</u>			<u>Magazines</u>	<u>200,000</u>
<u>Explosives Area No. 4 Km 63 (existing)</u>			<u>Magazines</u>	<u>300,000</u>
<u>Explosives Area No. 5 Km 78.2 (proposed)</u>			<u>Magazines</u>	<u>200,000</u>
<u>Km 97 (existing)</u>	<u>AN</u>	<u>Storage for emulsion plant</u>	<u>Seacans</u>	<u>15,000,000</u>
<u>Mine site (existing)</u>	<u>Prepackaged Explosives</u>	<u>Open pit mining</u>	<u>Magazines</u>	<u>132,000</u>
	<u>Emulsion</u>	<u>Open pit mining</u>	<u>ISO tank in plant</u>	<u>35,000</u>
	<u>Detonators</u>	<u>Open pit mining</u>	<u>Magazines</u>	<u>110,000 units</u>
	<u>AN</u>	<u>Emulsion manufacture</u>	<u>Totes on plant conveyor</u>	<u>8,000</u>
			<u>Seacans</u>	<u>200,000</u>
<u>Explosives trucks (2)</u>	<u>Emulsion</u>	<u>Rail construction</u>	<u>Explosives truck</u>	<u>10,000</u>
<u>Explosives trucks (2)</u>	<u>Emulsion</u>	<u>Open pit mining</u>		<u>10,000</u>
	<u>AN</u>			<u>4,000</u>
Material	Purpose	Storage Type	Max. Quantity at Site at any time	

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 30 of 115
	Environment	Revision: For review purposes only 4	Document #: BAF-PH1-830-P16-0036

Storage Location	Material	Purpose	Storage Container	Maximum Quantity (kg)
Pre-Packaged Explosives	Explosive agent	Magazines and Shipping Containers	800,000 kg	
Ammonium Nitrate	Polymer	20,000 kg per Shipping Container	2,000,000 kg	

7.2.3 POTENTIAL SPILL SCENARIOS RELATED TO EXPLOSIVES

SCENARIO 1: SPILL OF AMMONIUM NITRATE

~~AN dissociates readily in water to form ammonia, which in its un-ionized form, is toxic to aquatic organisms and fish. Storage on land, away from water sources largely eliminates the risk of ammonia losses to water bodies.~~

~~Small spills shall be scooped up with non-sparking shovels, placed in bags and stored at the magazine site at km 105.5 until the spilled emulsion can be disposed of in blast holes. Large spills will be dealt with on an individual basis depending upon the size of the spill. Efforts shall be made to contain spills and secure the surrounding area before clean-up begins. The clean-up of large spills may involve pumping spilled emulsion into tanks or totes and/or scooping up product with shovels and storing it in approved containers/bags.~~


All partially full, contaminated or ripped bags of prill, spilled prill and used empty bags are collected and stored in a dedicated contained location for reuse onsite or shipment offsite for disposal. Spills within the storage facility are completely contained and will be cleaned up by personnel trained in explosives management. All spills will be recorded on a spill report and all tote bags will be inspected regularly by the explosives contractor.

AN is expected to be used to produce explosives emulsion onsite and will be transported to various areas at the Project. Therefore the greatest potential for an AN spill to occur is during transport along the Tote Road due to mechanical failure, weather conditions or human error.

Description of Incident	Explosives transport truck rolls over or collides with another vehicle or object. Transport container(s) as well as individual tote bags rupture resulting in a spill.
Potential Causes	Collision, poor driving conditions or visibility, equipment error, operator error.
Product Spilled	AN
Maximum Volume Spilled	1 tonne
Estimated Time to Spill Entire Volume	Instantaneous
Immediate Receiving Medium	Depending on the location either on land or in a water body.
Most Probable Direction of Spill Migration	Depending on location
Distance and Direction to Closest Body of Water	Depending on location
Resources to Protect	Nearby water bodies

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019 Revision: <u>For review purposes only</u> 4	Page 31 of 115
	Environment	Document #: BAF-PH1-830-P16-0036	


Description of Incident	Explosives transport truck rolls over or collides with another vehicle or object. Transport container(s) as well as individual tote bags rupture resulting in a spill.
Emergency Response Level	Level 1 (low) or Level 2 (medium) – Refer to ERP (depends on quantity and whether there is potential for impact to water bodies and/or to public safety)
Estimated Emergency Spill Response Time	15 – 60 minutes
Spill Response Procedures	<p>a) In the event that a spill occurs on land the Emergency Response Team will be contacted immediately. If the driver is unharmed he will act as the spill response first responder. All spilled prills will be contained, with the use of berms if required. Once the spill has been contained the prills will be cleaned up by a trained crew and transported and stored in a dedicated contained location until they can be shipped offsite.</p> <p>b) In the event that a spill occurs in water the Emergency Response Team will be contacted immediately. Spill containment devices (i.e. diking and/or pumping water into bladder(s)) will be constructed downstream and undissolved prills will be removed from the water body. Recovered material will be stored in a dedicated containment area before it can be shipped offsite.</p>

For an AN spill to occur during transportation, the explosives transport truck would need to be in a significant collision/incident since both the AN prill tote bags and shipping container would need to rupture for AN prill to be released into the environment. If this did occur, the spill would pose minimal risk to the surrounding environment unless the AN prill was deposited directly into a stream/water body. Due to limited open-water season at the Project, the risk of spills that would involve the deposition of AN prill directly into a stream/water body are anticipated to be low.

Accidental spills of AN from an explosives truck shall be immediately cleaned-up, reported to the Environment Department, and logged as required by regulations. A copy of a Standard NT-NU Spill Report Form is provided in Appendix D. Clean-up shall be completed by personnel licensed to handle explosives and the contaminated material will be handled and stored in a designated area until the contaminated material can be shipped offsite.

SCENARIO 2: SPILL OF EMULSION

~~Emulsion materials are acutely toxic to aquatic life and therefore could have adverse impacts on fish and other aquatic life if released to surrounding water bodies and streams. Because of this, emulsion material is stored in either the form of pre-packaged explosives in an explosives magazine or at the Project's emulsion plant where spills can be completely contained within the confines of the plant. Spills within the emulsion plant would be cleaned up by employees and contractors licensed to handle explosives. Clean-up materials will be segregated in an appropriate area; incompatible materials will not be stored together, pursuant to material MSDSs and WSCC regulations.~~

	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u> Revision: <u>For review purposes only</u> 4	Page 32 of 115
	Environment	Document #: BAF-PH1-830-P16-0036	

In the event of an emulsion spill, a spill report will be completed by the explosives contractor with the support of the Environment Department. If a spill exceeds reportable quantities, notification shall be made under the spill reporting regulations applicable to Nunavut.

SCENARIO 3: SPILL OF PRE-PACKAGED EMULSION DURING TRANSPORT

Given the precautions taken in the design of the explosives storage facilities and the suitability of containers used for storage and transport, major spills are most likely to be caused by traffic incidents during the transportation of the pre-packaged explosives by transport truck. If such an incident occurs, explosive materials will be recovered by employees or contractors licensed to handle explosives and the contaminated material will be handled and disposed of in a designated area until it can be shipped offsite.

Description of Incident	Emulsion transport truck rolls over or collides with another vehicle or object. Transport container as well as pre-packaged explosives.
Potential Causes	Collision, poor driving conditions or visibility, equipment error, operator error.
Product Spilled	AN emulsion
Maximum Volume Spilled	10,000 L
Estimated Time to Spill Entire Volume	Instantaneous
Immediate Receiving Medium	Depending on the location either on land or in a water body.
Most Probable Direction of Spill Migration	Depending on location
Distance and Direction to Closest Body of Water	Depending on location
Resources to Protect	Nearby water bodies
Emergency Response Level	Level 2 (medium) or Level 3 (high) – Refer to ERP (depends on quantity and whether there is potential for impact to water bodies and to affect public safety)
Estimated Emergency Spill Response Time	15 – 60 minutes
Spill Response Procedures	a) In the event that a spill occurs on land, the Emergency Response Team will be contacted immediately. If the driver is unharmed he/she will act as the spill response first responder. All spilled prills will be contained, with the use of berms if required. Once the spill has been contained the emulsion will be cleaned up by a trained crew and stored in a dedicated contained location until the cleanup materials can be shipped offsite. b) In the event that a spill occurs in water, the Emergency Response Team will be contacted immediately. Spilled materials will be contained and recovered using booms and other spill control devices. Recovered material will be stored in a dedicated containment area until it can be shipped offsite.

SCENARIO 4: SPILL OF EMULSION DURING BLAST HOLE LOADING

Emulsion spills are unlikely to occur during blast hole loading given the nature of emulsion explosives. Pre-packaged explosives are in self-contained tubes that are simply dropped into the hole. Emulsion from the emulsion plant is pumped into blast holes via hose lines on the emulsion pump truck.

Description of Incident	Emulsion spilled while loading emulsion in blast holes.
Potential Causes	Operator error, mechanical failure or malfunction
Product Spilled	AN emulsion
Maximum Volume Spilled	<10 kg
Estimated Time to Spill Entire Volume	Instantaneous
Immediate Receiving Medium	Land
Most Probable Direction of Spill Migration	Not expected to migrate due to its high viscosity.
Distance and Direction to Closest Body of Water	Depending on location
Resources to Protect	Nearby water bodies
Emergency Response Level	Level 1 (low) – Refer to ERP.
Estimated Emergency Spill Response Time	5 minutes
Spill Response Procedures	In the event that a spill occurs on land, the blasting technician will respond. The spilled emulsion will immediately be cleaned up and stored in a dedicated contaminated explosives area until it can be shipped offsite.

7.3 UNTREATED SEWAGE

The Mine Site and Milne Port are equipped with dedicated sewage treatment plants (STP; Refer to Baffinland's Fresh Water Supply, Sewage and Wastewater Management Plan; BAF-PH1-830-P16-0010) equipped with Membrane Bio Reactor (MBR) technology. Sewage produced at Steensby Port will be treated using a latrine system or transported to Milne Port or the Mine Site for treatment.

7.3.1 POTENTIAL SPILLS SCENARIOS RELATED TO SEWAGE

SCENARIO 1: SEWAGE SPILL AT MILNE PORT

Description of Incident	Spill from MBR holding tank.
Potential Causes	Pipe or mechanical failure, human error.
Product Spilled	Raw sewage
Maximum Volume Spilled	48,000 L
Estimated Time to Spill Entire Volume	60 minutes
Immediate Receiving Medium	Milne Port
Most Probable Direction of Spill Migration	Milne Port or nearby stream east of camp pad.
Distance and Direction to Closest Body of Water	150 m
Resources to Protect	Milne Port
Emergency Response Level	Level 1 (low) or 2 (medium) – Refer to ERP (depends on quantity and whether there is potential for impact to a nearby water body and to public safety)
Estimated Emergency Spill Response Time	15 minutes after spill is identified.
Spill Response Procedures	Contain with berms or sumps/ditches. Direct spill to the desired location and remove recoverable sewage with a vacuum truck. Transport recovered sewage to PWSP or return to the STP for treatment. Resurface area with fresh soil.

SCENARIO 2: MINE SITE SEWAGE SPILL

Description of Incident	Spill from STP.
Potential Causes	Piping and/or tank failure.
Product Spilled	Raw sewage
Maximum Volume Spilled	48,000 L
Estimated Time to Spill Entire Volume	60 minutes
Immediate Receiving Medium	Soil
Most Probable Direction of Spill Migration	Downstream and into a local depression east of the Mine Site STP. This local depression dries up in the summer and intercepts the maximum spilled volume.
Distance and Direction to Closest Body of Water	200 m
Resources to Protect	One stream (West of STP) and Sheardown Lake.
Emergency Response Level	Level 1 (low) or 2 (medium) – Refer to ERP (depends on quantity and whether there is potential for impact to a water body and/or to public safety)
Emergency Spill Response Time	15 minutes after spill.
Spill Response Procedures	Contain with berms or sumps/ditches. Direct spill to the desired location and remove recoverable sewage with a vacuum truck. Transport recovered sewage to PWSP or return to the STP for treatment. Resurface area with fresh soil.

SCENARIO 3: SEWAGE TRANSPORT TRUCK SPILL

Description of Incident	Spill from the tanker truck transporting raw sewage from temporary camp to Project STP.
Potential Causes	Road incident
Product Spilled	Raw sewage
Maximum Volume Spilled	10,000 L
Estimated Time to Spill Entire Volume	Depends on severity of accident and damage sustained by the tanker truck.
Immediate Receiving Medium	Soil
Distance and Direction to Closest Body of Water	Depends on location of accident
Resources to Protect	Soil and nearby lakes, rivers and streams
Emergency Response Level	Level 1 (low) or 2 (medium) – Refer to ERP (depends on quantity and whether there is potential for impact to water body and /or to public safety)
Estimated Emergency Spill Response Time	Immediate if driver is not injured; up to 60 minutes for ERT Team to arrive.
Spill Response Procedures	Report spill and contain with berms or sumps/ditches. Direct spill to the desired location and remove recoverable sewage with a vacuum truck. Transport recovered sewage to PWSP or return to the STP for treatment. Resurface area with fresh soil.

	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 35 of 115
	Environment	Revision: For review purposes only ⁴	Document #: BAF-PH1-830-P16-0036

SCENARIO 4: MOBILE CAMP SEWAGE HOLDING TANK SPILL

<u>Description of Incident</u>	<u>Spill from sewage holding tanks for mobile construction camps.</u>
<u>Potential Causes</u>	<u>Piping and/or tank failure.</u>
<u>Product Spilled</u>	<u>Raw sewage</u>
<u>Maximum Volume Spilled</u>	<u>24,227 L</u>
<u>Estimated Time to Spill Entire Volume</u>	<u>30 minutes</u>
<u>Immediate Receiving Medium</u>	<u>Soil</u>
<u>Distance and Direction to Closest Body of Water</u>	<u>Depends on location of mobile camp at time of spill.</u>
<u>Resources to Protect</u>	<u>Soil and nearby lakes, rivers and streams</u>
<u>Emergency Response Level</u>	<u>Level 1 (low) or 2 (medium) – Refer to ERP (depends on quantity and whether there is potential for impact to water body and /or to public safety)</u>
<u>Estimated Emergency Spill Response Time</u>	<u>15 minutes after spill</u>
<u>Spill Response Procedures</u>	<u>Report spill and contain with berms or sumps/ditches. Direct spill to the desired location and remove recoverable sewage with a vacuum truck. Transport recovered sewage to PWSP or return to the STP for treatment. Resurface area with fresh soil.</u>

7.4 LUBRICANTS AND OILS

Lubricants and machinery oils will be used on site throughout the life of the Project. Lubricants and oils have the ability to contaminate waterways and soils if exposed to the environment. However, the risk of a lubricant or oil spill on site is expected to be minimal. Lubricants and oils shall be handled by trained personnel following established procedures and guidelines. Lubricants are stored and transported in small quantities. In the event of a spill, appropriate spill response equipment and procedures, as outlined in this Plan, will be readily available and utilized to minimize the impact of the spill.

7.4.1 POTENTIAL SPILL SCENARIOS RELATED TO LUBRICANTS AND OILS


SCENARIO 1: CONTAINMENT PUNCTURE DURING TRANSPORT

The most likely spill scenario to occur with regards to lubricants and oils is a puncture of an individual storage unit during transport. Lubricants and oils are typically stored in 1 cubic metre containers (1,000 L totes). When lubricants or oils are required, single totes are removed from their storage location with a forklift. In the event that the container/tote is punctured by the forklift, a maximum spill volume of 1,000 L could potentially occur. The likelihood of this occurring is minimal as all equipment operators will be trained in proper lubricant and oil transfer procedures (i.e. use of spotter). In the unlikely event that a tote is punctured, the operator will identify the puncture and will immediately proceed to contain the spill and implement mitigation procedures.

Description of Incident	Lubricant or oil container is punctured by a forklift during transport
Potential Causes	Operator error. Equipment failure.
Product Spilled	Lubricant or oil.
Maximum Volume Spilled	1,000 L
Estimated Time to Spill Entire Volume	5 minutes
Immediate Receiving Medium	Land
Most Probable Direction of Spill Migration	Depends on area

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.


