



ITIVIA OIL HANDLING FACILITY OIL POLLUTION EMERGENCY PLAN

**For
Meliadine Mine Fuel Farm in Rankin Inlet
EC ID number EC-00044507 P-50 Diesel fuel**

**April 2020
Version 3.1**

EXECUTIVE SUMMARY

This document presents the Oil Pollution Emergency Plan for Agnico Eagle Mines Limited (Agnico) Meliadine Division. This plan is pursuant to the Canada Shipping Act 2001; and all the subtending regulations. This emergency plan is also required under the Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations (STS Regs), s. 30 to 32. pursuant to the Canadian Environmental Protection Act, 1999 and the Environmental Emergency Regulations 2019 SOR/2019-51.

Oil Pollution Emergency Plan (OPEP) designates lines of authority, responsibility, establishes proper reporting and details plans of action in the event of a spill. This plan applies to the operational phase of the fuel transfer which takes place at Agnico Eagle Ltd.'s Itivia Site Fuel Storage and Containment Facilities and Oil Handling Facility located at latitude 62°48'16.66" N and longitude 92°05'5.32" W.

A hard copy of the OPEP is available at the Rankin Inlet Marshalling facility during the transfer operations.

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ACRONYMS

Agnico	Agnico Eagle Mines Limited
DFO	Department of Fisheries and Oceans Canada
ECC	Emergency Control Center
ECCC	Environment and Climate Change Canada
ERT	Emergency Response Team
ERP	Emergency Response Plan
Fuel	P50 Arctic Grade diesel fuel
IMO	International Maritime Organization
CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada
KIA	Kivalliq Inuit Association
MARPOL	<i>The International Convention for the Prevention of Pollution from Ships, 1973, and</i>
OHF	Oil Handling Facility
OPEP	Oil Pollution Emergency Plan
PPE	Personal Protective Equipment
SCP	Spill Contingency Plan
SOPEP	Ship Oil Pollution Emergency Plan
SMP	Spill Management Plan
TC	Transport Canada
TCMSS	Transport Canada Marine Safety & Security
TEU	Twenty-foot equivalent unit

DISTRIBUTION LIST

Agnico - Environmental Superintendent

Agnico – General Mine Manager

Agnico – Health and Safety Superintendent

Agnico – Energy and Infrastructures Superintendent

Agnico – General Services Superintendent

Agnico – ERT Emergency Measures Councilor

Rankin Inlet – Rankin Inlet Hamlet Office

Rankin Inlet – Fire Department

Coastal Shipping Limited – General Manager

Transport Canada – Marine Pollution Officer

Canadian Coast Guard Environmental Response

DOCUMENT CONTROL

Version	Date (YMD)	Section	Page	Revision
0	17/07/17	All	All	Comprehensive plan for Agnico's Rankin Inlet Fuel Farm Facilities
1.1	18/09/17	5.3, 10.2, Appendix H	11, 33, 217	Additions and revisions in response to the comments by Transport Canada officer
1.2	18/02/07	All	All	-Version and date updated, general review and revision -Environment general supervisor updated -Added reference to spill response seacans located along the AWAR -Removed "A fuel dispensing pad area completed with a dispensing unit will be located in a lined facility with a provision to capture any and all spills at the fueling area and direct them to a containment area provided at the tank farm." – to be implemented through future planning -Added "or equivalent, ie. Plastic tote" to options for spill containment at OHF manifold -Added environment department to list of security contacts -Updated Agnico contact list
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		3.2.1	4	
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		5.4	12	
		Figure 3	13	
		Table 5	24	
1.3	18/07/20	All	All	Fuel Handler
2	19/01/03	All Appendix I	All	-Version and date updated, general review and revision -added mock spill training in the summer of 2018

3	19/10/10	<p>Executive summary</p> <p>2.5</p> <p>5.1</p> <p>11.1</p> <p>Appendix J</p> <p>Appendix K</p> <p>Appendix L</p>	<p>i</p> <p>7</p> <p>11</p> <p>35</p>	<p>Add references to the Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations and the Environmental Emergency Regulations in the executive summary</p> <p>Health and environmental risk resulting from an emergency release of diesel spill</p> <p>Main activities involving diesel fuel</p> <p>Maximum expected quantity of diesel fuel at the Itivia facility</p> <p>PTA assessment</p> <p>STR's cross reference table</p> <p>EER 2019 cross reference table</p>
3.1	10/04/20	<p>Section 8.3</p> <p>Appendix A</p> <p>Appendix B</p> <p>Appendix C</p> <p>Appendix G</p> <p>Appendix I</p> <p>Appendix L</p>		<p>Contact information updated</p> <p>Updated with latest version</p> <p>Updated with latest version</p> <p>Updated with latest version</p> <p>Updated with latest version</p> <p>Updated with latest version</p> <p>Removed</p>

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SECTION 1 - OIL HANDLING FACILITY DECLARATION

Pursuant to paragraph 168(1) (b) (i) of the Canada Shipping Act 2001, Agnico Eagle Mines Ltd. (Agnico) has signed an Oil Handling Facility Declaration. This Declaration can be found posted at the Oil Handling Facility (OHF).

SECTION 2 - GENERAL INTRODUCTION

The Oil Pollution Emergency Plan (OPEP) outlines the necessary actions to stop or minimize the potential loss of fuel at Agnico Eagle Mines Limited's Itivia Site Fuel Storage and Containment Facility located in Rankin Inlet, Nunavut during the ship-to-shore fuel transfer. Additionally, it provides direction to Agnico personnel and/or contractors at the laydown and tank farm areas, and to Agnico's Emergency Response Team (ERT) for emergency spill response situations, describes oil pollution scenarios, defines the roles and responsibilities of management and responders; and outlines the measures taken to prevent spills. The purpose of the OPEP is to minimize potential health and safety hazards, environmental damage and cleanup costs.

2.1 Fundamental Principles

The following OPEP is submitted to comply with the Canada Shipping Act 2001 and all the subtending regulations and to outline the appropriate spill response protocol during fuel transfer operations at the Rankin Inlet OHF. A hard copy of the OPEP is located on site for reference and review during transfer operations. This OPEP is reviewed annually and updates are provided to Transport Canada Marine Safety & Security (TCMSS) for compliance prior to every shipping season. The following priorities shall be taken into account when responding to an oil pollution incident and in the following order:

1. Safety of the workers;
2. Safety of the OHF;
3. Safety of the community of Rankin Inlet;
4. Prevention of fire and explosion;
5. Minimize of the oil spill;
6. Notify and report the oil pollution incident to associated Governing bodies;
7. Minimize the environmental impact of the spill;
8. Complete clean-up from the oil pollution incident.

2.2 Legislative Requirements

This plan was prepared in accordance with federal legislation listed below, which lists legislative instruments applicable to Agnico's Itivia Site Fuel Storage and Containment Facility. All requirements found in the *Canada Shipping Act, 2001*, ss. 168 are laid out in the Meliadine Mine site OHF Concordance Table which will be submitted to Transport Canada (TC) as a stand-alone document.

The OPEP complies with the requirements for procedures, equipment and resources as set out in the *Canada Shipping Act* (s.s. 660.2(4)) specific to a fuel handling facility - the bulk incoming transfer of fuel from ship-to-shore and spill scenarios directly relating to this operation.

The following standards and regulatory requirements have been reviewed in preparation of this document:

- Canada Shipping Act;
- Response Organizations and OHFs Regulations;
- Vessel Pollution and Dangerous Chemical Regulation;
- Environmental Response Arrangements Regulations;
- OHFs Standards (TP 12402E);

- Response Organization Standards (TP 12401);
- Arctic Waters Oil Transfer Guidelines (TP 10783);
- Environmental Prevention and Response National Preparedness Plan (TP 13585);
- Release and Environmental Emergency Notification Regulations;
- Guidelines for reporting Incidents Involving Dangerous Goods, Harmful Substances and/or Marine Pollutants;
- Requirements of the Central & Arctic Regional Response Plan; and
- Storage tank System Regulations
- Environmental Emergency Regulations 2019.

2.3 Related Documents

Management and monitoring plans for the Meliadine Project and that provided input to the Oil Pollution Emergency Plan include the following:

1. Spill Contingency Plan;
2. Emergency Response Plan;
3. Shipboard Oil Pollution Emergency Plan¹; and
4. Shipping Management Plan.

The cornerstones of contingency planning for Agnico are the Spill Contingency Plan and the Oil Pollution Emergency Plan. These, coupled with the Emergency Response Plan and the Shipping Management Plan, describe the processes to be followed in responding to a spill. The OPEP on its own provides the necessary information in the event of a mishap where fuel is lost during the transfer of fuel from a tanker vessel to the Fuel Tank Facility.

The OPEP complements the Spill Contingency Plan and it should not be construed as superseding it. The Spill Contingency Plan addresses a wider scope of operations stretching 35 kilometers from the Meliadine mine site in the north to the infrastructure at the Itivia Site Fuel Storage and Containment Facilities. The OPEP strictly covers the transfers of fuel from ship to OHF.

2.4 Meliadine Mine Oil Pollution Emergency Plan

This Plan is a working document that will be reviewed annually and updates will be provided to TCMSS for compliance prior to every shipping season.

This plan specifically centers on the activities in ship-to-shore transfer of fuel from a small tanker delivering fuel to Agnico's Itivia Site Fuel Storage and Containment Facility constructed in Rankin Inlet. On site personnel at the Facility are expected to respond to spill incidents (generally smaller than 1 m³) that can be contained and cleaned up without assistance, while the Emergency Response Team will respond to larger spills.

Fuel is being delivered to Agnico's Itivia Site Fuel Storage and Containment Facility by Coastal Shipping Limited, a Division of the Desgagnes Group. Fuel is stored within the existing tank farm owned and operated by Agnico. The Shipboard Oil Pollution Emergency Plan (SOPEP) is the responsibility of the shipping company. The outline of the SOPEP prepared by Coastal Shipping Limited can be found in Appendix A – 1.1.

¹ The Shipboard Oil Pollution Emergency Plan (SOPEP) contains all information and operational instructions as required by the "Guidelines for the development of the Shipboard Marine Pollution Emergency Plan" as developed by the International Marine Organization. Desgagnes, the shipping company, is responsible for this Plan.

2.5 Health and Environmental Risk Resulting from an Emergency Release of Diesel Fuel

Short-term exposure to diesel fuel can cause irritation of the eye, skin or respiratory tract. Dizziness, headache or nausea can also be experienced. Long-term exposure to diesel fuel fumes can cause lung cancer, kidney damage and increased risk of heart attack.