	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 36 of 115
	Environment	Revision: For review purposes only 4	Document #: BAF-PH1-830-P16-0036

Description of Incident	Lubricant or oil container is punctured by a forklift during transport
Distance and Direction to Closest Body of Water	Depends on area
Resources to Protect	Any nearby water bodies.
Emergency Response Level	Level 1 (low) or 2 (medium) – Refer to ERP (depends on quantity and whether there is potential for impact to a nearby water body)
Estimated Emergency Spill Response Time	>5 minutes
Spill Response Procedures	If the forklift driver is not injured, he will act as a first responder and immediately initiate the spill response utilizing the spill kit kept in the work area. The spill will be contained through the use of temporary berms and ditches until it can be removed and transported to an appropriate storage facility. Contaminated soil will be removed and transported to the Project's landfarm facilities for remediation.

SCENARIO 2: SPILL DURING EQUIPMENT ROLLOVER

It is possible that the mobile equipment carrying a container of lubricant or oil could rollover or have a collision causing a spill of the entire 1 cubic metre tote. In the event that this occurs, the spill will be managed the same way as detailed above. The event of a rollover is unlikely given the safe driving procedures, speed limits, road signage and training procedures established and enforced at the Project. In addition to this, all lubricant and oil containers will be securely fastened inside the vehicle in which they are being transferred, when applicable, making a spill unlikely.

Description of Incident	Spill during equipment rollover
Potential Causes	Operator error. Equipment failure. Poor visibility or adverse weather. Collision.
Product Spilled	Lubricant or oil.
Maximum Volume Spilled	1,000 L
Estimated Time to Spill Entire Volume	Instantaneous
Immediate Receiving Medium	Land
Most Probable Direction of Spill Migration	Depends on area
Distance and Direction to Closest Body of Water	Depends on area
Resources to Protect	Any nearby water bodies.
Emergency Response Level	Level 1 (low) or 2 (medium) – Refer to ERP (depends on quantity and whether there is potential for impact to a nearby water body)
Estimated Emergency Spill Response Time	15 – 60 minutes
Spill Response Procedures	<p>If the driver is not injured, he/she will act as the first responder and immediately initiate the Spill Contingency Plan SCP as defined in Section 1, utilizing the spill kit kept in the work area or on the mobile equipment. The spill will be contained through the use of temporary berms and ditches until it can be removed and transported to an appropriate storage facility. Contaminated soil will be removed and transported to the Project's landfarm facilities for treatment.</p> <p>In the event a spill occurs in a water body, the lubricants and oils will be contain and recovered downstream as described in Section 4, with shorelines protected using sorbent booms. All free-product will be collected for temporary storage and soiled shorelines cleaned-up. If the mobile equipment operator is not injured, he will act as a first responder and immediately initiate the Spill Contingency Plan SCP as defined in Section 1, utilizing the spill kit kept in the work area or on the mobile equipment. Once the spill is contained, contaminated water and recoverable free product will be removed by vacuum truck and</p>

	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u>	Page 37 of 115
	Environment	Revision: <u>For review purposes only</u> 4	Document #: BAF-PH1-830-P16-0036

Description of Incident	Spill during equipment rollover
	transported to an appropriate storage facility for shipment offsite or treatment using the Project's onsite oily-water treatment facilities.

SCENARIO 3: SPILLS DURING TRANSFER

It is possible that a minor spill may occur during the transfer of lubricants or oil to equipment. This will most likely be the result of equipment failure, such as pumps or hoses, or operator error.


As proper maintenance procedures will be in place to reduce the chance of equipment malfunctions, along with proper training procedures, it is unlikely a spill will occur in this event. Additionally, the use of spill trays will be mandatory during all oil and lubricant transfers.

Description of Incident	Spill during transfer
Potential Causes	Operator error. Pump failure. Hose failure.
Product Spilled	Lubricant or oil.
Maximum Volume Spilled	1,000 L
Estimated Time to Spill Entire Volume	5 – 15 minutes
Immediate Receiving Medium	Land
Most Probable Direction of Spill Migration	Depends on location
Distance and Direction to Closest Body of Water	Depends on location
Resources to Protect	Nearby water bodies.
Emergency Response Level	Level 1 (low) or 2 (medium) – Refer to ERP (depends on quantity and whether there is potential for impact to water body)
Estimated Emergency Spill Response Time	5 -15 minutes
Spill Response Procedures	<p>If the spill occurs in a maintenance building it will be contained as maintenance buildings are lined or equipped with concrete floors, preventing any contaminants from reaching the natural environment. The spill will be cleaned up by qualified personnel and disposed of as a hazardous material.</p> <p>If a spill occurs during transfer, all transfer activities will be halted immediately and clean-up of the spill with the available spill kit will commence. The spill will be contained using berms, ditches, sumps and booms where necessary. The downstream wall of trenches will be lined with plastic material to ensure unexposed soil does not come in contact with the lubricant or oils. Absorbent material will be utilized where required. Once the spill has been contained, spilled materials will be removed by a vacuum truck and brought to an appropriate storage/treatment facility. Contaminated soil will be removed and brought to the Project's landfarm facilities for treatment.</p>

SCENARIO 4: SPILLS DURING CRUSHING OPERATIONS

It is possible that spills will occur during crushing operations at the Mine Site Crushing Facility. This will most likely be the result of equipment failure such as ruptured hoses or a rupture to the oil reservoir.

Preventative maintenance, in addition to proper equipment warm-up procedures will reduce the likelihood of spills. Several spill kits are located at the Crushing Facility and shall be maintained at all times. The spill kits are equipped with absorbent pads, booms, and PPE to effectively respond to a spill.

	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u> Revision: <u>For review purposes only</u> 4	Page 38 of 115
	Environment	Document #: BAF-PH1-830-P16-0036	

Description of Incident	Release of Hydraulic Fluid from Cone Crusher
Potential Causes	Hose failure. Rupture of oil reservoir
Product Spilled	Lubricant Oil
Maximum Volume Spilled	600 L
Estimated Time to Spill Entire Volume	5 minutes
Immediate Receiving Medium	Land
Most Probable Direction of Spill Migration	Ore pad is a level surface of medium to fine grain gravel/crushed ore.
Distance and Direction to Closest Body of Water	Depends on location - > 31 m
Resources to Protect	Nearby water bodies - > 31 m
Emergency Response Level	Level 1 (low) or 2 (medium) – Refer to ERP (depends on quantity and whether there is potential for impact to nearby water bodies)
Estimated Emergency Spill Response Time	5 – 15 minutes
Spill Response Procedures	<p>Hydraulic fluid/oil will spill to the medium – fine gravel/crushed iron ore ground surface below the ore crusher, at the ore pad.</p> <p>In the event of a release of lubricant fluid from the cone-crusher tank, (max volume of 600L) crushing activities will be halted immediately and clean-up of the spill with available spill kit(s) will commence. The spill will be contained using absorbent booms where necessary. The ore crushing pad is a level surface of medium – fine grain gravel/ore fines, therefore contaminant migration is not of great concern. Absorbent material (pads) will be also be used where required.</p> <p>When the spill is contained, the layer of contaminated gravel/crushed ore fines will be excavated and brought to an appropriate storage facility for eventual shipment offsite or treatment at the Project's landfarm facilities. New gravel will then be placed over the exposed area.</p>

–SCENARIO 5: SPILLS DURING RAILWAY OPERATIONS

It is possible that a spill of railway lubricant or oil ~~will~~ could occur during railway operations or a rail accident or derailment.


Description of Incident	Spill during railway operation
Potential Causes	<u>Operator error. Equipment failure. Poor visibility or adverse weather. Collision.</u>
Product Spilled	<u>Lubricant or oil.</u>
Maximum Volume Spilled	<u>1,613 L</u>
Estimated Time to Spill Entire Volume	<u>Instantaneous</u>
Immediate Receiving Medium	<u>Depends on location</u>
Most Probable Direction of Spill Migration	<u>Depends on area</u>
Distance and Direction to Closest Body of Water	<u>Depends on area</u>
Resources to Protect	<u>Any nearby water bodies.</u>
Emergency Response Level	<u>Level 1 (low) or 2 (medium) – Refer to ERP (depends on quantity and whether there is potential for impact to a nearby water body)</u>
Estimated Emergency Spill Response Time	<u>15 – 60 minutes</u>
Spill Response Procedures	<u>If the amount of petroleum products spilled is less than 100 litres (22 gallons) and is not a threat to a water body, the spill should be immediately contained and cleaned in the field as soon as possible.</u> <u>If the spill was caused in a derailment, the derailment procedure will be activated simultaneously (refer to the Railway Emergency Response Plan).</u>

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 39 of 115
	Environment	Revision: <u>For review purposes only</u> 4	Document #: BAF-PH1-830-P16-0036

<u>Description of Incident</u>	<u>Spill during railway operation</u>
	<p>In the event a spill occurs in a water body, the lubricants and oils will be contain and recovered downstream as described in Section 4, with shorelines protected using sorbent booms. All Free-product will be collected for temporary storage and soiled shorelines cleaned-up. If the mobile equipment operator is not injured, he will act as a first responder and immediately initiate the SCP as defined in Section 1, utilizing the spill kit kept in the work area or on the mobile equipment. Once the spill is contained, contaminated water and recoverable free product will be removed by vacuum truck and transported to an appropriate storage facility for shipment offsite or treatment using the Project's onsite oily-water treatment facilities.</p> <p>Additional detail is provided in the Railway Emergency Response Plan.</p>

	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 40 of 115
	Environment	Revision: For review purposes only ⁴	Document #: BAF-PH1-830-P16-0036

8 REPORTING REQUIREMENTS

Internal spill reports are written by the department responsible for the spill and are provided to the Environment Department through Baffinland's Incident Reporting System. However, all external reporting requirements (i.e. CIRNAC, NWB, NIRB, ECCC) shall be the responsibility of the Environment Department.


Table 8-1 provides guidance pertaining to spill reporting and associated clean-up procedures for site personnel. Departments responsible for the spill are required to complete clean-up activities using the resources required. In the event of a Level 2 or 3 spill response, initial assistance and resources shall be provided by the ERT.

TABLE 8-1: GENERAL SPILL REPORTING AND CLEAN-UP REQUIREMENTS

Spill on Land		
Volume	Required Documentation	Spill Clean-up
Less than 1 L	Verbal or email report	Environment Department will advise if needed.
Greater than 1 litre and less than 100 litres	<ul style="list-style-type: none"> - Photos of Spill and Clean-up - Baffinland Incident Investigation Report 	Spills greater than 30 litres will have an Environmental Monitor present to advise clean-up efforts.
Greater than 100 L	<ul style="list-style-type: none"> - Photos of Spill and Clean-up - Baffinland Incident Investigation Report - NT-NU Spill Report - Notification to regulators and the Spill Line 	Environmental Superintendent or his/her designate will lead and advise clean-up efforts.
Spill on Water Body or Watercourse		
Volume	Required Documentation	Spill Clean-up
Any volume	<ul style="list-style-type: none"> - Photos of Spill and Clean-up - Baffinland Incident Investigation Report - NT-NU Spill Report - Notification to regulators and the Spill Line 	Environmental Superintendent or his/her designate will lead and advise clean-up efforts.
<p><u>If the spill resulted in:</u></p> <ul style="list-style-type: none"> - the death of a person - the treatment of a person's injuries by a health care professional - an evacuation or shelter in place - the closure of a facility, road, main railway line, main waterway <p><u>Or if:</u></p> <ul style="list-style-type: none"> - the means of containment has been damaged so that its integrity is compromised - the center sill or stub sill of a tank car is broken or has a crack in the metal of at least 15 cm 		
Volume	Required Documentation	Spill Clean-up
Any volume	<ul style="list-style-type: none"> - Release or Anticipated Release Report – Road, Rail or Marine (see Appendix F for required information); submit to CANUTEC at 1-888-226-8832 and the consignor) - 30-Day Follow-up Report Form TP16-0086 (included in Appendix F); Submit to the Director General of the Transportation of Dangerous Goods Directorate 	Environmental Superintendent or his/her designate will lead and advise clean-up efforts.

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 41 of 115
	Environment	Revision: For review purposes only ⁴	Document #: BAF-PH1-830-P16-0036

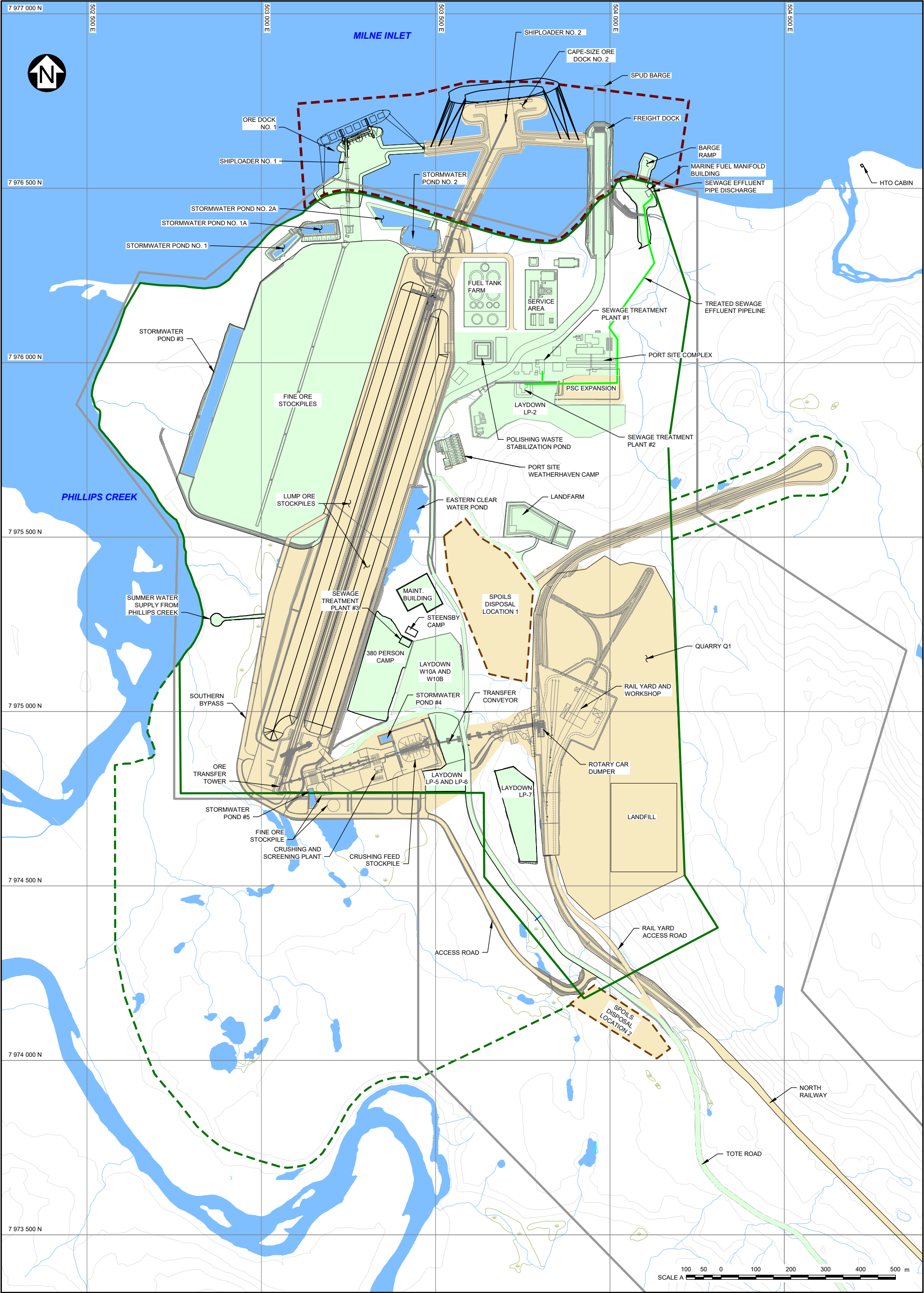
Note:

1 – A guide to completing the 30-Day Follow-up Report Form TP16-0086 is also included in Appendix F.

	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 42 of 115
	Environment	Revision: For review purposes only 4	Document #: BAF-PH1-830-P16-0036

Appendix A

Site Layouts (Milne Port and Mine Site)



LEGEND:

- WATER
- SPOILS DISPOSAL LOCATION
- TREATED SEWAGE EFFLUENT PIPELINE
- APPROVED INFRASTRUCTURE
- ADDITIONAL PHASE 2 PROPOSAL INFRASTRUCTURE
- COMMERCIAL LEASE BOUNDARY
- PROJECT DEVELOPMENT AREA (PDA)
- PDA EXPANSION FOR PHASE 2 PROPOSAL
- FORESHORE LEASE BOUNDARY / MARINE PDA
- ROAD

NOTES:

- COORDINATE GRID IS UTM NAD83 ZONE 17N.
- TOPOGRAPHY PROVIDED BY EAGLE MAPPING (2005).
- CONTOUR INTERVAL IS 10 METRES.
- PROPOSED MILNE PORT INFRASTRUCTURE PROVIDED BY HATCH APRIL, 2019.

BAFFINLAND IRON MINES CORPORATION

MARY RIVER PROJECT

**MILNE PORT LAYOUT
PHASE 2 PROPOSAL**

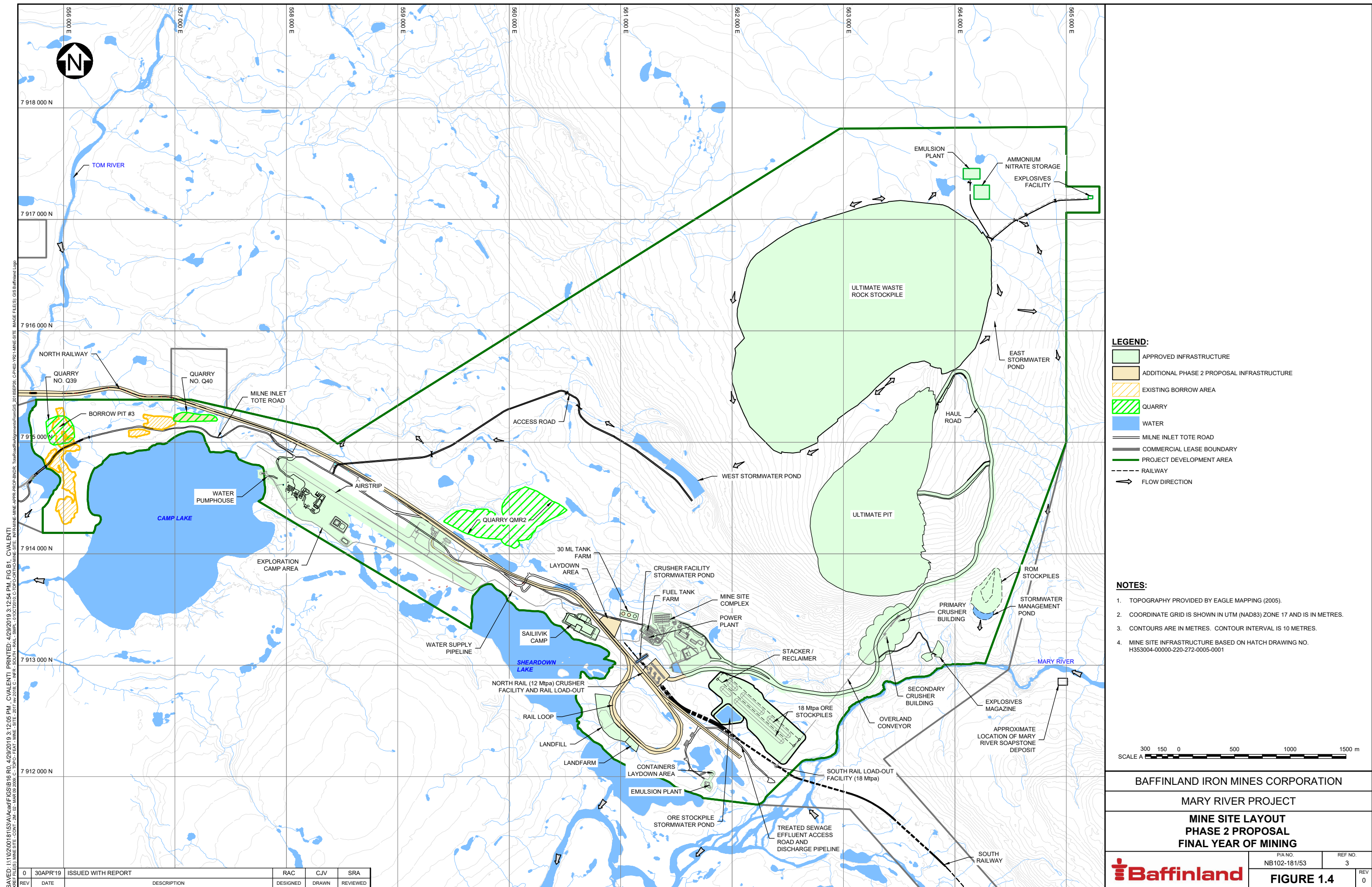
P/A NO.
NB102-181/53

REF NO.
3

FIGURE 1.3

REV
0

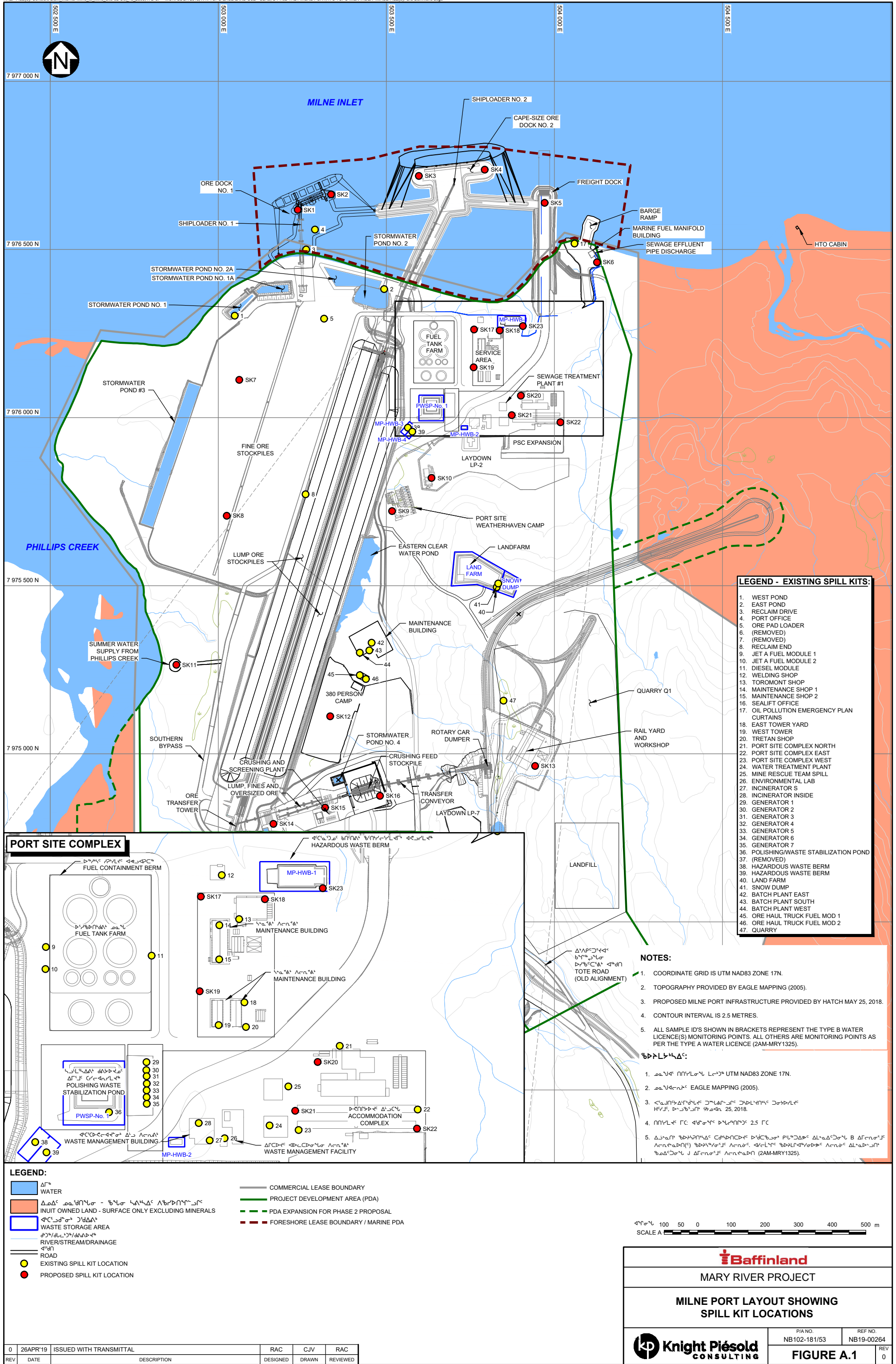
0	30APR'19	ISSUED WITH REPORT	RAC	CJV	SRA
REV	DATE	DESCRIPTION	DESIGNED	DRAWN	REVIEWED

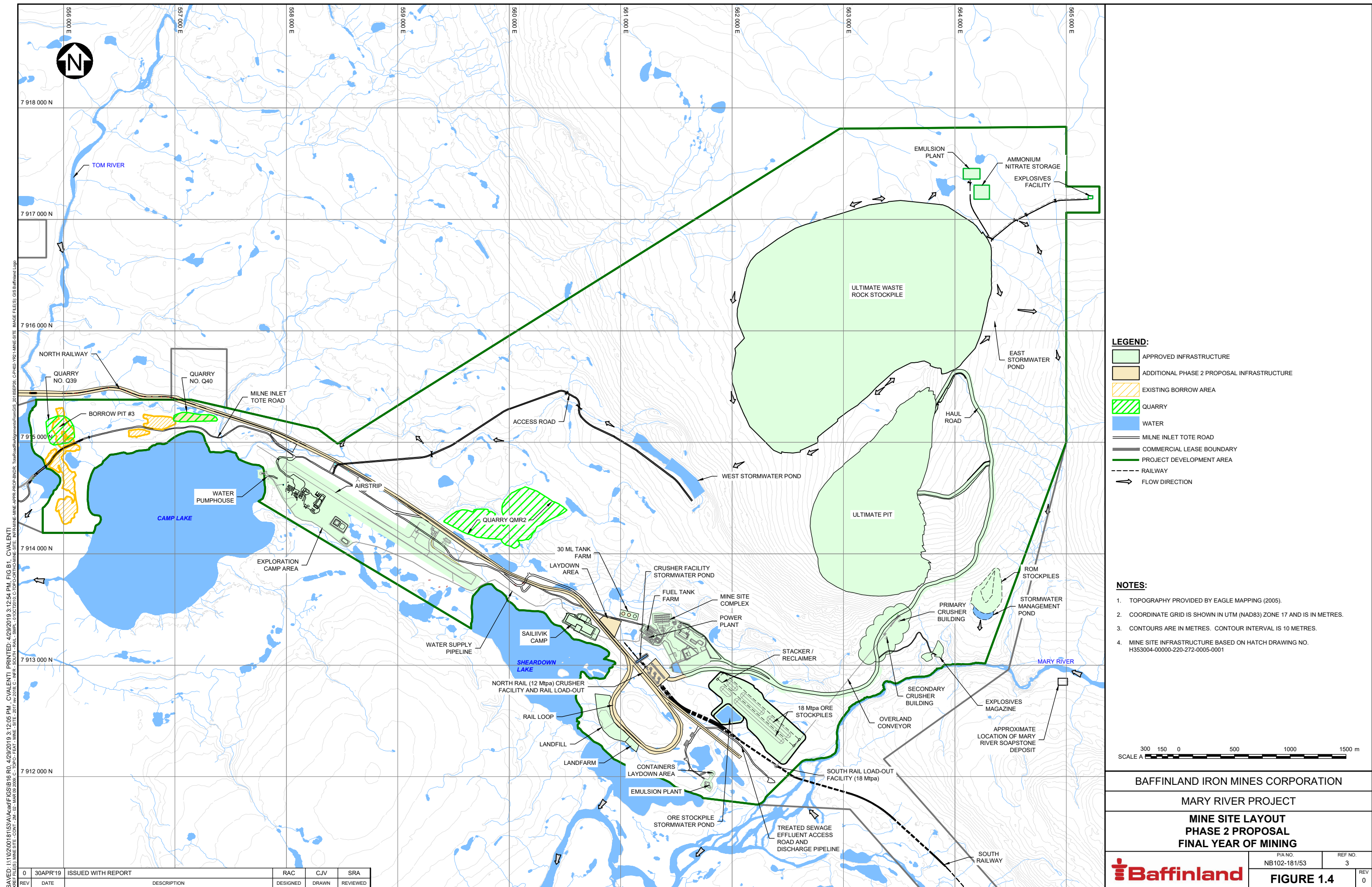


	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 45 of 115
	Environment	Revision: For review purposes only 4	Document #: BAF-PH1-830-P16-0036

Appendix B

Emergency Spill Kit Supplies and Locations and Emergency Response Truck Inventory





	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 48 of 115
	Environment	Revision: For review purposes only 4	Document #: BAF-PH1-830-P16-0036

MRT EMERGENCY RESPONSE TRUCK

Right Side:



Left Side:



The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.


	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 49 of 115
	Environment	Revision: For review purposes only 4	Document #: BAF-PH1-830-P16-0036

Table B-1 – Inventory of Emergency Response Trucks

Compartment	Amount	Items
Cabin	1	Safety Glasses clear box
	1	Safety glasses Darks box
	1	Binoculars
	1	Rolls of duck tape
	1	Emergency Road kit
	1	First Aid kit
	2	Care Flare
	1	Thermal Imaging Camera
	2	Caution Tape
	1	2.5 pound fire extinguisher
1 Left Compartment	7	SCBA
	18	SCBA Cylinder
	25	SCBA Face masks
	1	RIT pack
	2	Wheel Chock
2 Left Compartment	2	Shovel (Spade, Shovel)
	2	Rakes
	1	Cable power puller
	1	Saws all (reciprocating saw)
	2	Saws all blades (kits)
	3	Drill bit set
	2	Cordless drill
	1	Socket set
	1	Tool box
	2	bolt cutters (Large/Small)
	1	D size 12 pack batteries
	1	C Size 12 pack Batteries
	3	9 Volt Batteries
	1	4 AAA Batteries
	6	Led head liters with 4AAA Batt
	1	4 AA batteries
	1	sledge hammer
	1	Haligan bar
	3	Big axe
	4	Winter Gloves
	1	Steel jerry can (gas)
	1	Plastic jerry can (gas)
	1	Portable fan
	1	Power pack for jaws of life
	1	Miscellaneous oils
	1	Airstar Light
	2PG	Balaclava
	1	Standard set wrenches
		work gloves

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

Compartment	Amount	Items
3 Left Compartment	1	Portable fan (electric)
	4	Tarps
	3	Various Valves and adaptors
	1	hydraulic air hammer
	1	Spreader
	1	Cutter
	1	Pincher
	1	Brace bar (hydraulic brace)
	2	Air Bags Hoses
	1	Chainsaw
	1	Chop saw
	1	1/2 Impact gun
	1	Gloves
	1	Grizzly Strots
	3	Hydraulic Hoses
4 Left Compartment	2	1.5 inch hose (yellow)
	4	1.5 inch hose (red)
	2	2.5 inch hose (white)
	2	Pistol Grip 2.5 hose nozzle
	1	Rubber hose
	1	Splitter 2.5" to 1.5"
	1	Y valve with adaptor
	3	Pistol Grip 1.5 inch nozzle
	4	Mustang Suits
	4	Rollgliss R550 Kit
	4	1.5 inch portable spray nozzle
	1	Victaulic coupler
		Wood (cribbing)
5 Left Compartment	2	Black Mustang Survivor Vest
	1	Pulley's carabineers, bag
	1	Prusik
	2	Mini 4:1
	3	Bag Carbiner
	4	Climbing harness
	1	Bag webbing & slings
	4	Beam Clamps
	8	Helmets & Gloves
	2	400' Rope Bags
	5	HH Life Vests
	2	Mustang Survival Suits
	3	Mustang Self Inflatable
	6	Orange PFD Vest
	3	Petzl AVAO Harness
	4	Boots (pairs)
	2	Rescue rope (200 foot bags)
	1	Rescue Rope 4:1 (200')

Compartment	Amount	Items
	2	Rope abrasion protection
	3	Teraphrene Boots
	2	Rescue ring
	4	"Confined space" SCBA
	2	Telescopic reach pole
1 Right Compartment	2	Back Boards
	2	Ferno Head Immobilizers
	2	Ked Extrication Kits
	1	Trauma Kit
	3	Blankets
	6	Insulated Coveralls
	4	Raguler Coveralls
	6	Hih-viz Vests
	4	Granola bars Box
	5	ferno spider straps
	3	Ferno CPR masks
	1	IC Command Center Board
	2	Box Safety Glasses
	1	Misc. rigid splints
	1	RsQmax Kit
	2	Padded Split Kits
	7	Folding stretchers
	2	Basket Stretcher kits
2 Right Compartment	6	Pylons
	2	padded splint
	5	Pails
3 Right Compartment	3	Grey Spill Pads (Bag)
	3	White Spill Pads (Bag)
	3	Box Absorbent Socks
	1	Plug & dyke
	1	20L Pail Gap Seal
	2	Lithium fire extinguisher
	2	15000 liter Onion bladder
	1	Ferno Stair chair
	4	Magnesium fire extinguisher
4 Right Compartment	1	15000 VSG Bladder
	4	Quatrex bags (white)
	1	Stair Chair
	3	Bladder repair kits
	3	Bladder fitting kit
	1	Mazar Rescue Board
5 Right Compartment	5	Quatrex Bags(white)
	1	spill response generator
	2	Medical disaster kits
	2	Arctic soft extension cords
	2	Chicken wire (roll)

Compartment	Amount	Items
	3	Tarps
	2	2X2 Duck Pond
	5	EXO Fit Harness
	1	Helmet Face Sheild
	15	Long gloves (pair)
	1	Honda GX 270 trash pump
	4	hip wader steel toe
		Tyvek coveralls suits
	1	Funnel
	3	rubber suits
	2	mag Lite Flash lights

Table B-2 – Inventory of Typical Spill Kits

Amount	Description
1	30 Gallon Drum with Lid
50	Sorbent Pads
4	Sorbent Socks
2	Sorbent Booms
1	Shaker of Safety Sorb
1	Neoprene Drain Cover
1	Disposable Bag
2 Pair	Safety Goggles
2 Pair	Nitrile Gloves

* Best efforts are made to ensure spill kits remain fully stocked at their designated locations.