Another risk related to an emergency release of diesel fuel would be the contamination of drinking water. Diesel fuel is highly flammable and pose a serious fire hazard if not contained.

Diesel fuel is considered a non-persistent oil (as compared to a heavier Bunker or crude oil product) in even the calmest sea conditions, as it will lose 40% of its volume due to evaporation within 48 hours in cold weather. Adverse weather will disperse the sheen into smaller slicks creating a greater surface area for evaporation. In open rough seas, most of the volume released will be dispersed and evaporated within 5 days. Nevertheless, it still poses a threat to marine organisms and particularly birds if they happen to come in contact with the slick.

More details can be found in Appendix D.

The possibility that an environmental emergency occurs, the potential effects of the environmental emergency on the environment and on human life or health and the measures that will be taken to protect the environment and human life or health will be communicated to the members of the community every year prior to the fuel transfer.

SECTION 3 - PLANNING STANDARDS

3.1 Facility Category

OHF's are categorized according to their maximum oil transfer rate in cubic meters per hour, in respect of the oil product loaded or unloaded to or from a ship, as follows (Table 1):

Table 1 - Category of OHF

Category of OHF	Maximum Oil Transfer Rate (cubic meters/hour)
Level 1	150
Level 2	750
Level 3	2 000
Level 4	More than 2 000

The product transfer rate (Diesel) for the Agnico's Itivia Site Fuel Storage and Containment Facility OHF at Rankin Inlet is 400 m³/hr. As indicated in the OHF Standards TP 12402, this flow rate requires the onsite spill response capacity to meet a Level 2. To do this, the OHF will have the equipment and resources to respond to a 5 m³ spill within the required timelines specified in the Response Organization and OHF Regulations:

1. Contain and control in one hour of spill detection; and
2. Commence cleanup within six hours after spill detection.

3.2 General Planning Guidelines

3.2.1 Response Time Standards

Agnico and contractor personnel at Itivia Site Fuel Storage and Containment Facility have appropriate training to respond to spills, if it is safe to do so (see Table 8). The material onsite can be deployed within one hour to contain a spill of 5 m³ or less, unless deployment within one hour will be unsafe. Generally, for a spill greater than 1 m³, the OPEP and the Emergency Response Plan (ERP) will be activated and the Emergency Response Team (ERT) located at Meliadine Mine site will come into Rankin Inlet to help. Realistically, the ERT can be on site within 60 minutes (or less) ready to help for the clean-up activity. If the spill is greater than 5 m³, material from the spill response seacans along the AWAR (km 7 and 18) and the Meliadine Mine site will be required and will be brought to the Itivia OHF within 60 minutes to finalize the containment (if not complete) and recovery of the oil pollution incident.

3.2.2 On-Water Recovery

Agnico has a boat in a sea can at the Itivia Site Fuel Storage and Containment Facility that is ready to be deployed in case of an emergency situation. All personnel involved in a response situation need to have or complete the pleasure craft operator's certification.

If additional water crafts are required to help with the containment of a spill from the OHF local resources

such as Sarliaq Holdings Ltd and Inuksuk Contracting. Contact info for these companies can be found in Table 6.

3.2.3 *Dedicated Facility Spill Response Equipment*

Agnico has a sea can with spill response equipment at the Rankin Inlet shore within Agnico's Marshalling area and includes booms that can rapidly be deployed to limit the spread of any spill on water. The list of equipment can be found in Table 2. The spill supplies and resources are in place to respond to a 5 m³ spill within the required timelines as specified in the Response Organizations and OHF Regulations. These sea cans are inspected before each transfer season to ensure that all the spill response material and PPE are there and stored in a manner that is organized and accessible in order to comply with regulatory requirements and allow an efficient spill response.

3.2.4 *Transfer Conduit*

The transfer conduit or hose that is used to transfer fuel from Coastal Shipping Vessels to the Agnico Rankin Inlet Fuel Farm OHF are pressure tested annually by Coastal Shipping according to the regulation prior to it being placed into service. A copy of the annual pressure tests conducted can be found in Appendix B. The transfer conduit will always have a bursting pressure of at least 4 times its maximum design pressure and the design pressure will be clearly marked on the conduit.

3.2.5 *MEL-ENV-0029: OHF / Ship to Shore Fuel Discharge Procedure*

Agnico has created an internal procedure to ensure all planning and precautions are in place prior to the transfer of any fuel from the vessels to the OHF. This procedure can be found in Appendix C along with the Pre-discharge and Spill Response Sea Can checklist.

SECTION 4 - RANKIN INLET MARSHALLING AREA AND FUEL STORAGE FACILITY

4.1 General Overview and Site Description

Agnico Eagle's proposed tank farm and laydown area is located at Itivia in Rankin Inlet on Melvin Bay at latitude 62°48'16.66" N and longitude 92°05'5.32" W, map sheet 055/K16. Its location is shown on Figure 1-1. Two (2) fuel storage tanks are installed at the Rankin Inlet Itivia fuel farm. The site location of the 20 million and 13.5 million liter tanks (tank #1 and #2 respectively) as shown on Figure 2 below. Tank #1 was completed in 2018; Tank #2 was erected in 2017.

Figure 1 - Location of the Community of Rankin Inlet

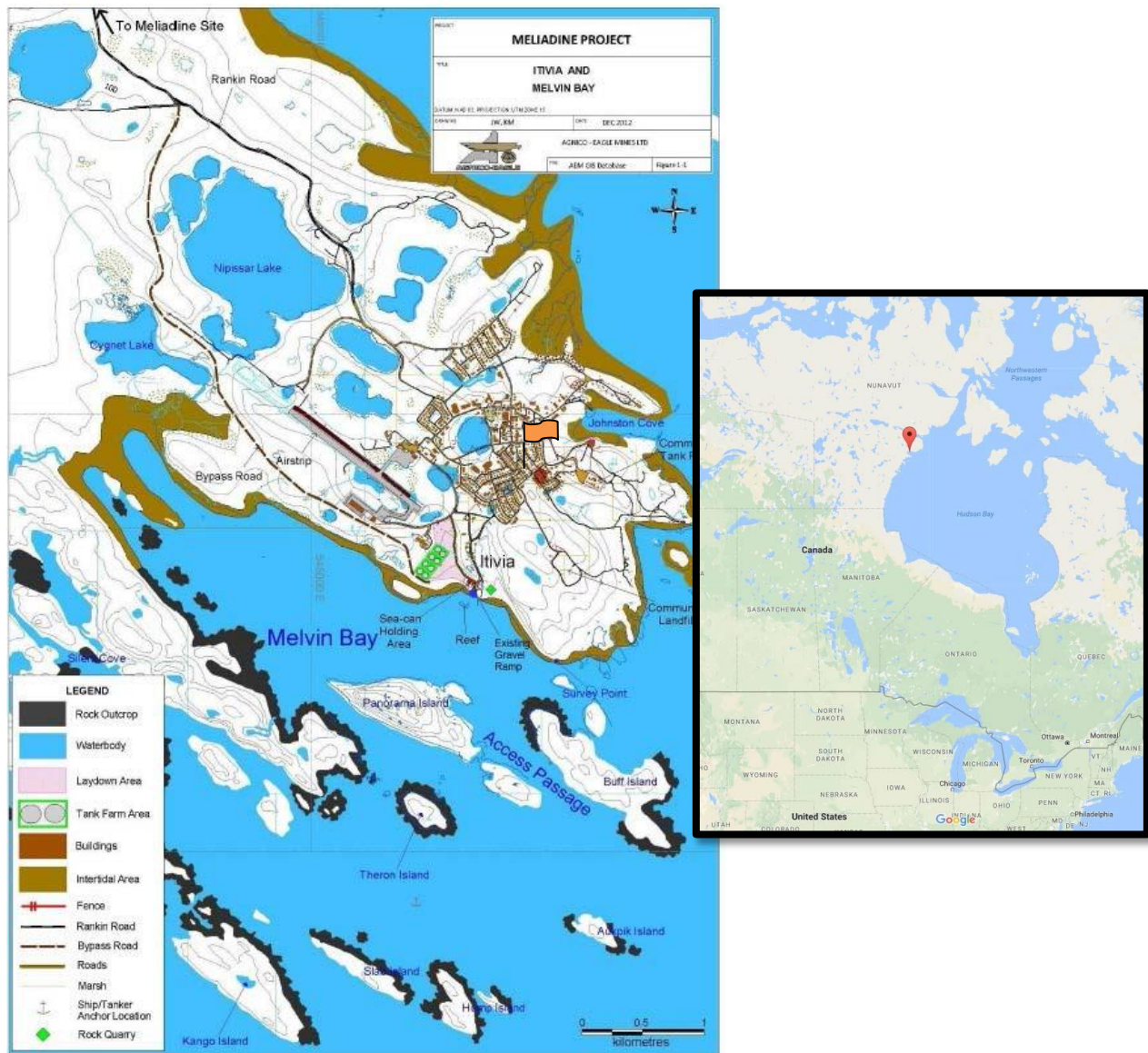
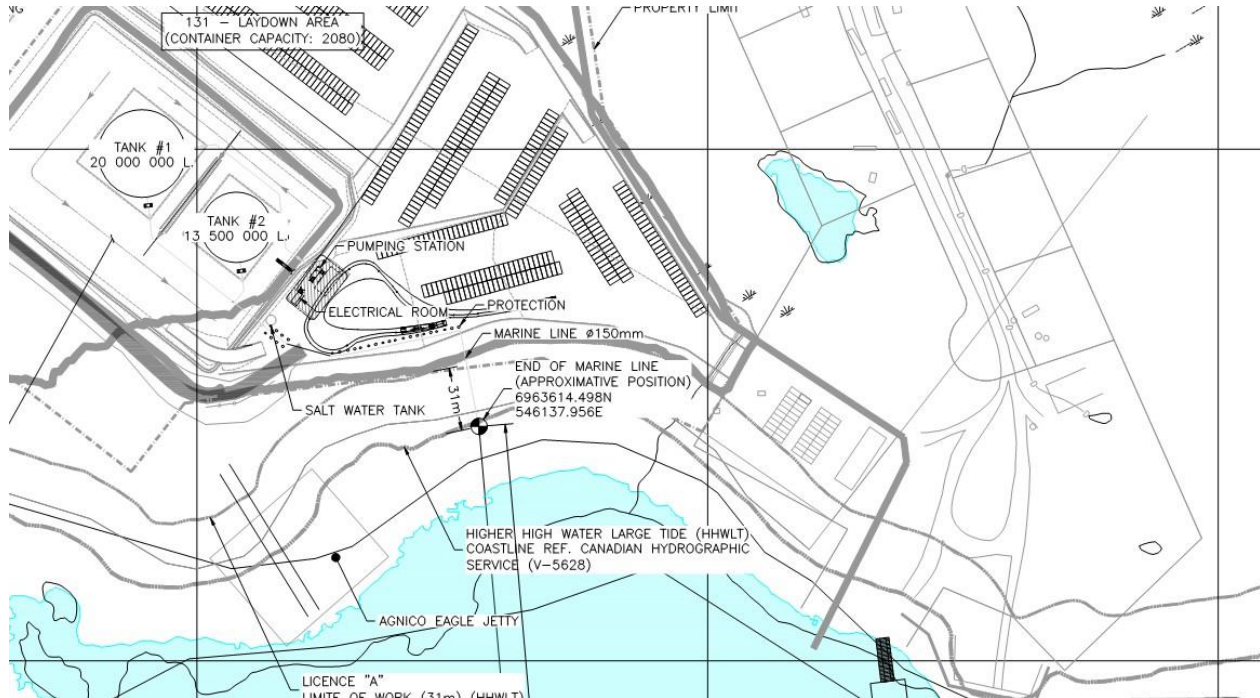


Figure 2 - Itivia Site Fuel Storage and Containment Facility

4.2 Fuel Storage Facilities Infrastructure

4.2.1 P-50 Fuel Tanks

The diesel fuel tanks are contained within an impermeable lined and bermed area. The steel fuel tanks were field-erected and built to API-650 standards. The bermed area is capable of containing 110% of the volume of the largest storage tank. The impermeable lined and bermed cell has the following:

- A granular base for the tank completed with an impermeable LLDPE liner system and granular dikes;
- A tank complete with the required appurtenances such as stairs, base manholes, water draw offs, re-supply nozzle, suction nozzle, tank lighting, tank level monitoring, roof manhole, manual gauge hatch, tank temperature and P/V vent;
- Piping for unloading and loading; and
- Site lighting via fixtures mounted from the dispensing building.

The Tank Farm Facility is designed to meet the following standards:

- National Fire Code 2010;
- *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations* – 2008; and
- Canadian Council of Ministers of the Environment, “*Environmental Code of Practice of*

Aboveground and Underground Storage Tank Systems Containing Petroleum Products and Allied

Petroleum Products – 2003 (Updated in 2013) (PN1326)".

The OHF is constructed and operated in accordance with TC Arctic Waters Oil Transfer Guidelines (TP 10783E) and OHF Guidelines (TP 12402E).

4.3 Rankin Inlet Shoreline and Marine Characteristics

The following Rankin Inlet Shoreline and Marine Characteristics were gathered during the Environmental Impact Assessment that was performed prior to construction of the Rankin Inlet Marshalling facility and Tank Farm.

4.3.1 *Topography*

The bulk fuel storage area is located south of the residential area of Rankin Inlet, and within the industrial area of the community of Rankin Inlet, south of the Rankin Inlet Regional Airport. The OHF sits on a terrace parallel with the shoreline of the coast of Hudson's Bay, the bay in which Rankin Inlet is located is known as Melvin Bay. There is a gradual slope (5 to 10% grade) toward Melvin Bay with an approximate elevation change of 3-5 m from the OHF to the coastal shoreline. The Melvin Bay shoreline is gently sloping, well-drained, very rocky, comprised of boulders and rock.

4.3.2 *Flora and Fauna*

There are no trees and few shrubs in the area surrounding the bulk fuel storage facility. The site is covered by low-lying vegetation; predominated by grassy hummocks, dwarf willow, sedge, green moss and lichen.

Arctic ground squirrels, ptarmigans and songbirds inhabit the area surrounding the bulk fuel storage facility. Lake cisco, lake trout, arctic char, lake whitefish, round whitefish, slimy sculpin and stickleback are predominant species found in Hudson Bay in the vicinity of Rankin Inlet.

4.3.3 *Tides and Currents that Prevail at the Facility*

There is a general cyclonic (counter clockwise) current in Hudson Bay with mean monthly residual currents of approximately 4 to 6 cm/sec. In Hudson Bay, stronger currents occur in summer than in winter and more variability occurs at the surface than at depth. Based on the navigation charts prepared by Canadian Hydrographic Service, flow through the Access Passage into Melvin Bay can reach approximately 26 cm/s (0.5 knot; CHS 1997). Tidal range is about 4.6 metres at Panorama Island in Melvin Bay.

4.3.4 *Meteorological Conditions Prevailing at the Facility*

Monthly meteorological data has been collected from 1981 to 2009 at the Rankin Inlet A climate station, which is a Meteorological Service of Canada climate station. Snow and rain are combined to give monthly average precipitation. The prevailing winds for the area are generally from the north to north-west and average 23 km/h.

4.3.5 *Surrounding Area Environmental Sensitivities*

The hamlet of Rankin Inlet is situated on the Kudlulik Peninsula which protrudes into Rankin Inlet of Hudson Bay. Rankin Inlet itself has three (3) main rivers entering it: the Diane River in its northwest, and the Meliadine River and Char River in the northeast. Melvin Bay is fringed with drying flats on the north side and encumbered by islands, islets, reefs and shoal water. The access passage is mostly bedrock. Itivia is situated on the northeast shore of Melvin Bay as shown in Figure 1. Itivia has an intertidal zone of up to 56 metres with the substrate predominately comprised of 70% gravel/cobble, 20% fines and 10%

boulders. The substrate at this location was strongly influenced by the addition of gravel to develop the harbour's boat launch. In the open water season, Itivia provides a place for residents to moor and launch their boats. A few cabins are situated across Melvin Bay from Itivia but otherwise there are no buildings on the shore. Itivia is used for the loading and unloading of community supply vessels. In the winter, it is used by residents for snowmobile access to the sea ice in Melvin Bay and beyond.

Melvin Bay has a typical biological assemblage of macrophytes, plankton, zooplankton, benthic invertebrate and fish found elsewhere in this area of Hudson Bay. Near shore macrophyte coverage around Melvin Bay is sparse and is predominately rockweed (*Fucus* spp.) and kelp (*Laminaria* spp.). Phytoplankton are predominately dinoflagellates while the zooplankton community is more variable. Incidental invertebrate species are observed and include amphipods, barnacles, unidentified bivalves (e.g., mussels, clams), winkles (*Littorina sitkana*), ascidians (sea squirts), and unidentified crab species. Arctic char were not captured in Melvin Bay during the baseline survey. The predominate fish was Greenland cod followed by slender eelblenny and fourhorn sculpin.

SECTION 5 - SITE ACTIVITIES

5.1 Nature of the Oil Product

The main fuel stored at the Agnico's Rankin Inlet Fuel Farm is P50 diesel. Appendix D includes the SDS for Diesel. All other fuels such as gasoline, Jet-A and possibly other grades of diesel are purchased in drums or 1 m³ totes and brought to the mine site for storage at the Itivia Site Fuel Storage and Containment Facility, or purchased and brought to site from a supplier or contractor in Rankin Inlet. The main activities involving the P50 diesel at the facility are creating electricity, heating activity and different process (incinerator, treatment and process plant). The product is also used for mobile equipment.

5.2 Bulk Transfer

The tankers delivering diesel fuel are anchored within Melvin Bay. From there, transfer hoses (Conduit) are connected to a shore based pipeline for transfer of P-50 diesel fuel to the diesel tank farm.

Ballast are not required for the inward voyage as the tanker arrives at Rankin Inlet loaded with diesel fuel. After transferring the fuel to the tank farm, the tanker takes on ballast in its segregated ballast compartments before sailing out.

Due consideration is given to prevailing and expected wind, weather and tide conditions when undertaking ship-to-shore fuel transfers.

The tanker is discharging at a rate of 400 m³/hr. Communications between the shore and the tanker is maintained throughout to ensure the safe transfer of the fuel and to avoid the overfilling of the tanks. The ship-to-shore transfer procedure being used is similar to the one used at communities throughout Nunavut.

5.3 Measures to Minimize a Diesel Pollution Incident

The small tanker is anchored offshore in water of sufficient depth to allow for draught and tidal changes during transfer.

The transfer of the fuels uses sound, well-rehearsed practices, including an adequate number of trained and alert personnel, have sufficient materials, and use well maintained, thoroughly tested equipment. A team of trained personnel on the tanker is in charge of the tanker fuel transfer equipment, while an onshore team is in charge of the land based transfer equipment. Agnico has at least 2 trained personnel on the land to observe for any leak detection: a third party contractor (Intertek) and the Rankin Inlet Supervisor. The role of the third party contractor is to apply procedure and oversee operation during the fuel transfer. To do this, the third party contractor needs to come on site at least one (1) day before the first day of transfer to receive the appropriate training given by the Environmental Department. Fire-fighting, spill response equipment, and supplies are located on the tanker and onshore near the transfer point as required by TC. This includes readily available absorbent material (including absorbent pads) at the flexible hose connections on deck and onshore to quickly address minor spills at predictable minor spill locations. Additionally, Agnico placed a sea can with spill response supplies (including boat) and equipment at the Itivia Site Fuel Storage and Containment Facility area where it can quickly be accessed in the event of a spill.

Four-inch (10 cm) steel piping able to accommodate a flow rate of approximately 400 m³/hr leads down to the shore from the diesel tank farm. Conduit from ship-to-shore are connected to the fuel-receiving manifold located onshore using dry-break coupling(s).

- Complete checklist before / during transfer for the on-land responsible (See Appendix E);
- Complete checklist, provide by Desgagnes, with vessel captain before transfer begin (Appendix E);
- Complete inspection / inventory of spill response sea can before transfer;
- During the transfer, regular monitoring are undertaken for detection of incipient spills and leaks between the tanker and the tank farm;
- Radio test before transfer and at hour intervals during transfer between the personnel on land and the captain of the vessel;
- Transfer operations will be suspended should any leak be detected or filling alarm are activated;
- The onshore area and ship deck are well-lit as fuel transfers could continue around the clock;
- Have a good knowledge of the OPEP requirement and protocol to follow in case of a spill by receiving a training / review each year before the transfer season; and
- The regular update of the OPEP.