Table B-3: Inventory of Spill Mini-Kits (Available at the Railway Maintenance Building at Milne Port and Mary River)

<u>Box</u>	<u>Amount</u>	<u>Description</u>
<u>1</u>	<u>1</u>	<u>case 42" x 30" x 29 1/2" (55 lbs)</u>
	<u>2</u>	<u>absorbent airbags</u>
	<u>1</u>	<u>absorbent roll 10"</u>
	<u>100</u>	<u>absorbent sheets 18" x 18"</u>
	<u>8</u>	<u>absorbent flanges 48"</u>
	<u>1</u>	<u>absorbent flange 5" x 10'</u>
	<u>1</u>	<u>neoprene cover</u>
	<u>10</u>	<u>bags 6 mil</u>
	<u>2</u>	<u>strong polyethylene sheets 20' x 20</u>
	<u>2</u>	<u>pairs of gloves Solvex</u>
	<u>2</u>	<u>disposable pieces of clothing in Tyvek 2</u>
	<u>2</u>	<u>pairs of security glasses</u>
<u>2</u>	<u>1</u>	<u>case 42" x 30" x 29 1/2" (55 lbs)</u>
	<u>8</u>	<u>absorbent flange 5" x 10'</u>

100

absorbent sheets (17" x 19" x 3/8")


Table B-4: Secondary Intervention Materials and Control Equipment

<u>Amount</u>	<u>Description</u>
<u>1</u>	<u>Alpha Skimmer 1.5" in stainless steel</u>
<u>1</u>	<u>Portable base on wheel with handles</u>
<u>1</u>	<u>10' of suction pipe not floating</u>
<u>1</u>	<u>Coalescing separator 10 GPM (35 gal.)</u>
<u>1</u>	<u>Retention float Mini Boom</u>
<u>1</u>	<u>Manual Beta skimmer</u>
<u>2</u>	<u>30' of pipe 1.5" floating</u>
<u>3</u>	<u>25' of pipe 1.5" pump waste disposal</u>
<u>1</u>	<u>25' of pipe 1.5" separator waste disposal</u>
<u>2</u>	<u>driving belts</u>
<u>9</u>	<u>fast connectors</u>
<u>3</u>	<u>pump replacing bases H-100</u>
<u>1</u>	<u>Gasoline outboard motor Honda 5 hp</u>
<u>4</u>	<u>sealing rings for the cover</u>
<u>1</u>	<u>Pump model H-100 (12 GPM) 250'</u>

	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 54 of 115
	Environment	Revision: For review purposes only ⁴	
		Document #: BAF-PH1-830-P16-0036	

Appendix C

MSDS Inventory

	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019 Revision: <u>For review purposes only</u> 4	Page 55 of 115
	Environment	Document #: BAF-PH1-830-P16-0036	

Name	Manufacturer	Synonyms	Revision Date
EYEWASH	Niagara Pharmaceuticals Inc		07/03/2015
MOLYKOTE 55 O-RING GREASE	The Dow Chemical Company		09/24/2015
AeroShell Grease 7	Shell Canada Products		06/22/2015
CLEANER BLEND 300	ITW Professional Brands		09/10/2015
Flake Calcium Chloride	Sel Warwick	Powdered Calcium Chloride; Calcium Chloride Dihydrate	06/01/2012
MOBIL JET OIL II	Exxon Mobil Corporation		07/09/2015
IFB 23 Tile, Insalcor, JM-20, JM-23, JM-26, JM-28, JM-30, JM- 32, K-20, K-23, K-24, K-25, K-26 , K-28, K-30, SR-90, SR- 99, SR-99-LS, TC-23, TC-26, TJM-26, TJM-28	Morgan Advanced Materials	INSULATING REFRACTORY BRICK	06/01/2015
LIMESTONE	Teichert Aggregates	Aggregate, Aglime, Barn Lime, Coverstone, Flexible Base, Fluxing Agent, Manufactured Sand, Mineral Filler, Screenings, Calcium Carbonate, Calcium Carbonate, LimeRock, Limestone CaCO3	06/01/2015
Antiseptic Skin Cleanser	Canadian Custom Packaging Company		10/05/2012
Black Dashboard Cleaner	Kleen-Flo Tumbler Industries Ltd	Dashboard polish	01/02/2015
SILICA GEL, TLC	Selecto Scientific, Inc.	BIO-SIL* KIESELSAURE (GERMAN)* METASILICIC ACID *	01/22/2011
Uvex Clear Lens Cleaner	Sperian Eye & Face Protection, Inc.	Lens cleaner	10/21/2013
JET A/A-1 AVIATION TURBINE FUEL	Petro-Canada	Jet A-1; Jet A-1-DI; Aviation Turbine Kerosene (ATK); JP-8; NATO F-34; Jet F-34; Aviation Turbine Fuel, Kerosene Type (CAN/CGSB 3.23 & CAN/CGSB 3.24)	05/14/2015
LPS 2 (Aerosol)	LPS LABORATORIES	An industrial lubricant designed to displace moisture from equipment, provide heavy-duty lubrication and rust prevention	10/25/2014
LOCTITE 565 PST PIPE SEALANT	Henkel Canada Corporation		10/20/2014

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

Name	Manufacturer	Synonyms	Revision Date
THREAD SEALANT			
LePage Heavy Duty Contact Cement	Henkel Canada Corporation	Adhesive	11/19/2014
Shell Corena S4 R 46	Shell Canada Products	Compressor oil	12/18/2014
Bulab 5361P	Buckman Laboratories of Canada, Ltd.		12/01/2014
3M AUTO BEDDING AND GLAZING COMPOUND (BLACK) PN 08509	3M Corporation	Sealant	04/06/2015
LOCTITE 510 known as LOCTITE 510 GASKET ELIMINAT	Henkel Canada Corporation	Sealant	03/16/2015
50% Isopropyl Alcohol	Vi-Jon		05/05/2008
TRAXON E SYNTHETIC CD-50	Petro-Canada Lubricants Inc.		02/17/2015
TRAXON E SYNTHETIC 75W-90	Petro-Canada Lubricants Inc.		01/07/2015
HYDREX EXTREME	Petro-Canada Lubricants Inc.		02/12/2015
HEAVY DUTY SYNTHETIC BLEND ATF	Petro-Canada Lubricants Inc.		02/02/2015
Lock-De-Icer	Kleen-Flo Tumbler Industries Ltd	Spray de-icer	01/02/2015
Expo	Dustbane Products Limited		06/01/2015
Shell Gadus S2 V30KXD 1	Shell Canada Products	Automotive and industrial grease	12/18/2014
Shell Air Tool Oil S2 A 32	Shell Canada Products	Machine oil	12/18/2014
PRECISION XL RAIL CURVE GREASE	Petro-Canada Lubricants Inc.		02/27/2015
0.2 NTU RATIO TURBIDITY STANDARD	Reagecon Diagnostics Ltd		08/05/2015
LOCTITE SF 7063 known as Loctite 7063 - GERMAN	Henkel AG & Co. KGaA		06/15/2015
Isopropyl Alcohol 99%	Vi-Jon		03/04/2014
Alcohol 70% Isopropyl	Vi-Jon	First Aid	11/04/2014
Formaldehyde solution 37%	Thermo Fisher Scientific	Formalin; Methanal; Methylene oxide; Oxymethane; Formic aldehyde; Methyl aldehyde, Laboratory chemicals	10/29/2014
Formaldehyde solution 37%	Thermo Fisher Scientific	Formalin; Methanal; Methylene oxide; Oxymethane; Formic aldehyde; Methyl aldehyde, Laboratory chemicals	10/29/2014
Clorox Disinfecting Wipes - Fresh Scent	Clorox Company of Canada, Ltd.	Moistened disinfecting wipes	01/05/2015
LPS 3 (Aerosol)	LPS LABORATORIES		11/10/2014
Formaldehyde, 37 wt% solution	Thermo Fisher Scientific	Formalin; Formol; Methanal (Molecular Biology),	03/06/2015

**Spill Contingency Plan**Issue Date: ~~September 25, 2018~~ May 1, 2019

Page 57 of 115

Revision: For review purposes only4**Environment**

Document #: BAF-PH1-830-P16-0036

Name	Manufacturer	Synonyms	Revision Date
		Laboratory chemicals	
FLEETCOOL EG PREMIX (Ethylene glycol based coolant)	Cummins Filtration	Premixed antifreeze / coolant	02/27/2015
804AA 91% Isopropyl Alcohol	Vi-Jon	First-Aid	07/07/2015
SmokeCheck 25S (Smoke Alarm Tester)	HSI Fire & Safety Group		03/17/2015
S-316	HORIBA, Ltd.		12/25/2014
Stoko Gel Instant Hand Sanitizer	Deb-STOKO USA LLC		06/01/2015
Stoko Gel Free	Deb-STOKO USA LLC		06/01/2015
Iron Ore (Baffinland Iron Mines Corporation)	BAFFINLAND IRON MINES CORPORATION	BAFFINLAND MARY RIVER IRON ORE MARY RIVER LUMP ORE (LUMP: grain size - less than 31.5mm greater than 6.3mm) MARY RIVER FINE IRON ORE (FINES: grain size - less than 6.3mm) BAFFINLAND MARY RIVER IRON ORE, MARY RIVER LUMP ORE (LUMP: grain size - less than 31.5mm greater than 6.3mm), MARY RIVER FINE IRON ORE (FINES: grain size - less than 6.3mm)	07/13/2015
NO. 1 DIESEL FUEL	Exxon Mobil Corporation	Hydrocarbons and Additives, Fuel	06/08/2015
CONSAV 1GL 5600 Floor Paint Safety Yellow	Rust-Oleum Corporation		06/30/2015
# OMC99290 & OMC99291 OFFICE MAX DUSTER 10OZ	EXPONENT MICROPORT INC.	#OMC99290-OMC99291 OFFICE MAX 10OZ PRODUCT	01/01/2015
Sodium Hexametaphosphate (SHMP)	ICL PERFORMANCE PRODUCTS LP	Glass H, Hexaphos, Sodaphos, SHMP; glassy Sodium Phosphate; Sodium Polyphosphate, glassy; Metaphosphoric Acid, Sodium Salt; P60; Graham's Salt	05/18/2015
SODIUM SULFATE	Anachemia Canada	Disodium sulfate, Sodium sulfate anhydrous, Salt cake, Sulfuric acid disodium salt, Sodium sulphate, Thenardite,	03/10/2015

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

Name	Manufacturer	Synonyms	Revision Date
		Mirabilite, AC-8515, AC-8515T, 85330, 85376	
LOCTITE 565 PST PIPE SEALANT h PTFE THREAD SEALANT	Henkel Corporation		09/08/2014
COD TNTPlus, LR (3-150 MG/L)	Hach Company		01/12/2015
Sodium Bicarbonate	Tronox Specialty Alkali Corporation	Baking Soda, Bicarbonate of Soda	04/07/2015
Shell Air Tool Oil S2 A 100	Shell Canada Products		01/12/2015
EL 2007 Non-Flammable Duster Aerosol	Sprayon Products		03/13/2015
Shell Omala S4 GX 150	Shell Canada Products		01/12/2015
3V PRIMER (PVC & CPVC Primer)	SLUYTER CO LTD		05/07/2015
Armor All Original Protectant	The Armor All/STP Products Company		01/31/2015
PURELL Alcohol Hand Sanitizing Wipes	GOJO Industries, Inc.		02/10/2015
Iodine Solution, 5%, Lugol	Thermo Fisher Scientific	Laboratory chemicals	08/18/2014
Fantastik All Purpose Cleaner	Sealed Air Corporation		06/11/2014
Wet Ones Citrus Scent Antibacterial Wipes	Playtex Manufacturing Inc		09/04/2012
Sunlight Liquid Dish - Lemon	Sealed Air Corporation	Dish soap	09/09/2014
BACTOL DISINFECTANT AND SANIT	AVMOR		07/10/2014
CALCIUM HYDROXIDE (LIME WATER)	Anachemia Canada	R-1430, 19195	11/06/2014
Digestion Solution for COD 20-1500 mg/l Range	Hach Company		01/12/2015
SULPHURIC ACID 50%	KENCRO CHEMICALS LIMITED		06/01/2014
HYDROCHLORIC, 0.50 NORMAL	REAGENTS, INC.	Muriatic acid solution, 0.5 Molar	04/23/2015
AmVer High Range Ammonia Test 'N Tube Reagent	Hach Company	Laboratory Use Determination of ammonium nitrogen	08/02/2014
NitraVer X Nitrogen, Nitrate Reagent B	Hach Company		02/02/2015
TOTAL PHOSPHATE TEST KIT	CHEMETRICS, INC.		01/31/2013
Hach One Reference Electrolyte Solution	Hach Company		08/07/2014
Rhodamine WT, 20% solution in water	Thermo Fisher Scientific	Laboratory chemicals	02/10/2015
Buffer Powder Pillows pH 10.01 ± 0.02 @ 25°C	Hach Company		05/29/2014
Buffer Powder Pillows pH 4.01 (+/-) 0.02 @ 25 Degree C	Hach Company	Buffer	07/29/2014
pH 7.00 Buffer Solution	Hach Company		10/23/2014

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

Name	Manufacturer	Synonyms	Revision Date
HI 6031 1413 (Micro)S/cm Standard Solution	HANNA INSTRUMENTS INC		06/13/2013
AMCO CLEAR TURBIDITY STANDARD, 0.0 NTU	GFS Chemicals, Inc.	Reagent for determination of turbidity of liquids	12/16/2014
AMCO CLEAR TURBIDITY STANDARD, 1.0 NTU	GFS Chemicals, Inc.	Reagent for determination of turbidity of liquids	12/17/2014
AMCO CLEAR TURBIDITY STANDARD, 10 NTU	GFS Chemicals, Inc.	Reagent for determination of turbidity of liquids	12/17/2014
AMCO CLEAR TURBIDITY STANDARD, 1000 NTU	GFS Chemicals, Inc.		01/20/2012
Shell Tellus S4 VX 32	Shell Canada Products		12/22/2014
WD-40 Specialist Penetrant	WD-40 Products (Canada) LTD.		01/23/2015
Shell Spirax S6 AXRME 75W-90	Shell Canada Products		01/29/2015
Aluminum potassium sulfate dodecahydrate	Sigma-Aldrich Corporation	Potassium aluminum sulfate dodecahydrate, Alum, Potassium alum	02/27/2015
ICWB LSPR 12PK CAUTION BLUE MARK	Rust-Oleum Corporation		08/26/2014
pr88 - The Wash-Off Hand Protection	URSULA RATH GMBH		04/01/2015
Anti-seize Sealing Compound	Kleen-Flo Tumbler Industries Ltd		01/02/2015
NEW RAPID TAP PASTE	Relton Corporation		03/30/2015
Calcium Chloride 2.5 M	Bio-Rad Laboratories		01/13/2015
Sodium Hypochlorite 12%	Univar Canada Ltd.	Sodium oxychloride; Soda bleach liquor; Javel water; Clorox; Javex	04/03/2014
Shell Donax TC Multiseason	Shell Canada Products		02/09/2015
Air1 Diesel Exhaust Fluid	Yara Belle Plaine, Inc		05/31/2013
HERTEL PLUS DISINFECTANT	Lavo Inc.		10/04/2013
Sulphuric Acid 93%	Benson Chemicals Ltd.	Sulfuric acid, Battery acid, Dihydrogen sulfate, Electrolyte acid, Hydrogen sulfate, Mattling acid, Oil of vitriol, Spirit of sulfur	11/15/2014
PROPANE	Exxon Mobil Corporation	Paraffinic Hydrocarbons, Gas or Liquefied Gas, Chemical feedstock	12/04/2014
Regular Gasoline	Irving Oil Refining G.P.	Natural gasoline, Automotive gasoline, Fuel	10/15/2014
Methanol	INTERSTATE CHEMICAL CO	4Z0A reagent#5/acetone alcohol/AI3- 00409/alcohol C1 /alcohol, methyl /carbinol/ caswell No 552 / coat-B1400 / colonial spirit / colonial spirits / Columbian spirit / Columbian spirits / EPA pesticide	11/24/2014

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.