During the ship-to-shore transfer, Agnico has competent personnel on location at all times to monitor the fuel transfer and maintain contact with the tanker's crew. Should problems arise, the ship can be called to shut down the transfer and onshore piping will be closed down. In the event of a spill that escapes the containment boom, diversion booming will be deployed to minimize migration of a spill throughout Melvin Bay. Adequate lighting is in place during all transfers, to allow for proper inspections of transfer locations around the clock. The lighting system intensity is not less than 54 lx at each transfer connection point of the vessel and OHF and a lighting intensity not less than 11 lx at each transfer operation work area around each transfer connection point of the vessel and OHF.

For more information, please refer to Appendix C: MEL-ENV-0029: OHF / Ship to Shore Fuel Discharge Procedure.

5.4 Permanent Containment Structure

At the connection of the ship's conduit to the OHF manifold, a permanent containment structure was erected for the transfer of product. This structure is capable of holding ~400 L of liquid in the case that there is a leak at the flange or residual drips out of the conduit or hard wall pipe.

Spill "pop-up" pools/secondary containment berms will be in place under each joint for the conduit used to fill the Fuel tanks during fuel transfer. These pop-up pools/berms are only capable of holding 20-50 L of fuel and are in place to catch residual and be a first line of defense in the case of a leak.

SECTION 6 - MELIADINE RESPONSE TO EMERGENCIES

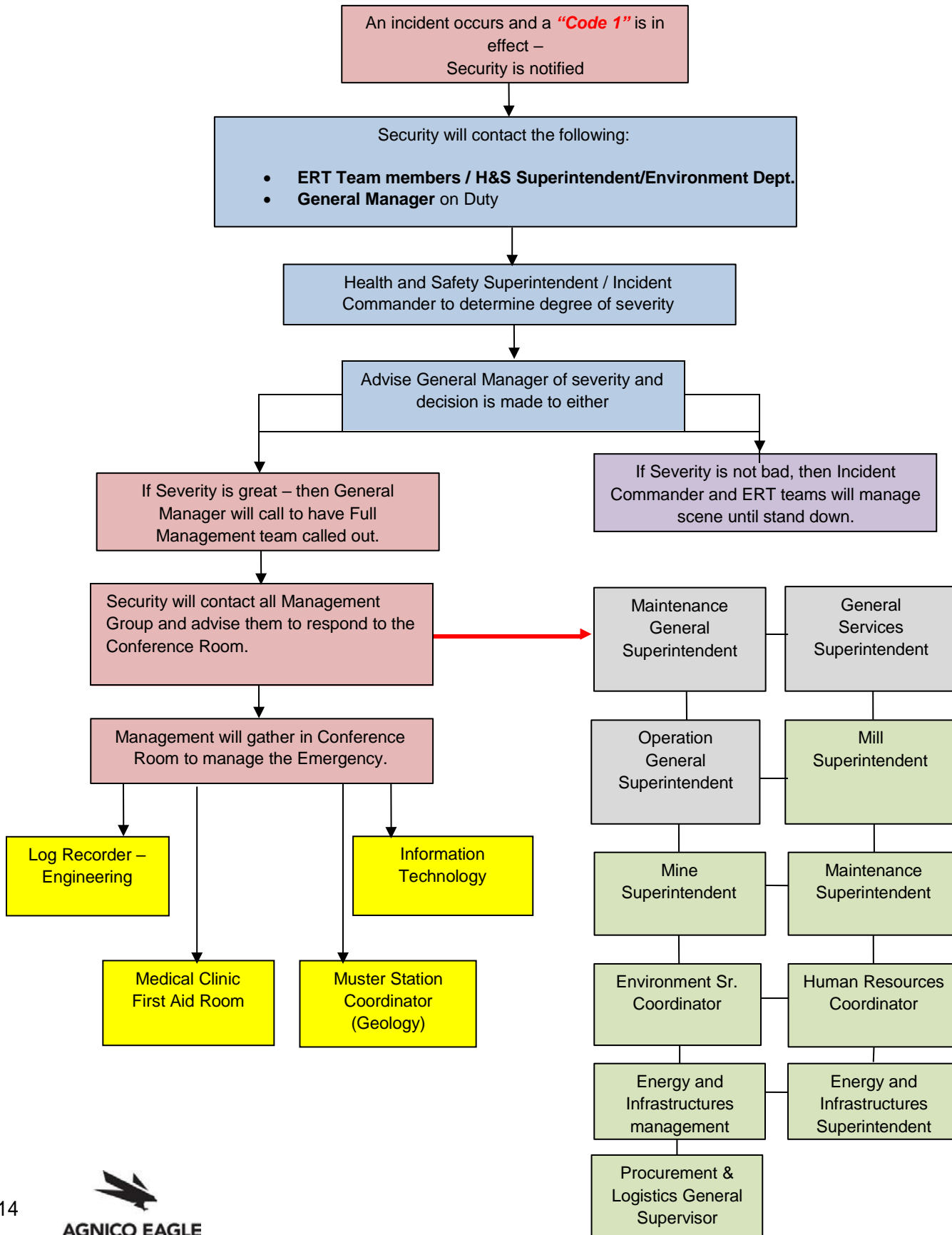
The Itivia Site Fuel Storage and Containment Facility OHF is considered Level 2 Handling facility as indicated in the OHF Standards TP 12402. With a transfer rate of $\sim 400 \text{ m}^3/\text{hr}$, Agnico's OHF must have the spill response capacity to respond to a minimum of a 5 m^3 spill.

6.1 Response Management Structure

Agnico has an Emergency Response Team (ERT) at the Meliadine site trained and responsible for controlling Level 2 or greater spills at the Itivia Site Fuel Storage and Containment Facility, and for assisting with medical and other emergencies that may occur at the mine site or the OHF.

Figure 3 depicts the Response Management System.

Figure 3 - Response Management System



6.1 Logistics and Planning

The Emergency Measures Counsellor (EMC) ensures that site drawings and equipment lists are posted in key locations throughout the site so that important information is always readily available. This includes the following:

- Location and isolation points of energy sources;
- Location of emergency equipment (e.g., fire water pumps, fire extinguishers, monitors, self-contained breathing apparatus);
- Emergency procedures outlines, such as specialist firefighting, chemical neutralization;
- Location of equipment for combating pollution (e.g., booms, pumps, absorbents, dispersants);
- Availability of internal and external emergency medical support (e.g., hospitals, clinics, ambulances, medical supplies, personnel with medical or first aid training);
- Location of toxicity testing facilities (e.g., gas and water);
- Location of wind direction / speed indicators;
- Directions on how to contact the local or regional weather forecasting service;
- Location of personal protective equipment (PPE) and directions on its proper use; and
- Location of first aid stations and muster areas.

The Incident Commander, EMC, and Health and Safety Superintendent know where, throughout the project site, all of this information is posted and where emergency equipment is stored. These individuals are also trained in the proper use of emergency equipment.

SECTION 7 - EQUIPMENT AND PPE

The following sections describe the items that are available in the case of a spill at the Agnico Eagle Mines Limited's Rankin Inlet Fuel Farm OHF. Equipment has been classified into items available for spill sizes either up to or greater than 5 m³. However, all means will always be used to respond to a spill in a timely manner and ensure a prompt clean-up of any spill.

7.1 OHF Response Equipment for spills up to ~5 m³

The following equipment (Table 2) is available right at the OHF during open water season in a sea can designated for Environmental Emergency and can be deployed on scene within one hour, if it is safe to do, to contain and control the spill.

Table 2 - Material available in the Spill Response Sea Can at Agnico's OHF

Agnico Eagle Boom Sea Container		
Line #	Description	QTY
1	Anchor Set; 25kg anchor, 50' x 1/2" chain ballast, 50' rode line and 21" marker buoy	6
2	Tow bridles with bullet float	4
3	8" float x 12" skirt OptiMax II Boom - 25' sections	32
4	Mini Max Hydraulic Skimmer with pump, Power pack	1
5	14' aluminum boat with 15 hp outboard prop motor	1
6	1/2" Polyester Yacht Braid rope (600' rolls)	10
7	Drive pin anchors	5
8	Slater anchors	5
9	Wing anchors	5
10	Sorbent Boom, 5" X 4 per bag	30
11	Mustang Floater Suit	4
12	Personal Floatation Devices (PFD)	8
13	Oil resistant gloves	12
14	Leather gloves	12
15	Sledge Hammer with Fibreglass Handle	2
16	Spade - Long Handle	2
17	Fire Extinguisher - 20lb ABC with brackets	2
18	Tyvek Suit XL	20
19	Alberta Standard #3 First Aid Kit	1
20	Storage Totes for Small Items	4
21	Quick Tank (500 gallon / 1893 ltrs.)	1



7.2 Additional Response Equipment or for Spills >5 m³

All equipment previously mentioned is available for use during any emergency situation for a spill greater than 5 m³. The following equipment would take time to get to the spill site, time would vary depending on distance from the spill. All these equipment and resources can be deployed on scene in <6 hours for the recovery and clean-up of the spill.

7.2.1 General Equipment

This section addresses the emergency response machinery, equipment, tools and other resources that can be made available on-site for spill counter measures.

7.2.1.1 Mobile Equipment

Mobile equipment available to Agnico, that will be used for spill contingency include:

- | | |
|------------------------|-------------------------------|
| • Graders-1 | Winch Trucks-2 |
| • Cranes-3 | Pickup Trucks-40 |
| • Snowmobiles-3 | Generator Sets/Light tower-26 |
| • Vacuum Truck-1 | Fire Truck-1 |
| • Loaders-6 | Boats-4 |
| • Backhoe-3 | Fuel Trucks-1 |
| • Bulldozer-1 | Bobcat-4 |
| • Forklift & Hysters-4 | Haul Trucks-13 |
| • Water Trucks-6 | Snow Cat-1 |

All the previous listed equipment can be found on the Meliadine Project site. Wheeled equipment can be at the OHF in Rankin Inlet in 3-6 hours. Tracked equipment would have to be loaded and transported which would take 5-6 hours.

7.2.1.2 Emergency Transportation

Emergency transportation that will be used under an emergency situation are:

- Seasonal Aircraft (fixed wing or helicopter)
- 4-wheel drive vehicles >70
- Snowmobiles x 9
- Boats and motor x 4

7.2.2 Spill Response Kits and Containers

7.2.2.1 Kits

Spill response kits are strategically located where required. Each department and work area is responsible for providing sufficient spill response kits in their respective work areas. The kits are kept in marked and accessible locations. The locations include all fuel storage areas, chemical storage areas and so on.