Name	Manufacturer	Synonyms	Revision Date
		chemical code 053301 / eureka products criosine	
Ammonium Nitrate	CAROLINA BIOLOGICAL SUPPLY COMPANY	Nitric Acid, Ammonium Salt	09/03/2014
Shell Rotella T Triple Protection 15W-40	Shell Canada Products		12/18/2014
Safe -T-Brake	Kleen-Flo Tumbler Industries Ltd		01/02/2015
EP61 GLASS & SURFACE CLEANER	AVMOR		09/25/2014
FRIENDLY AIR	Dustbane Products Limited		09/01/2014
CITRANET LEMON LAUND.POWD.DET.	NORCHEM DIVISON DE AVMOR		07/16/2014
TIP TOP SOLUTION STL-RF	REMA TIP TOP AG		04/01/2014
TIP TOP SOLUTION HL-T	REMA TIP TOP AG		04/01/2014
International Thinner-Eqpt Cleaner	International Paint Limited		02/20/2013
International Thinner-Eqpt Cleaner	International Paint Limited	Thinner	05/15/2013
Interplus 356 Aluminium Part A	International Paint Limited		02/04/2014
Interplus 356 Part B	International Paint Limited		05/02/2014
Interthane 990 Base Light Part A	International Paint Limited		12/03/2014
INTERTHANE 990 PART B	International Paint Limited		06/18/2014
Loctite 7063	Henkel Limited	Solvent based cleaner	06/27/2014
Loctite 7063 - FRENCH	Henkel Technologies France SAS	Dégraissant à base de solvants	06/27/2014
Loctite 586 - GERMAN	Henkel AG & Co. KGaA		02/04/2014
404 Quick Set Instant Adhesive	Henkel Corporation		08/28/2014
LPS ChainMate	LPS LABORATORIES		06/29/2014
LePage PL9000 Heavy Duty Construction Adhesive	Henkel Canada Corporation		06/02/2014
LOCTITE 242 THREADLOCKER	Henkel Corporation		08/21/2014
Toner WorkCentre 7525, WorkCentre 7530, WorkCentre 7535, WorkCentre 7545, WorkCentre 7556	Xerox Corporation		08/20/2013
Drum Cartridge for WorkCentre 7525, WorkCentre 7530, WorkCentre 7535, WorkCentre 7545, WorkCentre 7556	Xerox Corporation		10/17/2013
Expo White Board (Care) Cleaner, Expo White Board (Care) Cleaning Wipes	Newell Rubbermaid		03/05/2013
EP70 WASHROOM CLEANER	AVMOR		01/10/2014
XIRTEC 11 GRY Low VOC PVC Plastic Pipe Cement	IPS Corporation		06/12/2013
MAGIC FOG-BE-GONE LENS CLEANING ANTI-STAT, ANTI- FOG FLUID	MAGIC SAFETY PRODUCTS		05/04/2013
Formazin Turbidity Standard, 4000 FNU	Hach Company		04/17/2014

Name	Manufacturer	Synonyms	Revision Date
SUPER DOUCET MOUSSE	Groupe Savon Olympique Inc.	White antibacterial foam hand and body soap	03/18/2013
SBS 40 Medicated Skin Cream	Deb USA, Inc.		12/31/2013
DOW CORNING 736 HEAT RESISTANT/SEALANT	The Dow Chemical Company		06/26/2013
DOW CORNING 732 MULTI - PURPOSE SEALANT CLEAR	The Dow Chemical Company		04/05/2013
DEVCON Flexane High Performance Putty - KIT	ITW Professional Brands		12/30/2012
262 Threadlocker Permanent Strength	Henkel Canada Corporation		01/09/2014
LOCTITE 262 THREADLOCKER HIGH STRENGTH	Henkel Canada Corporation		01/09/2014
LPS 1	LPS LABORATORIES	Petroleum Distillates	10/07/2013
LOCTITE SUPERFLEX RED HIGH TEMP RTV V Silicone Adhesive Sealant Silicone Adhesive Sealant	Henkel Canada Corporation		04/01/2014
Quickstix 268 Threadlocker High Strength	Henkel Canada Corporation		04/25/2014
660 Quick Metal Retaining Compound	Henkel Canada Corporation		02/14/2014
MASTERS PRO-DOPE	G.F. THOMPSON CO. LTD.		12/01/2012
Master Appliance Ultratane Butane Fuel (Petroleum Gases, Liquefied)	Master Appliance Corporation		03/14/2014
LPS QB Duster	LPS LABORATORIES		06/13/2013
Worthington Petroleum Based Soldering Flux	Worthington Industries Inc		06/18/2013
All Season Windshield Washer	Recochem Inc.		03/20/2014
BASICS Pressurized Duster	Falcon Safety Products, Inc		05/14/2012
3M Windo-Weld Super Fast Urethane PN 08608, 08609	3M Corporation		03/19/2014
Eberhard Faber Dry Erase Markers	Newell Rubbermaid		03/05/2013
Berol, Expo Low Odor , Expo Click, Expo Original, Eberhard Faber - Dry Erase Markers, Sharpie Whiteboard Markers	Newell Rubbermaid		04/01/2014
DOW CORNING 832 MULTI-SURFACE ADHESIVE SEALANT, OFF-WHITE	The Dow Chemical Company		01/27/2014
OFF! DeepWoods Spray Insect Repellent 5	S.C. Johnson and Son, Limited		01/10/2014
LYSOL Brand III All Purpose Cleaner 4 in 1 - Trigger - (All Scents, All Sizes)	Reckitt Benckiser (Canada) Inc.		04/25/2012
KRYLON Industrial TOUGH COAT Fluorescent Acrylic Enamel, Electric Green Fluorescent	THE SHERWIN-WILLIAMS COMPANY- KRYLON Products Group		05/24/2014

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

Name	Manufacturer	Synonyms	Revision Date
KRYLON Industrial QUIK-MARK Water-Based Inverted Marking Paint, Chalk-Line Clear	THE SHERWIN-WILLIAMS COMPANY- KRYLON Products		05/21/2014
WINDEX MULTI-SURFACE DISINFECTANT TOUCH-UP CLEANER - FRESH SCENT	S.C. Johnson and Son, Limited		07/19/2012
WINDEX MULTI-SURFACE CLEANER - VINEGAR	S.C. Johnson and Son, Limited		05/21/2014
PRECISION SYNTHETIC MOLY	Petro-Canada Lubricants Inc.		02/14/2013
DURON-E SYNTHETIC 5W-40	Petro-Canada Lubricants Inc.		10/28/2013
PC FAST ORANGE LOTION WITH PUMICE 3.78 L	ITW Permatex Canada		05/17/2013
prDry Hands - Skin Protection Gel	URSULA RATH GMBH		04/01/2014
PURELL Instant Hand Sanitizer	GOJO Industries, Inc.		04/29/2013
PURELL Advanced Moisturizing Foam Hand Rub	GOJO Industries, Inc.		06/04/2014
Sharpie Fine Point Marker, Sharpie Ultra Fine Point Marker, Sharpie Extra Fine Marker, Sharpie Chisel Tip Marker, Sharpie Twin Tip Marker, Super Sharpie Marker, Super Sharpie Twin Tip Marker, Sharpie Mini Fine Point Marker, Sharpie Micro Marker	Newell Rubbermaid	Sharpie Grip Marker, Sharpie Retractable Fine Point Marker, Sharpie Magnum Marker, Sharpie King Size Marker, Sharpie Liquid Tip Marker. Sharpie Premium, Sharpie CD Marker, Sharpie Pro, Sharpie Pro King Size, Sharpie Pro Magnum, Sharpie Aluminum Barrel	04/02/2014
Shell Gadus S2 V220 2	Shell Canada Products		12/09/2013
Shell Gadus S5 V100 2	Shell Canada Products		12/09/2011
Shell Gadus S5 U100KD 1	Shell Canada Products		12/09/2011
Spray Nine 4L	ITW Professional Brands		10/04/2012
Shell Spirax S3 TLV	Shell Canada Products		12/09/2011
CAT FINAL DRIVE AND AXLE OIL SYNTH (FDAO-SYN)	Exxon Mobil Corporation		04/08/2013
Monitor Cleaning Wipes, 100ct SKU 775488 (model 16982) [STP08002]	Kleinmann GmbH	Staples Monitor Cleaning Wipes Tub of 100	01/01/2014
CONSTANT CHLOR PLUS BRIQUETTES	Arch Chemicals, Inc.		04/16/2014
PGP Comet Deoderizing Cleanser with Chlorinol	Procter & Gamble		10/15/2013
Belkin Air Duster 10/12 oz r134a	Kleen Concepts		12/04/2012
Braze Core Silver, Copper, Tin, Zinc	Lucas Milhaupt, Inc.		05/09/2014
Shell Spirax S6 ATF A295	Shell Canada Products		06/10/2013
KEYSTONE ANTIBACTERIAL LIQUID HAND SOAP	Ecolab Inc.		04/07/2014

	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 63 of 115
	Environment	Revision: For review purposes only 4	Document #: BAF-PH1-830-P16-0036

Name	Manufacturer	Synonyms	Revision Date
HP Grinding, HP XX, Allsteel XX, Stainless, ALU, Concrete, Pipefitter, Xcavator, Ripcut, Chopcut, Chopcut ALU, Portacut, Zip, Zip Stainless, Zipcut, Zip ALU, Railcut, HP Cup Wheel, Flexcut	Walter Surface Technologies Inc.		2015-05-30
Enduro-Flex, Enduro-Flex Turbo, Enduro-Flex Stainless, Enduro-Flex 2 en 1, Coolcut, Topcut, Coolcut XX, Topcut+, Inox+, Twist, Quick-Step, Two-In-One	Walter Surface Technologies Inc.		2016-04-14
Abrasive Product	Saint-Gobain Abrasives, Inc.		
VULKEM 801LV 5 GAL	Division de Tremco Canada		2011-04-14
Ultra Seal-Hesive	UZ Engineered Products		2013-02-01
Ultra Blue Gasket Maker 3.35 OZ	ITW Permatex		2016-11-07
Threadlocker 277 Heavy Duty	Henkel Corporation		
Silicone Gasket Maker (Black)	Kleen-Flo Tumbler Industries Ltd		2015-01-02
R-O 6X405G LEAKSEAL BLACK	Rust-Oleum Corporation		2015-03-09
Plumber's Putty	William H. Harvey Company		
PC MAXIMUM TEMPERATURE SLEEVE RETAINER 36 ML	ITW Permatex Canada		
PC 99MA High Tack Spray-A-Gasket Sealant 255 GR.	ITW Permatex Canada		
Oatey Canadian Premium ABS Yellow Cement	Oatey Company		2015-09-11
Non-Flammable Rubber Cement	Ningbo Autowin Tools Company, Ltd.		
Muffler Cement	Kleen-Flo Tumbler Industries Ltd		
LOCTITE® 290 THREADLOCKER	Henkel Corporation		2015-07-08
LOCTITE LB 771 NICKLE GRADE ANTI-SEIZE known as Nickel Grade Anti-Seize	Henkel Canada Corporation		2014-01-06
LOCTITE 609 RETAINING COMPOUND known as Loctite 609 Retaining Compo	Henkel Canada Corporation		2014-02-07
LOCTITE 495 INSTANT ADHESIVE known as 495 Super Bonder(R) Instant Adhesive	Henkel Corporation		2017-12-11

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

Name	Manufacturer	Synonyms	Revision Date
LePage Multi-Purpose Spray Adhesive	Henkel Canada Corporation		2012-08-30
IPEX 636 Transistion Low VOC Plastic Pipe Cement	IPS Corporation		2014-11-01
HomeBond Multi-Purpose Floorcovering Adhesive	ROBERTS COMPANY CANADA LTD.		2012-10-23
GREAT STUFF Gaps & Cracks Insulating Foam Sealant 12oz HC EF QP Empty Lowes	THE DOW CHEMICAL COMPANY		
Bonded Abrasive Product	Saint-Gobain Abrasives, Inc.		
Alex Plus Acrylic Latex Caulk Plus Silicone - All Colors	DAP Products Inc		2016-01-12
3M Super 77 Multipurpose Adhesive (Aerosol)	3M		
3M Hi-Strength Spray Adhesive 90 (aerosol)	3M		2014-09-09
3M Dynatron Red Cream Hardener 1, 4, 9, 301, 304, 30748, 9301, 9307R	3M		2014-02-19
16BR BLACK SILICONE ADHESIVE SEALANT 3 OZ	ITW Permatex		2015-09-29
DUST FREE AERO, M/M	MANTEK, DIVISION OF NCH CORP		2013-09-03
Air (Compressed)	Air Liquide Canada Inc.		2014-06-01
Plumbing Antifreeze	Hall Chem Mfg. Inc.		2015-01-01
Lock D-Icer	Recochem, Inc.		2017-05-04
Flo-Perm Plumbing Anti-Freeze	Vulsay Industries Ltd.		2006-05-01
50/50 Premixed Antifreeze/Coolant	Recochem Inc.		
Top-Mix, Top-Mix KM	Supplier: Bauval Tech-Mix		
Primary Batteries AS2/AS3/AS6/AS8/AS10	Cegasa Portable Energy S.L.U.		
Industrial Ni-Cd Cells and Modules or Battery Systems Composed of These Cells	Saft S.A.S.		
Cyclon, Genesis, SBS, SBS J, Hawker XE, Odyssey, Trolling Thunder, NexSys, OptiGrid or XFC	EnerSys Energy Products Inc.		
002FCLA Lead Acid Cell (Antimony), GNB Flooded Classic, Pacific Chloride, GNB, GNB Tubular, Pacific Chloride, Tubular, Tubular-HP, Liberator, KDZ, Titan, GNB Fusion,	GNB Industrial Power		2013-09-11