All of the mobile equipment for the Meliadine project (including heavy equipment) contains an emergency spill kit. Regular audits are completed to ensure these are in place.

7.2.2.2 Emergency Trailer

Agnico also have an Environmental Emergency Trailer which is easily accessible and mobile. The trailer is located at the Meliadine Project Site east of the Environmental Office. This trailer contains the following items:

2020-Emergency spill trailer	
Items	Quantity
Evac system	2
Leak control kit	1
Drum opener	1
Westcott	2
Hammer	2
Screw driver	3
Plier	1
Empty drum	4
Berms 4x4	2
Tarp	2
Spill pad-Universal (bags)	2
Spill roll-Universal	2
Booms (5x10)-Universal (bag of 4)	2
Booms (8x10)-Universal (bag of 4)	2
Absorbent (gator)-(Bag)	3
Absorbent (pellet)-(bag)	2
Quatrex-bags	5
Milk crate	1
ty-wrap	Pack
Yellow liner roll	1
Anti-spark Gaz pump	1
Pump Hose	200ft
Shovel 4ft round tip	3
Re-bar 3-4-5ft	14
Sledge hammer	2
Jerry can (full gas)	2
Crow bar 4 ft	2
Pig tale (3 balls)	1
Pin for pig tale	1

7.2.2.3 AWAR Sea cans

Along the AWAR there are 2 Environmental Emergency sea cans. These sea cans are strategically

placed along the road at water crossings. Each Environmental Emergency sea can contain the following material:

2020-AWAR SPILL SEACAN (KM 7)

Seacan	Items	Quantity
271029-0	Empty drums (Sealed) 45 gal.	10
	Quatrex Bags	10
	Yellow liner (Q-bag liner) Roll	1+1/4
	Mini Berm 3'x3'	2
	Mini berm 2'x3'	4
	Spill Kit (blue drum)	1
	Tarp 8'x10'	3
	Tarp 20'x30'	0
	Tarp 30'x50'	1
	Universal boom 5"x10'	20
	Universal boom 8"x10'	20
	Oil only booms 5"x10'	20
	Maritime barrier (Baffle)	3
	ABS pipe : 10' (4")	0
	Absorbent Sheet (bags)-Universal	10
	Absorbent Roll-Universal	10
	Absorbent pellet (bag)	7
	Oil gator absorbent (bag)	10
	Plug pattie	0
	Fork lift crate (pallets)	6
	Long handle round and square point shovel	6
	Chisel point crow bar 16 lbs 57"	2
	Ice braker chisel	1
	Sledge hammer 12 lbs 36"	3
	Steel Rod bar (4')	16
	Steel Rod bar (6')	10
	stream skimmer	0
	temporary storing device (old bladders, pipes and fitting)	0
	CI agent granules (100lbs)	0
	Oil spill kit (pail)	1
	Yellow Nylon rope (bags)	2
	Mini-Sledge Hammer	1
	Ty-wrap (pack)	1
	26' Tape	1
	Multi-purpose shears	1
	Crescent wrench	1
	Hook knife	1
	Mechanics wire roll	1
	Side cutters	1



2020-AWAR SPILL SEACAN (KM 18)

Seacan	Items	Quantity
278737-1 (KM 18)	Empty drums (Sealed) 45 gal.	10
	Universal boom 5"x10'	12
	Universal boom 8"x10'	12
	Oil only booms 5"x10'	12
	Maritime barrier (Baffle)	3
	Absorbent Sheet (bags)-Universal	10
	Absorbent Roll-Universal	10
	Absorbent pellet (pail)	10
	Fork lift crate (pallets)	6
	Yellow Spill Kit	1
	Evac System	2
	Silt Bags	2
	Silt Fence	2
	Yellow Liner Roll	1
	Q-Bags	10
	Rebar 3"	4
	Rebar 4"	10
	Sledge Hammer	1
	Mini Sledge Hammer	1
	Nylon rope roll	1/2
	'Pingouin"	1
	Tarp	4
	Bolt cutter	1
	Side cutters	1
	Knife	1
	Mechanic wire roll	1
	Yellow and red ruban	1 roll each
	Ty-wrap (pack)	1
	Pipe wrench	1
	Westcott	2
	Crow bar	1

7.3 PPE

7.3.1 PPE at OHF for Spills <5 m³

The following PPE (Table 3) can be found in the Emergency Trailer and also in sea can at the OHF:

Table 3 - PPE Available at OHF

Quantity	Equipment/tool name
3	Rain gear -- Pants and Top (L & 2-XL)
3	Rubber boots (size 8,10,12)
6	Rubber gloves
3	Goggles
3	Tyvex suits (L & 2 XL)
3	Safety glasses
3	Leather gloves

This is adequate PPE intended for 3 persons. Additional PPE will be available from the Meliadine Project site.

7.3.2 PPE for Spills >5 m³

PPE is stored in bulk quantities at the Meliadine Warehouse. Quantities of each can be found on site using the JD Edwards system. In addition, the community of Rankin Inlet has certain PPE that can be purchased through Agnico Eagle after consulting the Agnico Eagle Procurement and Logistics department; however quantities of this PPE cannot be relied on within Rankin Inlet.

SECTION 8 - COMMUNICATION

The primary basis for communication is the phone system; back-up communication is also available via radios or satellite phone. For on-site communication, hand-held radios are mandatory for all employees working or travelling in remote areas from the OHF. Cell phones can be used as an additional means of communication however only CDMA service is available at the OHF. Back-up power sources and replacement batteries for communications equipment are available to provide continuous, uninterrupted operation either at fixed facilities or at emergency sites.

Key site personnel are accessible at all times by either portable radios, radios in vehicles, or office radios. The Health Care Professional carries a hand-held radio and is available at all times. Security personnel monitor the emergency channel twenty-four hours per day. Senior management personnel will rotate as “On-Call Managers” for after-hour emergencies. An accommodations list that highlights key personnel will be posted and updated as required.

In the event of a major emergency, all external communications for the project site and associated areas will be cut and all external contact will take place solely through the Emergency Control Center at the Meliadine Site.

During fuel transfer operation, the vessel master and the operator of the OHF always have a two-way communication on a continuing basis. This two-way communication is the direct communication by radio and the use of the cell phone.

8.1 Communication with the Public

Communication with public bodies during the state of emergency is the responsibility of the General Mine Manager or the Communications & Public Affairs Corporate Director.

In the case that the community of Rankin Inlet should need to be evacuated on short notice, the Emergency Response Team will immediately assist in the evacuation of the community. The General Mine Manager will immediately contact the Mayor of the Hamlet to inform them of the situation. In addition, if safe to do so, a radio notification should be immediately broadcasted on the Rankin Inlet Radio station.

8.2 Hand Held Radio Communication

The relevant channels used for hand held radio communication on the Meliadine Project site, the All Weather Access Road, OHF, and associated facilities are as follows in Table 4:

Table 4 - Meliadine Radio Channels

CAMP
CONSTRUCTION
EXPLORATION
ROAD
UG OPERATION
DRILL & BLAST
WAREHOUSE
MAINTENANCE

**Grey represents channels used at Itivia

8.3 Contacts

Internal contact information is contained in Table 5 for all Agnico personnel involved in spill recovery. Table 6 contains contact information for contractor contacts, which can be called for assistance with spill recovery. Table 7 is a list of government officials and external contacts to notify and provide subsequent reporting.

Table 5 - Agnico Contacts

Title	Name	Telephone No.
Sr. Vice President, Sustainability	Carol Plummer	416.644.2056 Cell: 819.354.9877
Vice President of Environment and Critical Infrastructure Development	Michel Julien	416-947-1212 ext. 3738 Cell: 514.244.5876
Corporate director, Communications & Public Affairs	Dale Coffin	416.847.8669 Cell: 647.274.4154
Director Shared Services Nunavut Group	Jason Allaire	819.759.3555 ext. 4608004 Cell: 819.355.2608
Meliadine General Mine Manager	Frédéric Mercier-Langevin	819-759-3555 ext 4608058 Cell: 819.354.6676
H&S Acting Superintendent	Guillaume Bigue	819.759.3555 ext 4603074 Cell 514.805.7338
H&S General Supervisor	Nathalie Ledoux Charles-Andre Langevin	819.759.3555 Ext 4603968 819.759.3555 Ext 4603073 Cell: 819-239-8287
Emergency Measure Counsellor	Dave Loder Darren Wilcox	819.759.3555 ext.4603113
Environmental Superintendent	Jessica Huza	819.759.3555 ext.4608190 Cell: 819.856.5097
Environmental General Supervisor	Terry Ternes	819.759.3555 ext. 4603212 Cell: 819.860.4515
SR. Environmental Coordinator	Sean Arruda Daniel Gorton	819.759.3555 ext.4603996

Environmental Department	Environmental Technicians	819.759.3555 ext.4603903 & 4603925
On-site Nurses		819.759.3555 ext.4603011

Table 6 - Contractors / Local Contacts

Title	Telephone No.	Contact in Emergency for:
Nolinor Aviation Services	Protocol Agent (819).759.3555 ext. 8008 Emergency (450) 476.0018 (888) 505.7025	Flight services for additional crew, or additional supplies
Calm Air	(867) 645.2746 Emergency (204) 677.5013 (204) 677.5019	Flight services for additional crew, or additional supplies
Dyno Nobel Explosives Ltd.	(867) 793-4610 ext. 3926	Heavy Equipment, Man power, Emergency Blasting
Desgagnes Group (Shipping)	(867) 979-3799	Fuel Hauler
Sarliaq Holdings Ltd.	Richard- Office 867.645.2653 Cell 867.645.1281 Silu - Office 867.645.2651 Cell 867.645.7645 James - Office 867.645.2759 Cell 867.645.6718 Kilabak - Office 867.645.2759 Cell 867.645.7851 Marvin - Cell 867.645.6799 Shop - 867.645.2753	Equipment, man power, Ground transportation services
Sakku Enterprises	Sean Sykes – 250.505.6105 Raymond Boisvert – 250.551.2894	Equipment, man power, Ground transportation services
Inuksuk Construction	John Winter – 902.483.0398 Tony King – 902.478.4700 Inukshuk Construction – 867.645.4032	Man power, equipment, trades personnel i.e. pipefitter, plumber, electrical