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

Name	Manufacturer	Synonyms	Revision Date
Exide Fusion, GNB Flooded Classic Platinum, Tubular-LM			
Ultratane Butane Fuel	Master Appliance Corp.		2015-01-28
Irwin Chalk - Red, Permanent	Irwin Tools		2016-12-23
Craie IRWIN – Rouge, permanente	IRWIN Tools		2013-10-23
ZEP FOAMING GLASS CLEANER	Zep Inc.		
VOLTZ	Chemsearch Div. Of Nch Corporation		2014-08-29
Vinylustre	Les Savons Evy Inc.		
UN 400-10 Glass Cleaner	Uni Select Inc.		
The Intelligent Soap	Kosmic Surf-Pro Inc.		
The Glue Buster	Kosmic Surf-Pro Inc.		2014-01-22
SuperClean Degreaser and Foaming Degreaser	SuperClean Brands, LLC		
Safeblend Ultra Concentrated Glass & Multi Surface Cleaner	Chemotec (PM) Inc.		2016-05-20
Resolve Oxi-Action In-Wash Laundry Stain Remover	Reckitt Benckiser (Canada) Inc.		
Orange H-Duty Hand Cleaner	Zep Inc.		2015-04-30
Nettoyeur sans chlore à freins et pièces	Kleen-Flo Tumbler Industries Ltd		
Nettoyeur d'étrangleur automatique	Kleen-Flo Tumbler Industries Ltd		2015-01-02
Nettoyant pour Freins et Pièces 408gr	Würth Canada Limited		2014-08-20
Moteur-Shampoo	Les Savons Evy Inc.		
MINWAX Wood Cleaner	MINWAX Company		
Mean Green Super Strength Cleaner & Degreaser (Low Odor)	CR Brands, Inc		
Liquid Gold Bowl Cleaner	RayMax Hygiene (Shanghai) Ltd		2013-01-01
Le Savonneur Intelligent	Kosmic Surf-Pro Inc		
INDUSTRIAL PURPLE CLEANER	Zep Inc.		2017-03-13
Glass Treatment	ITW Permatex Canada		
F-204 Inca Liquid Gold II	Inca Gold Company		2011-02-28
Choke & Carb Kleen	Kleen-Flo Tumbler Industries Ltd		2017-01-26

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

Name	Manufacturer	Synonyms	Revision Date
CAP	State Industrial Products		2016-04-21
03405-1314 NETTOYANT TRES PUISSANT POUR OUTILS ET 500G	K-G SPRAY-PAK INC		
03405-0720 Motomaster Carburetor Cleaner 312G	K-G Spray-Pak Inc.		2012-12-10
CREOSOTE - PETROLEUM PRESSURE TREATED WOOD	KOPPERS INC.		2017-02-03
TAPCUT	Walter Technologies pour surfaces inc.		
GHS product identifier:TAPCUT	Walter Surface Technologies Inc.		
COOLCUT	Bio-Circle - A Division of Walter Surface Technologies Inc.		
Spray Nine 32 fl.oz	ITW Permatex		
POLYACTION 0400	Lalema inc.		
De-Icing salt	Compass Minerals USA Inc.		2017-10-13
Diesel Fuel, All Types	Hess Corporation		2012-08-30
RotaMagic Super Concentrated Cutting Fluid	Hougen Manufacturing, Inc.		
Fluide de perçage super concentré RotaMagic	Hougen Manufacturing, Inc.		
Résine renforcée de fibre de verre pour trousse(s) de résine renforcée de fibre de verre Bondo 3M(MC) - NP 401, 401C, 402, 402C, 402ES, 402T, 402Z, 404, 404C, 404Z	3M Canada		
Liquid Hardener	Fibre Glass-Evercoat		
GM-10,GM-40 GELMAT	Laboratoires St-Antoine Inc.		2013-01-01
Bondo Fiberglass Resin Kit, P.N. 401, 401C, 402, 402M, 402C, 402ES, 402T, 402Z, 404, 404C, 404Z	3M		
Plastique INTERNATIONAL (PBC10, 40, 20)	Laboratoires St-Antoine Inc.		2013-01-01
Pâte de Cuivre CU 1000 300gr	Würth Canada Limited		2014-08-20
CU 1000 Copper Paste 300gr	Würth Canada Limited		2014-08-20
3M Dynatron DynaLite (Export) 494A, 494E, 494M	3M		2014-04-14
14200 Pro Pak FV16 Custom Filling System Universal Blend	Pro Form Products Ltd.		2013-10-04


Name	Manufacturer	Synonyms	Revision Date
ABC Dry Chemical Fire Extinguishant	AMEREX CORPORATION		2018-03-13
FIRESNAKE RAIL HEATER – BLACK	FORREST PAINT CO.		
Fusee, Backfiring - No Perchlorate (NPC) Formulation	Orion Safety Products		2015-05-01
MAP-pro Premium Hand Torch Fuel			2012-12-07
MAPP GAS	BernzOmatic		
Gasoline All Grades	Hess Corporation		2012-08-30
MOLYKOTE 4 Electrical Insulating Compound	Dow Corning Corporation		2017-10-16
Wilson One Shot Wasp and Hornet Killer	Premier Tech Home & Garden		
RAID MAX INSECTICIDE CONTRE LES INSECTES VOLANTS (No D'HOM 29831 LOI P.A.)	S.C. Johnson et Fils, Limitée		
OneShot Ant, Roach and Crawling Insect Killer	Premier Tech Home and Garden		
OFF! ACTIVE INSECT REPELLENT I	S.C. Johnson and Son, Limited		
Moth balls	Recochem Inc.		
Kerosene K1 and K2	Hess Corporation		2012-08-30
AP-22 Pneumatic lubricant	Just Tools, Inc.		
TEKUSOLV AEROSOL SAMPLE, NAC MM	Mantek Div of NCH Corp		2015-07-10
RAPID WRENCH	State Chemical Division – State Industrial Products		
FLUID FILM “AS” AÉROSOL	NLS Products		
BOLT-OUT (Aérosol)	J. WALTER CO. LTD		
Bolt-Out	Walter Surface Technologies Inc.		
Bolt Off Plus Aerosol	Certified Labs, Division of NCH Corporation		2014-05-09
Aero-Chem Heat Block Gel Spray 107109	Applied Maintenance Supplies and Solutions		2014-12-18
STIHL HP ULTRA	Emballage de spécialité d'Omni		
10251-01-011 JIG1601 JIG-A-LOO 311G	JIG-A-LOO INC.		
Slip Plate No. 1	Superior Graphite		
SLIP AEROSOL SAMPLE, NAC MM	Mantek Div of NCH Corp		
Yamalube Multi-Purpose Grease	Phillips 66 Spectrum Corporation		

Name	Manufacturer	Synonyms	Revision Date
WHITE GREASE	Supplier : Kleen-Flo Tumbler Industries Ltd		
WD-40 Multi-Use Product Aerosol (25% VOC)	WD-40 Company		2015-09-03
Valvoline SAE 80W-90 HUILE D'ENGRENAGE HP	Ashland		
Valvoline SAE 80W-90 HP Gear Oil	Ashland		
Valvoline MP 2 Cycle TC-W3 Outboard Motor Oil	Ashland		
Valvoline MP 2 CYCLE TC-W3 HUILE MOTEUR HORS BORD	Ashland		
Val Special Moly Grease 10/400 G	Ashland		
Universal Gear Lubricant	Phillips 66 Lubricants		2014-01-22
Ultrex Xtreme 15W40 CJ-4 Synthetic Blend Motor Oil, TS	Certified Labs, Div. of NCH Corporation		2015-06-19
ULTRA PRO AIR TOOL LUBRICANT	PRODUITS LUBRI-DELTA INC.		
TOOL CRIB PENETRATING OIL	Seymour of Sycamore		2016-10-13
TERESSO 46	Imperial Oil Downstream		2017-03-29
TEF-Lube 2000	Kleen-Flo Tumbler Industries Ltd		
Synpower Synthetic Grease Synthetic Grease	Ashland		
SUPREME 10W-30	Petro-Canada Lubricants Inc.		2017-02-28
Super HD II Motor Oil	Phillips 66 Lubricants		
SONIC 2 CYCLE OIL	Consumers' Co-operative Refineries Limited		
Shell GadusRail S2 Traction Motor Bearing Grease	Shell Canada Products		
Shell Gadus S4 V600AC 1.5	Shell Canada Products		
SELECTARC FC 308L-AP	FSH Welding Canada		
SCREW TYPE COMPRESSOR OIL (Lubri Screw)	TOPRING		2013-06-01
REDUCER E.A. MEDIUM [Solvent and thinner]	PRODUITS LUBRI-DELTA INC.		2013-05-01
RED AW 32 HYDRAULIC OIL	APRIL SUPER FLO		
Quaker State Grease Multi-Purpose and Wheel Bearing Lubricant	Shell Canada Products		
PRO LUBE	UZ Engineered Products		2009-08-01
Premier Motor Oil	Phillips 66 Lubricants		2014-01-

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

Name	Manufacturer	Synonyms	Revision Date
			24
PL-100 SPRAY	PROLAB TECHNOLOG INC.		2015-02-01
PL-100 Aerosol	Prolab Technolub, Inc.		2015-02-01
PETRO-CANADA ANTIGEL	Petro-Canada Lubricants Inc.		
OG-700 (Aerosol)	Prolab Technolub, Inc.		2015-02-01
MP Grease	BP Oil New Zealand Limited		
MOTOMASTER SYNTHETIC BLEND GREASE	CITGO Petroleum Corporation		
Motomaster Synthetic Blend ATF	Shell Canada Limited (SCL)		
MotoMaster Non-Detergent 30	Shell Canada Products		2014-12-18
MOTOMASTER FORMULA 1 10W-30	Shell Canada Limitée (SCL)		
MotoMaster Diesel 50	Shell Canada Products		2014-12-18
Motomaster Compressor Oil 32	Shell Canada Products		2014-03-10
MOBIL SUPER 1000 5W-20	Imperial Oil Downstream		2017-02-15
MOBIL EASY MIX 2-CYCLE MOTOR OIL	Imperial Oil Downstream		
MOBIL DELVAC 1300 SUPER 10W-30	EXXON MOBIL CORPORATION		2016-06-01
MOBIL DELVAC 1300 SUPER 10W-30	Pétrolière Impériale, Division Produits		2014-11-18
MM Hydraulic Oil AW46	Shell Canada Products		2015-01-13
MERCON V ATF	Phillips 66 Lubricants		
Max.E.P.	Sinto Inc.		2015-04-10
Lubritrac T.D.H. [Tractor Oil]	Produits Lubri-Delta, Inc.		
Lubritac - All Grades	Produits Lubri-Delta, Inc.		
Lubrigear GL-5 - All Grades	Produits Lubri-Delta, Inc.		
Lubemaster ATF	Certified Labs, Div. of NCH Corporation		2014-02-11
Lok Cease 20/20, MM	Certified Labs, Div. of NCH Corporation		2013-04-30
LOCTITE LB 8150 SV A/S known as Silver Grade Anti-Seize Lubric	Henkel Canada Corporation		
Liquid Wrench Penetrating Oil	RSC Chemical Solutions		

	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 70 of 115
	Environment	Revision: For review purposes only 4	Document #: BAF-PH1-830-P16-0036

Name	Manufacturer	Synonyms	Revision Date
Kwik-Cut Metal Working Lubricant (Lubricating Oil, Non-Regulated Material)	Applied Maintenance Supplies & Solutions		2015-05-20
JOHN DEERE HYGARD TRANSMISSION & HYDRAULIC FLUID	Imperial Oil Downstream		
Interlube M-914-S	Interlube Corporation		2015-05-21
Hydrex TM/MC AW 32	Petro-Canada Lubricants Inc.		
HYDREX AW 32	Petro-Canada Lubricants Inc.		
Hydraulic Oil (AW22/32/46/68/100/150 HT)	Hall Chem Mfg. Inc.		
HYDRAUFLO S.H.F. - ALL GRADES	PRODUITS LUBRI-DELTA INC.		2010-06-01
HYDRAUFLO HP AW - ALL GRADES	PRODUITS LUBRI-DELTA INC.		
HUSQVARNA "XP" PERFORMANCE 2 STROKE	Spectrum Lubricants Corporation		
HINO GENUINE 15W-40 ENGINE OIL	Castrol Heavy Duty Lubricants		
Heavy Duty Diesel Engine Oil	Phillips 66 Lubricants		2015-05-14
GRAISSE PROFESSIONNELLE AU LITHIUM BLANC 3-EN-UN	WD-40 Company		
Graisse blanche	Kleen-Flo Tumbler Industries Ltd		
F-10 Spray	Prolab Technolub Inc.		
Extra Duty Gear Oil	Phillips 66 Lubricants		
EASY-OFF BAM UNIVERSAL DEGREASER, TRIGGER SPRAY, (LIQUID)	Reckitt Benckiser North America, Inc.		
Dri-Lube Plus SP	Certified Labs, Div. of NCH Corporation		2015-06-09
Dri-Lube Plus Aerosol, MM	Mantek, Division OF NCH Corporation		2016-01-11
DIOL 9 RD 40	Imperial Oil Downstream		2014-11-17
Citgo Railroad Curve Grease Winter	Citgo Petroleum Corporation		
Citgo Railroad Curve Grease Summer	Citgo Petroleum Corporation		
Citgo Citgard 600 Engine Oil, SAE 15W-40	CITGO Petroleum Corporation		2018-04-09
Chain Oil - All Grades	Produits Lubri-Delta Inc.		
Certified Hydraulic Oil AW 32	Shell Canada Products		
Castrol Universal Chassis Grease	BP Lubricants USA, Inc.		
Castrol Hypuron 15W-40	BP Lubricants USA, Inc.		2015-06-

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

Name	Manufacturer	Synonyms	Revision Date
			18
Castrol Hino Engine Oil 15W-40	BP Lubricants USA, Inc		
Castrol GTX Diesel 15W-40	BP Lubricants USA Inc.		
Castrol GTX 5W-20	BP Lubricants USA Inc.		2015-04-30
Castrol 2T	BP Lubricants USA Inc.		2015-04-14
BARRE DE STIHL CANADA ET LUBRIFIANT MOYENS DE CHAÎNE	Emballage de spécialité d'Omni		
ALD-3	Prolab Technolub, Inc.		2015-02-01
Air Tool Oil	TOPRING		2015-02-01
ACE Biodegradable Engine Degreaser	Kleen-Flo Tumbler Industries Ltd		
771 NICKEL ANTI-SEIZE LUBRICANT 8OZ BT	ITW Permatex Canada		
3-IN-ONE PROFESSIONAL WHITE LITHIUM GREASE			
3-In-One Professional Silicone Spray Lubricant	WD-40 Company		
3-In-One Professional High-Performance Drip Penetrant	WD-40 Company		2011-04-05
3-IN-ONE Telescoping Spout Multi-Purpose Oil	WD-40 Company		
0G-700 AEROSOL	PROLAB TECHNOLOGY INC.		2015-02-01
03405-1504 LUBRIFIANT A LA SILICONE (300g)	K-G SPRAY-PAK INC		
SinLub	Sinto Inc		2015-04-10
Shell* Diesel Engine Governor Oil	Shell Canada Limited (SCL)		2008-12-19
Methanol	Gotham Industries Inc.		2015-01-02
Methyl Hydrate	Recochem Inc.		
Hydrate de méthyle pour service intensif	Recochem Inc.		2014-11-20
Heavy Duty Methyl Hydrate	Recochem Inc.		2014-11-20
Nitrogen	Supplier: Airgas USA, LLC and its affiliates		2016-05-26
Oxygen, compressed	Praxair, Inc.		

Name	Manufacturer	Synonyms	Revision Date
Oxygen	Airgas USA, LLC and its affiliates		2018-02-03
Polyprep Lacquer Thinner 705107	Brenntag Canada Inc.		
IPC GLOSS BLACK	Applied Maintenance Supplies & Solutions		2015-01-29
Wood Shield Clear Coat	Home Hardware Stores Limited		2013-01-02
Waterborne Paint	Dunn-Edwards Corporation		
TRMPRO 6X426G GLOSS ALUMINUM	Rust-Oleum Consumer Brands Canada (RCBC)		
TRMPRO 6X426G FLAT BLACK	Rust-Oleum Consumer Brands Canada (RCBC)		
TRMCLD 6X237ML Rust Paint Aluminum	Rust-Oleum Consumer Brands Canada (RCBC)		
TRMCLD 4X946ML RUST PAINT GLS WHITE	Rust-Oleum Consumer Brands Canada (RCBC)		2013-03-04
TRMCLD 2X946ML RUST PAINT MEDIUM BLUE	Rust-Oleum Consumer Brands Canada (RCBC)		2013-03-04
TRMCLD 2X946ML RUST PAINT LIGHT GREY	Rust-Oleum Consumer Brands Canada (RCBC)		2013-03-20
TRMCLD 2X946ML RUST PAINT FIRE RED	Rust-Oleum Corporation		2013-01-11
TRMCLD 2X3.78LT RUST PAINT YELLOW	Rust-Oleum Corporation		2018-03-14
TRMCLD 2X3.78LT RUST PAINT MEDIUM BLUE	Rust-Oleum Corporation		2013-01-28
TRMCLD 2X3.78LT RUST PAINT DARK BLUE	Rust-Oleum Corporation		2013-01-28
TRMCLD 2X3.78LT RUST PAINT ALUMINUM	Rust-Oleum Corporation		
TRMCLD +6X340GM YELLOW	Rust-Oleum Consumer Brands Canada (RCBC)		2013-07-23
TRMCLD +6X340GM RED OXIDE PRIMER	Rust-Oleum Consumer Brands Canada		2013-05-28
TRMCLD +6X340GM GALVANIZED WHITE PRIMER	Rust-Oleum Corporation		
TRMCLD +6X340GM ALUMINUM	Rust-Oleum Consumer Brands Canada (RCBC)		
TRMCLD +12X340GM FLAT BLACK	Rust-Oleum Consumer Brands Canada (RCBC)		
T-43 DARK CHERRY 6UC	Valspar Corporation		
Supreme Color Shield Paint	Aervoe Industries Incorporated		2015-08-10
Solid Color Wood Stain Deep Base No. 213	BEHR Process Corporation		2015-04-30

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

Name	Manufacturer	Synonyms	Revision Date
SHER-CRYL HPA High Performance Acrylic Gloss Coating, Extra White/Tint Base	THE SHERWIN-WILLIAMS COMPANY		2018-02-12
SELECT VELOUTE BLNAT 673500	PPG Architectural Coatings Canada Inc.		2014-06-04
Select Eggshell Natwh 673500	PPG Architectural Coatings Canada Inc.		2014-06-04
RUST CHECK RUST PAINT - NOIR LUSTRE AEROSOL 340G	RUST CHECK CORPORATION		2015-04-22
Rust Check Rust Paint - Gloss Black #21425 340G	Rust Check Corporation		2015-04-22
Royal Metal 900154 Qt.	ITW Evercoat, A Division of Illinois Tool Works Inc.		
Rona 6X340GM RP Gloss Black	Rust-Oleum Consumer Brands Canada (RCBC)		
RED IRON OXIDE PRIMER	Seymour of Sycamore		2018-01-05
PTOUCH 6X236ML GLOSS BLACK	Rust-Oleum Consumer Brands Canada (RCBC)		2015-03-12
Ptouch 6X236ML Gloss Black	Rust-Oleum Corporation		2016-04-07
Protecteur Original ARMOR ALL	Armor All/STP Products Company		
PROTECT DIP - Accessories Rubber Coating	Protect-Dip Inc		2013-02-15
Professional Painters Paint	Home Hardware Stores Limited		2012-11-13
PROFESSIONAL COATINGS/EXTREME COATINGS – GLOSS SAFETY YELLOW	State Chemical		2012-08-01
Professional Coatings/extreme Coatings - Gloss Safety Yellow	State Chemical Division - State Industrial Products		2012-08-01
PROFESSIONAL COATINGS – RED IRON OXIDE PRIMER	State Chemical		2012-08-01
Professional Coatings - Red Iron Oxide Primer	State Chemical Division - State Industrial Products		2012-08-01
PK6 Prof Coatings Red Iron Oxide Primer	Applied Maintenance Supplies & Solutions		2014-04-01
PERFECT MATCH Premium Automotive Paint, FLAME RED (PR4)	Dupli-Color Products Company		
Paint Thinner	Recochem Inc.		
OMNI-FILL Premium EZ Touch MasterBlend (DV Cans)	Specialty Aerosols		2018-07-09
MRO RED IRON OXIDE PRIMER	Seymour of Sycamore		2015-08-06

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

Name	Manufacturer	Synonyms	Revision Date
MRO GLOSS BLACK	Seymour of Sycamore		2015-08-06
MRO Cascade Green	Seymour of Sycamore		2017-03-15
MRO CASCADE GREEN	Seymour of Sycamore		2015-08-06
LX PERLE BASEN 476-115	PPG Architectural Coatings Canada Inc.		2014-06-04
LX Eggshell PBASE 472-111	PPG Architectural Coatings Canada, Inc.		2014-06-04
LX Eggshell MBASE 472-112	PPG Architectural Coatings Canada, Inc.		2014-06-04
LX COQUILLE BASEM 472-112	PPG Architectural Coatings Canada Inc.		2014-06-04
Low Odour Paint Thinner	Recochem Inc.		2015-01-20
Lacquer Thinner	Clear Chem Solutions Inc.		2013-01-04
KRYLON PROFESSIONAL Solvent-Based Marking Paint, Fluorescent Orange	Krylon Products Group		
KRYLON PROFESSIONAL Solvent-Based Marking Paint APWA Yellow	Krylon Products Group		
KRYLON Industrial REFLECT-A-LITE™ Spray Paint	THE SHERWIN-WILLIAMS COMPANY		2014-09-29
KRYLON Industrial QUIK-MARK Water-Based Inverted Marking Paint (Fluorescent) Fluorescent Orange	THE SHERWIN-WILLIAMS COMPANY		
KRYLON Industrial QUIK-MARK Solvent-Based Inverted Marking Paint (Fluorescent), Red Orange	SHERWIN-WILLIAMS COMPANY		
KRYLON High Heat, Black	Krylon Products Group		2018-01-11
Krylon Fusion For Plastic, Gloss Black	Krylon Products Group		
KRYLON ColorMaster with Covermax Technology Paint + Primer, Gloss Watermelon	Krylon Products Group		
KRYLON Industrial QUIK-MARK Water-Based Inverted Marking Paint (APWA) Utility Yellow	Krylon Products Group		
KRYLON Industrial QUIK-MARK Solvent-Based Inverted Marking Paint (Fluorescent), Orange	THE SHERWIN-WILLIAMS COMPANY		2018-07-02
Krown, The Solution	Krown Rust Control		
Krown T-40, T-40 With Tacifier	Canadian Krown Dealers Inc.		

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.


Name	Manufacturer	Synonyms	Revision Date
KROWN T-40	Krown Rust Control		
Kit & Bath Melamine SUPWH 166110	PPG Architectural Coatings Canada Inc.		2014-06-04
IPC GLOSS WHITE	Applied Maintenance Supplies & Solutions		2013-08-27
Gloss Black	Seymour of Sycamore		2017-03-09
Fedecor Anti-rust Enamel (Bright yellow)	Laurentide Industriel		
Extreme Hi-Solids Gloss White	State Industrial Products		2015-05-26
Extreme Hi-Solids Gloss Safety Red	State Industrial Products		2015-05-26
Extreme Hi-Solids Gloss Black	State Industrial Products		2015-05-26
Custom Tinted Low VOC Acrylic Modified Alkyd Enamel	PPG Industries, Inc.		2015-07-03
CUI&BAIN MELAMINE SUPBL 166110	PPG Architectural Coatings Canada Inc.		2014-06-04
CRYSTALEX VARNFLOOR GLO 196090	PPG Architectural Coatings Canada Inc.		2014-06-04
CORROSTOP NOIR MAT 635190	PPG Architectural Coatings Canada Inc.		
Corrostop Mbase 635502	PPG Architectural Coatings Canada Inc.		2014-06-04
Corrostop Dark Brown 635985	PPG Architectural Coatings Canada Inc.		2014-06-04
CORROSTOP BRUN FONCE 635985	PPG Architectural Coatings Canada Inc.		2014-06-04
Corrostop Bright Yellow 635530	PPG Architectural Coatings Canada Inc.		2014-06-04
CORROSTOP BASEM 635502	PPG Architectural Coatings Canada Inc.		2014-06-04
Corrostop Aluminum 635120	PPG Architectural Coatings Canada Inc.		
ColorWorks from KRYLON Maintenance Choice Enamel, Emerald Green	THE SHERWIN-WILLIAMS COMPANY		2015-01-09
Beauti-Tone Signature Series Exterior Latex Flat White	Home Hardware Stores Limited		2016-01-04
BEAUTI-TONE SIGNATURE SERIES	Home Hardware Stores Limited		2016-01-14
Beauti-Tone Signature Series	Home Hardware Stores Limited		2013-08-20
Beauti-Tone Rust Coat	Home Hardware Store Limited		2013-08-

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

Name	Manufacturer	Synonyms	Revision Date
			26
Beauti-Tone Alkyd Rust Coat Gloss Enamel Aluminum	Home Hardware Stores Limited		
Beauti-Tone	Home Hardware Stores Limited		2013-01-03
Beauti-Tone	Home Hardware Stores Limited		2012-12-20
ARMCT 6X340GM RP Gloss White	Rust-Oleum Corporation		2012-10-02
3M Brand Rocker Aerosol II (PN 08889) LC-7252	3M		
39691, 39694 Low VOC Etch Primer Green RTS	SEM Products Inc.		2015-04-02
196090 CRYSTALEX INTERIOR CLEAR GLOSS VARNISH FOR FLOORS	PPG Industries, Inc.		2016-08-23
19318-M103CU 635-120 ALUMINIUM 340G	K-G SPRAY-PAK INC.		
19318-0001CU 635-110A Ultra White Glossy (425G)	K-G Spray-Pak Inc.		2013-09-30
19318-0001CU 635-110A ULTRA BLANC BRILLANT (425G)	K-G SPRAY-PAK INC.		2013-09-30
POLYPREP Remover	Recochem Inc.		2014-04-23
Propane	Worthington Cylinder Corporation		2015-03-25
Propylene	Airgas USA, LLC and its affiliates		2017-11-30
H596-CWA-12	AOC LLC		2011-04-28
Sel	Compass Minerals International		2015-06-17
Traction Sand, Traction Tube, Industrial Sand, All Purpose/Play Sand	Basalite Concrete Products, Vancouver, ULC		2013-08-28
Dow Corning 4 Electrical Insulating Compound	Dow Corning Corporation		2017-03-18
CR50	CONDOR CHIMIQUES		2014-01-07
Weather Shield	Home Hardware Stores Limited		2012-07-12
Rubber solution	HSUAN HAU ENTERPRISE CO., LTD.		2012-10-25
NP-1	Certified Labs, Div. Of NCH Corporation.		2015-07-28

Name	Manufacturer	Synonyms	Revision Date
20502 - No Leak Cooling System Leak Stopper	Gold Eagle Company		2013-09-16
QUIK PENETRATING SOLVENT	Kleen-Flo Tumbler Industries Ltd		
POWER SOLV II	Applied Maintenance Supplies & Solutions		2012-09-01
G-Strip 130	Greensolv Inc.		2014-11-11
Bain de Buse	Techniweld Corporation		2015-01-01
DILUANT À PEINTURE-LAQUE	Clear Chem Solutions Inc.		2013-04-25
Diluant à peinture à faible odeur	Recochem Inc.		2015-01-20
Canon GPR-36 Black Toner	Canon Inc.		
Pure Turpentine	Recochem Inc		
Windshield Washer -40 deg C	Recochem, Inc.		2017-09-06
Washer Fluid with Detergent -45 deg C	Recochem Inc.		
STC Super Heavy Duty Brake Fluid	Phillips 66 Spectrum Corporation		2016-01-07
Safe-T-Brake	Kleen-Flo Tumbler Industries Ltd		2015-01-02
Rénovateur de carburant diesel	Kleen-Flo Tumbler Industries Ltd		
Rain-X Original Glass Treatment	ITW Global Brands		
Prestone Antifreeze/Coolant	Prestone Products Corporation		
Premium Concentrated Antifreeze/Coolant	Ford Motor Company of Canada Limited		
PRE-DILUTED 50/50 UNIVERSAL ANTIFREEZE	APRIL SUPER FLO		2013-01-01
Power Steering Fluid	Radiator Specialty Company, of Canada		
Pit Stop Antifreeze/Coolant	Phillips 66 Lubricants		
Petro-Canada Antifreeze	Petro-Canada, Inc.		
Lucas Fuel Treatment (UCL)	Lucas Oil Products, Inc		2015-02-15
Liquide pour freins DOT4	Recochem Inc.		2012-01-09
Kleen-Start Starting Fluid	Kleen-Flo Tumbler Industries Ltd		
Gas Line Antifreeze & Water Remover	Recochem Inc.		


	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 78 of 115
	Environment	Revision: For review purposes only 4	Document #: BAF-PH1-830-P16-0036

Name	Manufacturer	Synonyms	Revision Date
Fluide pour freins Qualité Extra Forte	Kleen-Flo Tumbler Industries Ltd		2015-01-02
Extended Life, Diesel Engine Coolant	Recochem Inc.		2013-04-24
Ethyl Alcohol Plumbing Antifreeze	Laurentide		
Dot 3 Heavy Duty Brake Fluid	Kleen-Flo Tumbler Industries Ltd		2016-10-11
DIESEL-MATE ALL SEASONS	CERTIFIED LABS, DIV. OF NCH CORP		
Diesel Fuel Conditioner	Kleen-Flo Tumbler Industries, Ltd.		
Defraissant a moteur biodegradable ACE	les entreprises kleen-flo tumbler ltée		
CTC Fuel Stabilizer	CAPO INDUSTRIES LTD		2016-05-02
Certified ATF Type F Automatic Transmission Fluid	Shell Canada Products		2013-07-29
Brake Fluid DOT 4	Recochem Inc.		2012-01-09
BRAKE FLUID DOT 3	Radiator Specialty Co., of Canada		
Brake and Parts Cleaner 408gr	Würth Canada Limited		2017-04-03
Brake and Parts Cleaner	Kleen-Flo Tumbler Industries, Limited		
Antigel/liquide de refroidissement concentré de haute qualité	Enterprise Ford du Canada limitée		
Antigel/déshydratant à carburant de qualité	Recochem Inc.		
ANTIGEL UNIVERSEL PRÉ-DILUÉ 50/50	APRIL SUPER FLO		2013-01-01
Antigel pour freins à air	Recochem Inc.		2013-03-27
Air Brake Antifreeze	Recochem Inc.		2013-03-27
AÉROSOL POUR CULBUTEUR II 3M (NO DE PIECE 08889) LC-7252 (INACTIF)	3M		
19425-01-002 MOTO-MIX (High Performance Fuel Mix) 1USG	K-G SPRAY-PAK INC.		2013-04-29
Roundup Ready-To-Use Weed and Grass Killer III	Monsanto Company, Lawn and Garden Products		
PowerWeld Gouging Carbons	Techniweld Corporation		2016-01-18

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

Name	Manufacturer	Synonyms	Revision Date
Worthington Petroleum Based Tinning Soldering Flux	Worthington Cylinder Corporation		
Tubular ARC Welding Electrodes	Hobart Brothers Company		2017-06-28
Stainless Steel Covered Electrode (Électrode en acier inoxydable revêtue)	Sandvik Wire and Heating Technologies		2014-01-01
Soudotec 330	FSH Welding Canada		
SODEL 333	SODEL LTÉE		2015-06-01
SODEL 2024Plus	SODEL LTÉE		2014-03-01
Shielded Metal Arc Welding (SMAW) Electrodes	Hobart Brothers Company		2016-09-08
Oatey No. 95 Tinning Flux	Oatey Company		
Oatey Lead Wire Solder, Oatey Lead Acid Core Wire Solder, Oatey Lead Rosin Core Wire Solder	Oatey Company		2014-12-17
Nonflammable Gas Mixture: Argon 1ppm-98%/Carbon Dioxide 2-99%	Supplier: Airgas USA, LLC and its affiliates		2017-04-20
Metaflux Tool Spray 70-03	Metaflux International AG		
Frogalloy, Hardalloy, Smootharc, Chrome-Mang and GP Hardsurfacing Electrodes	Hobart Brothers Company		2018-03-01
E-WELD (Aérosol)	J. WALTER CO. LTD		2014-02-01
CADWELD Starting Material	ERICO International Corporation		
Cadweld Plus Welding Material	Erico International Corporation		
Blueshield: Gouging Carbon	Air Liquide Canada Inc.		2014-01-13
Acetylene	Supplier : Airgas USA, LLC and its affiliates		2018-01-18
Absolute Weld 400S	Applied Maintenance Supplies & Solutions		2014-09-01

	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 80 of 115
	Environment	Revision: For review purposes only ⁴	
		Document #: BAF-PH1-830-P16-0036	

Appendix D

NT-NU Spill Report



Canada

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		<input type="checkbox"/> ORIGINAL SPILL REPORT, OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT LINE USE ONLY REPORT NUMBER _____
	OCCURRENCE DATE: MONTH – DAY – YEAR		OCCURRENCE TIME			
B						
C	LAND USE PERMIT NUMBER (IF APPLICABLE) IOL - Commercial Lease No.: Q13C301			WATER LICENCE NUMBER (IF APPLICABLE) 2AM-MRY-1325 Type "A"		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION			REGION <input type="checkbox"/> NWT <input checked="" type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE DEGREES MINUTES SECONDS			LONGITUDE DEGREES MINUTES SECONDS		
F	RESPONSIBLE PARTY OR VESSEL NAME Baffinland Iron Mines Corp.		RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION 2275 Middle Road East, Suite 300, Oakville, ON L6H 0C3			
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 <input type="checkbox"/> EC <input type="checkbox"/> CCG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> TC			SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED	
AGENCY		CONTACT NAME	CONTACT TIME	REMARKS		
LEAD AGENCY						
FIRST SUPPORT AGENCY						
SECOND SUPPORT AGENCY						
THIRD SUPPORT AGENCY						

	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 82 of 115
	Environment	Revision: For review purposes only ⁴	Document #: BAF-PH1-830-P16-0036

Appendix E

Dyno Nobel Baffin Island Inc. – Emergency Response Assistance Plan


	Spill Contingency Plan	Issue Date: September 25, 2018 May 1, 2019	Page 83 of 115
	Environment	Revision: For review purposes only 4	Document #: BAF-PH1-830-P16-0036

Appendix F

Transportation of Dangerous Goods

Regulations Reporting Requirements, Guide

and Form

	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u>	Page 84 of 115
	Environment	Revision: <u>For review purposes only</u> 4	Document #: BAF-PH1-830-P16-0036

Information to be included in the a Release or Anticipated Release Report


- The name and contact information of the person making the report;
- In the case of a release of dangerous goods, the date, time and geographic location of the release;
- In the case of an anticipated release of dangerous goods, the date, time and geographic location of the incident that led to the anticipated release;
- The mode of transport used;
- The shipping name or UN number of the dangerous goods;
- The quantity of dangerous goods that was in the means of containment before the release or anticipated release;
- In the case of a release of dangerous goods, the quantity of dangerous goods estimated to have been released;
- If applicable, the type of incident leading to the release or anticipated release, including a collision, rollover, derailment, overfill, fire, explosion or load-shift;
- If applicable, the name and geographic location of any road, main railway line or main waterway that was closed;
- A description of the means of containment containing the dangerous goods;
- If applicable, an estimate of the number of people evacuated or sheltered in place; and
- If applicable, the number of deaths and the number of persons who sustained injuries that required immediate medical treatment by a health care provider.