Table 7 - External Contacts

**All phone numbers will be reviewed each year at the beginning of July and updated.*

Organization/Authority	Telephone Number	Fax Number
NT-NU 24-Hour Spill spills@gov.nt.ca	(867) 920-8130	(867) 873-6924
Workers' Safety & Compensation Commission	(867) 979-8500	(867) 979-8501
Kivalliq Inuit Association (KIA)	(867) 645-5725	(867) 645-2348
Nunavut Water Board (NWB)	(867) 360-6338	(867) 360-6369
CIRNAC Inspector (Tim Morton)	(867) 669-2442	(867) 669-2871
Nunavut Regional Office (NRO) – Indigenous and Northern Affairs Canada (INAC) – Iqaluit	(867) 975-4500	(867) 975-4560
Department of Fisheries and Ocean (DFO) – Nunavut Regional Office - Iqaluit	(867) 979-8000	(867) 979-8039
Manager, Environmental Protection, Government of Nunavut – Kristi Lowe	(867) 975-7748	(867) 975-6099
Kivalliq Health Services – Rankin Inlet Emergency on call Nurse	(867) 645-8300 (867) 645-6700	(867) 645-8304
Rankin Hamlet Office	(867) 645-2895	(867) 645-2146
Rankin Ambulance or Fire Emergency	(867) 645-2525	
RCMP 24 Hour Emergency Number	(867) 645-0123	
Canadian Coast Guard (in the event of a spill to the marine environment 24 hours) Superintendent, Environmental Response Coast guard e-mail for notification iganordreg@innav.gc.ca	(800) 265-0237 (519) 383-1954 (867)-979-5724	(519) 337-2498
Transport Canada – Marine Safety Jaideep Johar Ian Salisbury Philip Levesque - Marine Safety Inspector	(204) 880-0754 or (204) 984-8618 (204) 984-2254 (780) 495-8360 (250) 754-0290 (204).984.5786 (204).801.6951(cell)	(780) 495-8607

SECTION 9 - ROLES AND RESPONSIBILITIES

9.1 First Responder (Third Party Contractor (Intertek Personnel) and Spud Barge Supervisor)

The person who has caused a spill or is the first to observe the spill is the first responder.

The responsibilities of the First Responder are as follows:

- Oversee the fuel transfer operation;
- Follow procedure set-up in the OPEP to prevent and minimize spill (See Section 5.3)
- In case of spill to land, ice or water, contact the Rankin Inlet Gatehouse to report the incident;
- Identify and contain the spill, IF SAFE TO DO SO; commence preparing spill response equipment, and
- Participate in spill response as a member of the clean-up crew.

9.1.1 Supervisor Fuel Discharge

The responsibilities of the Supervisor are as follows:

- Contact the Rankin Inlet Gatehouse; contact the Environment Department;
- Gather facts about the spill; and
- Participate in spill response.

9.2 Roles & Responsibilities of the Emergency Control Group

Below are the roles and responsibilities of the Emergency control group.

9.2.1 Official In-Charge

The Official In-Charge (General Manager or designate) will take charge for overseeing and approving the overall emergency strategy.

Immediate duties of the Official In-Charge include:

- Consult with the Incident Commander the status of emergency;
- Appoint an Emergency Log Recorder to maintain a written record of the time and events, including all discussions, instructions and decisions made by the Emergency Control Team;
- Issues specific tasks to the members of the Management Team as they arrive at the Control Room, as per this guideline;
- Brief the Emergency Control Team;
- Ensure that the safety of personnel is maintained, throughout the operation;
- Ensure procedures are in place for prompt dispatch of requested personnel, materials and

equipment to the emergency area;

- Arrange for all reports to be presented at specific intervals to the Emergency Control Team;
- Finalize the recommendations of the Incident Commander for rescue and recovery operations;
- The Official In-Charge is the only person authorized to release information to Government Agencies, Corporate Office or the Local Communities. He may delegate this activity to other members of the Emergency Control Team;
 - Verify all information you release;
 - Keep a record of all inquiries (media and non-media);
 - Do not speculate on causes;
 - Do not speculate on resumption of normal operations or when the problem will be solved; and
 - Advise that further updates will be forth coming.
- Notify the corporate management, if the following appear probable:
 - Fatalities;
 - Injuries that could probably become items of local, regional or national media interest;
 - There is a public health or environmental risk;
 - An incident involving chemicals where there is a large volume or the potential for over reaction (e.g., cyanide);
 - A spill of effluent or contaminated water or chemical substance to an area that lies outside the area of drainage control of the mine site (i.e., an external spill);
 - Mine operations may be stopped for more than two (2) days; and
 - Government authorities will become involved.
- Ensure all response teams, regulatory agencies and any other agency on emergency alert notice are advised when the emergency has ended;
- Ensure all documentation (i.e., notes, log sheets, written instructions, etc.) is gathered for the creation of the final report; and
- Participate in debriefing.

9.2.2 *General Superintendents*

- Energy & Infrastructure, Operations and Maintenance will report to the Emergency Control Room and support the General manager/Designate in whatever capacity required;
- They will also ensure that the Superintendent/Designate in each of their respective Department's is aware of the emergency; and
- They will assist with the investigation and write up of the final report.

9.2.3 *Incident Commander: A Trained Staff Member (ERT Coordinators or Supt.)*

The responsibilities of the Incident Commander include:

- Ensure Security has been notified of emergency;
- Ensure the evacuation procedures have been activated, if required;
- Ensure that there are sufficient ERT members available to respond to the emergency;
- Ensure that the ERT has back-up support, a standby Team;
- Ensure that ERT Team has refreshments and nourishment (if the emergency requires several hours to resolve);
- Assess the size and severity of the emergency and the likely consequences. Establish response priorities; as well coordinate prevention of fire or explosion;
- Maintain communication with the ERT Captain;
- Advise the Official In-Charge of the ERT Team's activities, regarding the rescue and recovery operations;
- Appoint sufficient personnel, equipment and outside services are available. Utilize the members of the Emergency Control Team to organize these resources;
- Advise Official In-Charge when the emergency situation is under control and give the "All Clear";
- Participate in emergency investigation;
- Coordinate an orderly return to normal operating conditions;
- Arrange for a debriefing session, and utilize the services of all involved in resolving the emergency; and
- Assist to write the final report.

9.2.4 *Emergency Response Team (ERT Team) Duties:*

- The ERT Team Members must report to the Fire Hall, when paged for a "Code One" emergency;
- ERT Team Members will be given instructions on the emergency by the Incident Commander;
- ERT Team Members will follow instructions from the Incident Commander and will not put the Team at risk; and
- The ERT Team Captain will maintain radio contact with the Incident Commander throughout the emergency.

9.2.5 *Environmental Superintendent /Designate Duties:*

The following are the responsibilities of the Environmental Superintendent/Designate;

- Provide technical advice on probable environmental effects resulting from a spill and how to minimize them;
- Provide advice to the Official-in-Charge for appropriate spill response procedures;
- Ensure that Environmental Staff are available to direct the spill response action plan; and
- Assist with restoring of the Operations back to normal operating standards.

9.2.6 *Health and Safety Superintendent/Designate Duties:*

The Health and Safety Superintendent/Designate will be responsible for:

- Ensure that an Incident Commander is in place to oversee the ERT Teams;
- Ensure that all Management respond to the emergency and meet in the emergency control room;
- Oversee all activities that require Security or Nursing and arrange for Medevac transport, if required;
- Assist with getting a “head count” for the Official in-charge; and
- Assist with obtaining outside help if required.

9.2.7 *Energy & Infrastructure Superintendent/Designate Duties:*

The following are the responsibilities of the Energy & Infrastructure Superintendent/Designate;

- Ensure that all employees are accounted for;
- Ensure that all ERT Crew Members respond to the “ Code One” emergency;
- If the “ Emergency” involves the site facilities, assist the Official-in-Charge with the action plan to deal with the emergency;
- Assist as required by supplying equipment and/or manpower; and
- Assist with restoring of the Operations back to normal operating standards.

9.2.8 *Human Resources Coordinator/Designate Duties:*

The following are the responsibilities of the Human Resources (HR) Superintendent/Designate:

- Ensure that all HR employees are accounted for; and

- Provide assistance to the Official-in-Charge if there are employee issues, such as injuries, transportation requirements, etc.

9.2.9 *Health Care Professional (Nurse/Medic):*

The on-site health professionals are responsible for the following:

- Providing on-site first aid and other medical support;
- Establish a triage location if there are multiple casualties;
- Arrange for medevac transportation, if required; and
- Ensuring that the first aid room is maintained at all times, by using First Responders as support.

9.2.10 *Security (Sarliaq Holdings Ltd.):*

The on-site Security Supervisor is responsible for the following:

- Ensuring that the Security officer has activated the appropriate level of emergency notification;
- Ensure that access points to the emergency are properly guarded;
- Notify the Rankin Inlet Gatehouse if the emergency involves the all-weather private road (AWPR); and
- Assist with other duties as requested by the Emergency Control Group.

9.3 **Debriefing**

After an incident has taken place and the location is brought back to normal operating standards a debriefing session will occur between ECG, Field Supervisors for the incident, ERT Captain(s), and the supervisor of the department involved with the spill.

The point of this debriefing session to determine the *who, what, where, when, why, and how* the incident occurred. It will also be the time to reflect on the steps that were taken to carry out the response and to determine what was done right and what corrective measures need to be put in place to better the response if needed in the future.

SECTION 10 - GENERAL SPILL PROCEDURES

SPILL RESPONSE PRIORITIES

- 1. Safety of the personnel working at or around the OHF**
 - a. Contact all personnel working around the spud barge area and make them aware
 - b. Make contact with the vessels Captain to make aware the ship and stop the transfer of the product
 - c. Wear appropriate PPE
 - d. STOP the spill
- 2. Make safe the facility**
 - a. Create a no entry perimeter to ensure unaware persons do not enter the area in which the incident took place.
 - b. Barricade entrances to the facility with red danger tape
 - c. Have a person designated to watch entrances to ensure no community persons come on to site.
- 3. Make the community of Rankin Inlet aware of the Spill to ensure measures can be taken to ensure safety of the community**
 - a. Contact Mayor / Hamlet counsel
 - b. Fire department
 - c. RCMP
- 4. Prevent fires or explosions / Stop all ignition sources**
 - a. Disconnect power supplies
 - b. Do not contain diesel fuel if vapors might ignite
 - c. Allow fuel vapors to evaporate before intervention
- 5. Minimize the Spill**
 - a. When safe to proceed stop the spread of the product
 - b. Use spill response equipment in emergency sea cans and ask for additional material if the spill is greater than 5 m³
- 6. Notice and Report the Spill**
 - a. Spill needs to be reported to Transport Canada, Coast Guard, Environment and Climate Change Canada and Government of Nunavut immediately
 - b. Other governing bodies will also be notified (see section 10.2)
- 7. Environmental Impact**
 - a. Deter wildlife from entering spill area. Keep track of any wildlife mortalities
 - b. Determine what impacts the spill will have on the Environment
- 8. Clean-up**

Commence clean-up of the spill

10.1 Coordination with Government Agencies

10.1.1 Coordination with TC Technical Service Environmental Response

In the event of a marine spill TC Technical Service Environmental Response (TC) will be contacted immediately regarding the incident. Agnico will adhere to further recommendations from TC in response to the spill.