Information to be Included in a 30-Day Follow-up Report

- the name and contact information of the person making the report;
- the names and contact information of the consignor, consignee and carrier;
- in the case of a release of dangerous goods, the date, time and geographic location of the release;
- in the case of an anticipated release of dangerous goods, the date, time and geographic location of the incident that led to the anticipated release;
- the mode of transport used;
- the classification of the dangerous goods;
- the quantity of dangerous goods that was in the means of containment before the release or anticipated release;
- in the case of a release of dangerous goods, the quantity of dangerous goods estimated to have been released;
- a description of the means of containment containing the dangerous goods;
- if applicable, a description of any failure of or damage to the means of containment;
- information about the events leading to the release or anticipated release of dangerous goods;

The information contained herein is proprietary to Baffinland Iron Mines Corporation and is used solely for the purpose for which it is supplied. It shall not be disclosed in whole or in part, to any other party, without the express permission in writing by Baffinland Iron Mines Corporation.

Note: This is an UNCONTROLLED COPY. All staff members are responsible to ensure the latest revision is used.

	Spill Contingency Plan	Issue Date: September 25, 2018 <u>May 1, 2019</u>	Page 85 of 115
	Environment	Revision: <u>For review purposes only</u> 4	Document #: BAF-PH1-830-P16-0036

- information as to whether there was an explosion or fire;
- the name and geographic location of any facility used in the loading or unloading of the dangerous goods that was closed, and the duration of the closure;
- the name and geographic location of any road, main railway line or main waterway that was closed, and the duration of the closure;
- if applicable, an estimate of the number of people evacuated or sheltered in place and the duration of the evacuation or shelter in place;
- if applicable, the number of deaths and the number of persons who sustained injuries that required immediate medical treatment by a health care provider;
- if applicable, the ERAP reference number;
- the date on which the report referred to in section 8.4 was made; and
- an estimate of any financial loss incurred as a result of the release or anticipated release, and any emergency response cost or remediation costs related to it.

Form (TP16-0086) – Detailed breakdown of each section

The following sections provide information and examples to help you complete the form. But if you have questions about what to include in the form, please email our TDG Safety Research and Analysis team at dor-rcd@tc.gc.ca.

Note: All reporting requirements for the 30-Day Follow-up Report are listed in the TDG Regulations under Sections 8.7 and 8.12. While the TDG Regulations **requires** you submit a 30-day follow-up report, **using the form is voluntary**.

Part I: Reporting timeline

Box 1 – Applicable dates and type of report (TDG Regulations 8.7(r) or 8.12(p))

Please enter the date that you initially reported the incident to CANUTEC in the following format: yyyy-mm-dd

Please enter the date your 30-Day Follow-up Report was completed and submitted to the TDG Director General in the following format: yyyy-mm-dd.

Please check the applicable box:

- If this is the first time you are submitting a 30-Day Follow-up Report for a particular incident, please check "30-Day Follow-up Report"
- If you are making an update or amendment to an existing 30-Day Follow-up Report for a particularly incident, please check "Date original 30-Day Follow-up Report submitted", and please provide the date you submitted to the TDG Director General in the following format: yyyy-mm-dd.

For example:

January 2, 2016 would be entered as 2016-01-02.

Part II: Contact information

Box 2 – Information of the person completing this report (TDG Regulations 8.7(a) or 8.12(a))

In the top row of Box 2, select your role and your organization's role in the shipment of the dangerous goods, and input your contact information.

Note: It is possible to be consignor, consignee and carrier/aircraft operator at the same time.

Remember that in the transportation cycle:

The consignor ¹ is the person who handles or offers dangerous goods for transport.

The consignee ¹ is the intended receiver of the dangerous goods the consignor has offered for transport.



TRANSPORTATION OF DANGEROUS GOODS 30-DAY FOLLOW-UP REPORT

PART I: REPORTING TIMELINE

1. Please provide applicable dates and check one box

Date of initial report to CANUTEC (yyyy-mm-dd): _____

30-Day Follow-up Report submission date (yyyy-mm-dd): _____

☐ 30-Day Follow-up Report

☐ Update or amendment to 30-Day Follow-up Report

• Date original 30-Day Follow-up Report submitted (yyyy-mm-dd): _____

FOR INTERNAL USE ONLY

Road, Rail or Marine Reports

☐ Release

☐ Anticipated Release

Air Report

☐ Dangerous Goods Accident or Incident

PART II: CONTACT INFORMATION

2. Information of the person completing this report

☐ Consignor ☐ Consignee ☐ Carrier/Aircraft Operator ☐ Other

First Name	Last Name	Title	
Telephone (999-999-9999)	Company Name		
Address		City	Province/Territory
Country	Postal Code (Z9Z 9Z9)	Email	

3. Information on the Consignor, Consignee and Carrier/Aircraft Operator

Consignor

First Name	Last Name	Title	
Telephone (999-999-9999)	Company Name		
Address		City	Province/Territory
Country	Postal Code (Z9Z 9Z9)	Email	

Consignee

First Name	Last Name	Title	
Telephone (999-999-9999)	Company Name		
Address		City	Province/Territory
Country	Postal Code (Z9Z 9Z9)	Email	

Carrier/Aircraft Operator

First Name	Last Name	Title	
Telephone (999-999-9999)	Company Name		
Address		City	Province/Territory
Country	Postal Code (Z9Z 9Z9)	Email	

PART III: INCIDENT INFORMATION			
4. Please indicate the date and time of the incident			
Date (yyyy-mm-dd)		Time (24-hour system)	
5. Geographic location of the incident			
Address			
City	Province/Territory	Postal Code (Z9Z 9Z9)	GPS Position
If the incident occurred by rail, please indicate the milepost and subdivision		If the incident happened on First Nations Territory, please indicate the Territory name	
Origin of consignment <input type="radio"/> Same address as consignor <input type="radio"/> Same address as consignee <input type="radio"/> Other (please provide address):		Destination of consignment <input type="radio"/> Same address as consignor <input type="radio"/> Same address as consignee <input type="radio"/> Other (please provide address):	
6. Geographic Area (Check only one box)			
<input type="radio"/> Urban Mixed use – residential, commercial <input type="radio"/> Suburban Primary residential <input type="radio"/> Rural Small towns, villages, agricultural lands <input type="radio"/> Wilderness/Remote Little or no population			
7. Mode of Transport (Check all applicable boxes)			
<input type="checkbox"/> Road <input type="checkbox"/> Rail <input type="checkbox"/> Air <input type="checkbox"/> Marine			
8. If MARINE was checked on question 7, please indicate the position of the vessel and the next location at which the vessel will be at anchor or alongside a fixed facility			
Position		Next location	
9. Phase of Transport (Check only one box)			
<input type="radio"/> In-Transit Consignment moving between origin and destination <input type="radio"/> Loading Consignment is being packed or loaded into a means of transport at origin <input type="radio"/> Unloading Consignment is being unpacked or unloaded from a means of transport at destination <input type="radio"/> Temporary Storage Consignment is in short term storage pending transportation			
10. Type of Incident (Check all applicable boxes)			
<input type="checkbox"/> Collision/Sideswipe Moving vehicles striking an object, animal, or another vehicle <input type="checkbox"/> Derailment Railcar leaving the rail tracks <input type="checkbox"/> Ran off road Vehicle enters a soft shoulder, ditch or similar area <input type="checkbox"/> Overturn Vehicle turning on its side or upside down <input type="checkbox"/> Loadshift Shifting of the consignment within a vehicle <input type="checkbox"/> Dropped Means of containment falling unexpectedly <input type="checkbox"/> Struck Means of containment being struck by another object <input type="checkbox"/> Other (Please specify): _____			
11. Type of Release (Check all applicable boxes)			
<input type="checkbox"/> Spill Quick, immediate discharge, emission or escape <input type="checkbox"/> Leak Slow, sporadic or continuous discharge, emission or escape <input type="checkbox"/> Explosion Violent sudden release of energy from means of containment producing a shock wave that may result in fragment projection and/or fire ball <input type="checkbox"/> Fire Burning substances combined with oxygen to typically produce flame, heat and smoke <input type="checkbox"/> BLEVE Boiling Liquid Expanding Vapour Explosion <input type="checkbox"/> Vapour Dispersion in air of particles of a substance that is liquid or solid in its normal state <input type="checkbox"/> Venting Controlled release of gas into the environment <input type="checkbox"/> Anticipated Release Distressed means of containment that is not leaking, venting or otherwise releasing its contents			

12. Information on the Dangerous Goods								
UN Number	Shipping Name	Primary Class	Subsidiary Class(es)	Packing Group or Category	Total Quantity in MOC Before the Release or Anticipated Release	Units (kg, L, etc.)	Estimated Quantity Released (if applicable)	Units (kg, L, etc.)

13. Means of Containment

Please provide a description of the means of containment involved in the incident by completing the appropriate forms from Annex E of the Guide (TP15294)

PART IV: CONSEQUENCES

14. Consequences of the incident (Check all applicable boxes)

NOTE: Refer to the Guide for more information on how to complete this section

☐ Human
 ☐ Property (e.g. product loss, facility, equipment)
 ☐ Environmental (e.g. contamination of waterway, ground, air)

15. Evacuation of people and buildings/Shelter in place

Was there an Evacuation as a result of the incident? ☐ Yes ☐ No

Was there Shelter in place as a result of the incident? ☐ Yes ☐ No

If **Yes**, please complete the following table

Evacuation of People and Buildings/Shelter in Place	Private Residence Includes houses and other buildings used as dwellings (e.g. Retirement homes)	Public Buildings Includes libraries, hospitals, churches, government buildings, etc.	Workplace Includes warehouse, facility, etc.	Public (Outside) Areas Includes parks, playgrounds, parking lots, etc.
Estimated number of people evacuated				
Estimated number of people sheltered in place				
Estimated number of buildings evacuated				
Size of Evacuation area (square meters)		Duration of Evacuation (hours)		Duration of Shelter in place (hours)

16. Injuries and/or deaths

Were there any injuries and/or deaths? ☐ Yes (please complete the following table) ☐ No

Minor Injuries <input type="radio"/> Yes <input type="radio"/> No Number of injured requiring immediate first aid treatment at the scene		
Attributed to Dangerous Goods	Attributed to incident	Total
Moderate Injuries <input type="radio"/> Yes <input type="radio"/> No Number of injured requiring immediate emergency treatment in hospital and release shortly after		
Attributed to Dangerous Goods	Attributed to incident	Total
Major Injuries <input type="radio"/> Yes <input type="radio"/> No Number of injured requiring immediate treatment with overnight hospitalization		
Attributed to Dangerous Goods	Attributed to incident	Total
Deaths <input type="radio"/> Yes <input type="radio"/> No Number of deaths		
Attributed to Dangerous Goods	Attributed to incident	Total

17. Please indicate an estimate of costs in Canadian dollars associated with the incident, as applicable					
NOTE: Refer to the Guide for more information on how to fill this section					
Material loss of dangerous goods	Damage incurred by the carrier	Property damage	Emergency response cost	Clean-up cost	Total cost
18. Infrastructure closure and duration (please use additional sheets for multiple closures)					
Was there an infrastructure closure as a result of the incident? <input type="radio"/> Yes <input type="radio"/> No					
If Yes , please complete the following table					
Type					Duration of the closure (in hours)
<input type="checkbox"/> Aerodrome – Area of land, water or other supporting surface used either in whole or in part for arrival and departure, movement or servicing of aircraft includes any building, installations and equipment situated thereon or in connection therewith					
<input type="checkbox"/> Air cargo facility – Facility used to receive or transfer cargo carried or to be carried by an aircraft					
<input type="checkbox"/> Facility – Permanent or temporary building or a portion of a building or equipment used in loading or unloading of dangerous goods					
<input type="checkbox"/> Railway – Tracks used by trains					
<input type="checkbox"/> Waterway – Navigable body of water through which a ship or boat can move					
<input type="checkbox"/> Roadway – The strip of land over which motor vehicles circulate, such as dirt road, numbered provincial highway or multiple lane freeway					
<input type="checkbox"/> Runway – the strip of ground on a landing field that aircraft use for landing or takeoff					
19. Geographic location of closure					
Address					
City		Province/Territory		Postal Code (Z9Z 9Z9)	
				GPS Position	
If the incident occurred by rail, please indicate the milepost and subdivision			Name of facility, road, railway or waterway		
20. ERAP Requirements					
Was an ERAP required under Part 7 of the <i>Transportation of Dangerous Goods Regulations</i> ? <input type="radio"/> Yes <input type="radio"/> No					
If Yes , please complete the following table					
ERAP Reference Number			ERAP Holder		
Address					
City		Province/Territory		Postal Code (Z9Z 9Z9)	
				Telephone of ERAP Holder (999-999-9999)	
Email					
Level of Response (check all that apply)					
<input type="checkbox"/> No response <input type="checkbox"/> First responders on scene <input type="checkbox"/> Phone call to ERAP holder <input type="checkbox"/> Employee from ERAP holder <input type="checkbox"/> Team from ERAP holder					
<input type="checkbox"/> Other: _____					

PART V: INCIDENT DESCRIPTION

21. Please describe:

- The sequence of events that led to the incident
- The means of containment damage or failure, including the size/location of holes, cracks, etc.
- The actions taken at the time it was discovered
- What was done to mitigate the effects of the release
- Contributing factors (e.g. human error, mechanical, equipment, packaging, infrastructure, external, weather, etc.)
- The physical environment (e.g. residential, commercial, industrial, etc.)
- The road's appearance (e.g. flat, straight, inclined, curved, intersection, etc.)
- Timeline of event (e.g. how long it lasted, time of release or discovery, time of first responder arrival, etc.)
- Communications with first responders and with your organization

Photographs and diagrams should be submitted, as required, for clarification. Estimate the duration of the release, if possible. Please use additional sheets if necessary.

NOTE: Refer to the Guide for more information on how to complete this section

PART VI: INCIDENT DESCRIPTION – AIR ONLY

22. Please describe:

- Any serious jeopardy to persons on any aircraft or aircraft itself
- Any damages to property or environment
- The route by which the dangerous goods were to be or have been transported, including the name of any aerodromes along the route

Aircraft Operator	Air Cargo Facility
-------------------	--------------------