TC will also be contacted annually prior to the transfer of fuel at the OHF. As well, annual approval of this OPEP will be required by TC Pollution Prevention Officer.

10.1.2 Coordination with Canadian Coast Guard

In the event of a marine spill, the coordination with Canadian Coast Guard (CCG)² is required and they will be contacted to report the incident. A description of the event will be provided to the CCG Environmental Response. Agnico will adhere to further recommendations from CCG in response to the spill.

On an annual basis prior to the shipment of fuels to the OHF commencing, Agnico will contact the CCG and make them aware that the shipping season will be starting so they are aware that fuels will be travelling to Agnico's Rankin Inlet Fuel Tank Facility constructed in Rankin Inlet. Also Agnico will inquire if there are any updates to "*The Central and Arctic Regional Response Plan (2008)*."

Agnico's Environmental Group will annually, prior to fuel transfer, review "*The Central and Arctic Regional Response Plan (2008)*." A copy of this plan can be found in Appendix F for reference. The plan will be reviewed to ensure that the OPEP and the actions of Agnico's OHF meet all requirements listed for an OHF.

10.1.3 Other Government Agencies

Agnico will contact all government agencies associated with the Meliadine Gold Project as is the norm for any reportable spill. These groups include: Government of Nunavut (GN) via 24 hour spill reporting line, Crown - Indigenous Relations and Northern Affairs Canada (CIRNAC), Department of Fisheries and Oceans Canada (DFO), Environment and Climate Change Canada (ECCC), Nunavut Water Board (NWB), and Kivalliq Inuit Association (KIA).

10.2 Reporting Requirements

As per the Canada Shipping Act, spills to the marine environment will be reported to the TC Technical Service Environmental Response and Canadian Coast Guard (contact numbers in Table 7). Marine spills will be reported in accordance with TC Guideline TP- 9834E, *Guidelines for Reporting Incidents Involving Dangerous Goods, Harmful Substances and /or Marine Pollutants*. Others to receive the spill report include the KIA, Hamlet of Rankin Inlet, DFO, ECCC, Canadian Coast Guard and CIRNAC. Incidents that require media communications will be the responsibility of Agnico General Mine Manager or Public Affairs Corporate Director. The copy of NT-NU spill report form is provided in Appendix H.

To ensure compliance with Section 36(3) of the *Fisheries Act*, all spills of fuel or hazardous materials, regardless of quantity, into a water body or onto ice will be reported immediately to the NT-NU 24-HOUR SPILL REPORT LINE (phone: (867) 920-8130, fax: (867) 873-6924, spills@gov.nt.ca).

² CCG: 1-800-265-0237, Superintendent Environmental Response Phone: 519-383-1954 Cellphone :519-381-6186

Agnico possess a thorough internal spill reporting system that documents all spills for internal tracking. A copy of this Agnico internal spill report can be found in Appendix G, this is this spill report that the first responder will have to complete. Regardless of the volume, these spills are all reported to the Environment Department and if the NT-NU spill limits are exceeded or if the spill occurs in a water body, the Environmental Department reviews the incident, produces the NT-NU spill report and submits the NT-NU spill report to the regulator listed above. Investigation of all reportable spills is completed by the Meliadine Environment Department.

10.3 Treatment and Disposal

All diesel recovered through the spill response and any contaminated material will be taken to the Meliadine Project site for recovery and, if applicable, incineration. It could also be packaged for disposal/recycling by a certified hazardous waste management company in southern Canada.

10.4 Resuming Unloading

The unloading of fuel from the tanker to the OHF will not resume if it hinders the response to the spill in any way. Unloading will resume once all problems are corrected, thus ensuring that the spill will not continue.

SECTION 11 - SPILL SCENARIOS AND RESPONSE STRATEGIES

Agnico will strive to prevent any accidental spills and take all reasonable steps to minimize the risk of spill incidents and their impact on the environment. A mock spill exercise is conducted annually and the most recent summary is provided in Appendix I.

11.1 Product Properties and Response Strategy

P50 Diesel is a bright oily substance that has a low viscosity. It spreads rapidly on the water, has a low solubility in salt water (60 mg/L), and a high evaporation rate as described in the text box below.

At Itivia, the wind is largely from the NW to N and the current in the access passage is 0.93 km/h to the south.

Predicted Evaporation Rate of Spilled Diesel

$$\text{Weight percent Evaporation} = (5.8 + 0.045T) \ln(t)$$

Where T = water temperature

t = time in minutes

After a time span of 60 minutes at a surface temperature of 5°C, up to 25% weight of the spilled diesel would have evaporated.

After 240 minutes, or 4 hours, the weight percent of the diesel that would have evaporated would be 33%.

Source: *Environment Canada, Emergencies Science and Technology Division*

As a result of the properties of diesel and the environmental conditions that predominate at Itivia, the spill response will aim to stop the spilled product from spreading across Melvin Bay to the south shore and into the access passage. This could include activating the Shipboard Oil Pollution Emergency Plan. The tanker has response equipment on board and a fully trained crew in spill response. This, coupled with a shore-based response under the OPEP, ensures sufficient resources are available to control and recover as much diesel fuel as feasibly possible. The maximum expected quantity of P50 Diesel at the facility is 33.5M liters

11.2 Pipeline Safeguards

There are a number of safeguards in operating the ship-to-shore pipeline; these include:

- Save-all trays to capture any minor spills at the ends of the floating pipeline;
- Dry-break couplings at both ends of the floating pipeline;
- A pressure test is performed before the diesel transfer to confirm the system is free of leaks; and

- Both the crew on the tanker and Agnico's shore based personnel are fully trained in spill response and spill recovery.

11.3 Wildlife

During a spill event, Agnico will take care to deter any animal that will be near the spill area to minimize the risk to wildlife. In a case of mortalities, Agnico will track any mortality and report these numbers to the GN and ECCC.

11.4 Scenarios

Three scenarios are considered, these being:

1. A spill between the ship and the flange of the OHF, the floating pipeline, resulting in a spill smaller than 1000 L of diesel fuel;
2. A major failure between the ship and the flange of the OHF, the floating pipeline, resulting in a spill greater than 1000 L but smaller than 5000 L of diesel fuel; and
3. Spill greater than 5000 litres.

In most instances Agnico personnel and/or contractors will be able to respond to the spill but if necessary, backup can be requested by calling for the assistance of the Agnico Emergency Response Team that is stationed at the Meliadine site located 35 kilometers away. The ERT can be at Rankin Inlet within 60 minutes to take charge of the spill response. Agnico will make every effort to have its equipment and resources deployed within 6 hours of an incident.

Scenario 1: Loss between the ship and the flange of the OHF, the floating pipeline, resulting in spill smaller than 1000 L of diesel fuel.

Appropriate Actions	Resources
<ol style="list-style-type: none"> 1. Communicate with vessel and immediately stop the ship-to-shore transfer of fuel, if it's safe to do. The transfer should not restart in a manner that would interfere with the immediate, effective and sustained response to the oil pollution. 2. Make sure that the environment is safe for the facility and vessel personnel, the facility and Rankin Inlet community. 3. Make sure that risk of fire or explosion are minimize. 4. Contact person found on OHF Declaration to initiate the OPEP. 5. Minimize the oil pollution incident by containing the spilled fuel to spreading within the marine environment, if it's safe to do. 6. Notify CCG, local and regulatory authorities. 7. Containment boom is manned to prevent the escape of fuel outside the boom. 8. If necessary, place a diversion boom outside the containment boom to stop the diesel from getting onto the beach. 9. Spread absorbent material on the spill to capture it. 10. Monitor any fuel that could not be recovered and collect water samples near the spill site and in the access passage for analysis. Repeat as necessary. 11. If diesel reaches the beach, excavate the contaminated beach material and take it to the Landfarm area at the Meliadine site. 	<ol style="list-style-type: none"> a. Crew on the tanker trained in spill response. b. Agnico's shore based personnel trained in spill response and recovery. c. Emergency Response Team to take control of the spill response and recovery. d. Spill response equipment and supplies maintained on board the tanker and also in the sea can located on shore of Itivia Site Fuel Storage and Containment Facility. e. Save-alls (Pop-up pools/plastic totes) placed under the pipeline manifolds to collect minor spills. f. Shore-based boat to position booms. g. Absorbent booms to recover spilled diesel on sea water. h. Heavy equipment such as excavators, back hoes, vacuum trucks, and dump trucks available if beach is contaminated.

Scenario 2: Loss between the ship and the flange of the OHF, the floating pipeline, resulting in spill greater than 1000 L but smaller than 5000 L of diesel fuel.

Appropriate Actions	Resources
<ol style="list-style-type: none"> 1. Communicate with vessel and immediately stop the ship-to-shore transfer of fuel, if it's safe to do. The transfer should not restart in a manner that would interfere with the immediate, effective and sustained response to the oil pollution. 2. Make sure that the environment is safe for the facility personnel, the facility and Rankin Inlet community. 3. Make sure that risk of fire or explosion are minimized. 4. Contact person found on OHF Declaration to initiate the OPEP. 5. Minimize the oil pollution incident by containing the spilled fuel to spreading within the marine environment, if it's safe to do. 6. Notify CCG, local and regulatory authorities. 7. Containment boom is manned to prevent the escape of fuel outside the boom. 8. If necessary, place a diversion boom outside the containment boom to stop the diesel from getting onto the beach 9. Spread absorbent material on the spill to capture it 10. For larger amounts of spilled materials on water, use absorbent booms to collect the spilled diesel 11. Monitor any fuel that could not be recovered and collect water samples near the spill site and in the access passage for analysis. Repeat as necessary. 12. If diesel reaches the beach, excavate the contaminated beach material and take it to the Landfarm area at the Meliadine site. 	<ol style="list-style-type: none"> a. Crew on the small tanker trained in marine spill response. b. Crew from the large tanker anchored outside the access passage. c. Agnico's shore based personnel trained in near shore spill response and recovery. d. Emergency Response Team trained for near shore spill response. e. Shore-based boat to position booms and spread absorbent material. f. Spill response equipment and supplies maintained on board the tanker, in Agnico sea can locate at Itivia Site Fuel Storage and Containment Facility. g. Additional booms to place outside the containment boom. h. Additional boats can be transported from the Meliadine site as well local boats can be rented from local contracting companies i. Heavy equipment such as excavators, back hoes, vacuum trucks, and dump trucks for waste materials. j. in the case of larger spills an Incident Command System will be set up at the Meliadine site as laid out in the Meliadine Emergency Response Plan.

Scenario 3: A spill >5,000 litres

In the case of an extreme spill, Agnico will follow the actions listed in Scenario 2 to complete the best clean up possible. Between the spill response equipment that the tanker delivering fuel has on board and the spill response supplies at the OHF, a spill up to the size of 5, 000 - 10,000L will be able to be controlled and cleaned up. However if the spill is greater than 10,000L, at this point Agnico will require external assistance with the clean-up.

The Canadian Coast Guard (CCG) and Transport Canada are made aware each year prior the fuel transfer, there is a possibility that under direction of CCG that their spill depot supplies located in Rankin Inlet may be used.

SECTION 12 - PREVENTIVE MEASURES

Agnico recognizes that spill prevention is more desirable than any modern efficient cleanup measures after the fact. Preventive measures have been adopted in relation to any transport, transfer, use and storage of diesel fuel. The tankers carry a Ship Oil Pollution Emergency Plan (SOPEP) (Appendix A) as per the MARPOL 73/78 requirement under Annex I. All ships with 400 GT and above must carry an oil prevention plan as per the norms and guidelines laid down by the International Maritime Organization (IMO).

A SOPEP contains the following things:

- The action plan contains duty of each crew member at the time of spill, including emergency muster and actions;
- General information about the ship and the owner of the ship etc.;
- Steps and procedure to contain the discharge of oil into the sea using SOPEP equipment;
- On-board Reporting procedure and requirement in case of oil spill;
- List of authorities to contact and reporting requirements in case of oil spill. Authorities like port state control, oil clean up team etc. are to be notified;
- Drawing of various fuel lines, along with other oil lines on board vessel with positioning of vents, save-all trays, etc.;
- General arrangement of ship, which includes location of all the oil tanks with capacity, content, etc.; and
- The location of the SOPEP locker and contents of the locker with a list of inventory (Marine Insight 2012).

The Spill Contingency Plan, Emergency Response Plan and the Oil Pollution Emergency Plan identify potential causes of emergencies and provides for the development and implementation of strategies to minimize the likelihood of the same.

As described in the Spill Contingency Plan, exercises are part of training for the Emergency Response Team. This includes comprehensive spill response exercise to practice the use of spill response equipment, including the use of booms and oil water separator.

The OPEP is updated annually based on the results of spill exercises, changes to the infrastructure at Agnico's Fuel Handling Facilities, changes to procedures and other variables. The updated OPEP is distributed to the Agnico Emergency Response Team, TC, the Kivalliq Inuit Association, the Municipality of Rankin Inlet and other agencies as appropriate.

12.1 Training

The environmental department and ERT team received training from a response organization and as a result will be able to respond to or assist with incidents that may occur at the OHF.

12.1.1 Meliadine site Personnel

A designated Emergency Response Team consisting of on-site personnel is established at Agnico's Meliadine Project site. Agnico ensures that the ERT is trained and staffed in sufficient number so that

the ERT is present at all times. All members of the team are trained and familiar with emergency and spill response resources, including their location and access, the Spill Contingency Plan, the Oil Pollution Emergency Plan and appropriate emergency spill response methodologies. The ERT have up to 20 members, each of whom will be trained.

The training includes the following:

- Worker health and safety during emergency interventions;
- A review of the spill response plan and responsibilities of the ERT members;
- The nature, status, and location of fuel and chemical storage facilities;
- The on-site and off-site spill response equipment and how to use it;
- Emergency contact lists;
- Communication methods and signals;
- Desktop exercises of “worst case” scenarios;
- Emergency evacuation;
- Fires or explosions;
- Emergency equipment and use;
- PPE and clothing;
- Marine shoreline recovery operations; and
- The likely causes and possible effects of spills.

The Environmental Department regularly provides tool-box sessions to give information on spill response and reporting procedures.

Basic spill response training is completed by all Agnico employees and contractors working on the Meliadine project as part of the mandatory induction for all personnel arriving on site. ERT members receive more extensive spill response training and learn how to respond while wearing personal protective clothing, use of specific spill response gear, proper deployment of absorbents and maritime boom.

12.1.2 OHF Personnel Training

Prior to the first discharge of fuel from the vessel to the OHF, a mandatory training takes place. This is a review with all the personnel responsible for the shore based portion of the fuel transfer, including the third party contractor and the Rankin Inlet supervisor, the current OPEP and make them aware of the procedures to follow in case of a spill before the first fuel barge arrives. A copy of the 2019 log sheet is provided in Appendix I.

A mock spill training is planned for the summer of 2020 to practice the response of all involved personnel to a hypothetical spill situation.

12.1.3 Boat Operators

All people involved in the supervision during operation and / or on the spill response has complete the training course for the pleasure craft operator. Records of pleasure craft operator certification is retained by the Meliadine Training department.

All concerned persons working for Agnico Eagle Mines Ltd. must possess a pleasure craft operator card and provide proof of this certification prior to operating any boat relating to the Meliadine project which includes the Rankin Inlet Marshalling facility. This includes emergency responders.

SECTION 13 - COASTAL SHIPPING

13.1 Coastal Shipping

Please refer to Appendix A - 1.2 for the 2018 contact information for Coastal Shipping during the barge season. This is reviewed with Coastal Shipping on an annual basis.

REFERENCES

Transport Canada *Oil Handling Facilities Standards*, TP12402E.

Canadian Coast Guard, Central & Arctic Region, 2008. *Regional Response Plan*.

Marine Insight, 2012. What is Ship Oil Pollution Emergency Plan (SOPEP)?

<http://www.marineinsight.com/misc/maritime-law/what-is-ship-oil-pollution-emergency-plan-sopep/#ixzz21B2YvDTW>

<http://www.marineinsight.com/misc/maritime-law/what-is-ship-oil-pollution-emergency-plan-sopep/#ixzz21B1dDGL5>

Moller, T.H. & Santner, R.S. 1997. *Oil Spill Preparedness and Response: the Role of Industry*, 1997 International Oil Spill Conference, Technical Report IOSC-005.

National Oceanic and Atmospheric Administration

<http://response.restoration.noaa.gov/oil-and-chemical-spills/oil-spills/resources/in-situ-burning.html>

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Transport Canada, TP-13585, 2008. *Environmental Prevention and Response National Preparedness Plan*.

Transport Canada Guideline TP- 9834E, 2009. *Guidelines for Reporting Incidents Involving Dangerous Goods, Harmful Substances and /or Marine Pollutants*.

Journal of Petroleum Science Research (JPSR) Volume 2 Issue 3, July 2013 - Modeling Oil and Petroleum Evaporation by Merv F. Fingas

APPENDICES

APPENDIX A – SOPEP and Contact info – Desgagnes Group

RECEIVED JAN 22 2013



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Fax +49 40 36149-200
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Your reference	Your letter of	Our reference	Extension	Date
	2012-12-19	12-140812/EdM	+49 40 36149-3243	2013-01-07

Project: JANA DESGAGNES
Approval Type: Approval
GL Reg. No.: 33994
Order-No.: 9079 13 44196 125

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The SMPEP manual for the above mentioned ship, submitted to us electronically, is herewith returned to you duly marked with our stamp of approval on behalf of the Government of Canada. One copy of the SMPEP we have filed on behalf of the flag administration.

The mandatory part has been found to be in accordance with the SMPEP required by MARPOL Annex I Regulation 37 and MARPOL Annex II Regulation 17. Additional remarks regarding national requirements of Port States are not within our scope of approval. We expect that the appendices are kept updated by the owners and that the drawings are showing the current structural condition of this particular ship. Please observe that the missing "Coastal Contact List" should be attached to the manual on board.

Should you have any further queries on this matter, please do not hesitate to contact us using the following GL Reference No. 12-140812/EdM.

Yours faithfully,

Germanischer Lloyd

i. V. Christian Mains

i. A. Eduard Maser



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*Only cover pages
Complete booklet has been
submitted via G6be on
2013-01-14*

M/T Jana Desgagnés

Shipboard Marine Pollution Emergency Plan

For Oil and Noxious Liquid Substances

As defined by MARPOL 73/78, Annex I, Regulation 37 and annex II, Regulation 1

Prepared by Transport Desgagnés Inc.

October 31, 201



Distribution List

M/T Dara Desgagnés (1)
M/T Esta Desgagnés (1)
M/T Jana Desgagnés (1)
Transport Desgagnés Inc. Emergency Room (1)
Transport Canada, Marine Safety (1)

SHIPBOARD MARINE POLLUTION EMERGENCY PLAN

In accordance with Regulation 37 of Annex I and Regulation 17 of Annex II of MARPOL 73/ 78

SHIP'S IDENTIFICATION

GL-Register-Number	33994
Name of Ship	JANA DESGAGNES
Distinctive Number or Letters (Call Sign)	VCDR
IMO-Number	9046564
Type of Ship	Chemical Tanker
Port of Registry	Quebec
Gross Tonnage	6262
Flag	CANADA

Owner / Managers: see „Ship Interest Contacts“



Approved

as being in compliance with
MARPOL 73/78 Annex II Reg. 17 and Annex I Reg. 37
(former Reg.16 and Reg. 26)
authorised by the Government of Canada

EdM

Hamburg

2013-01-07

Ref.-No. 12-140812

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Your reference	Your letter of	Our reference	Extension	Date
	2013-01-07	13-001410/EdM	+49 40 36149-3243	2013-01-07

Project: DARA DESGAGNES
Approval Type: Approval
GL Reg. No.: 33862
Order-No.: 9079 13 44201 125

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Should you have any further queries on this matter, please do not hesitate to contact us using the following GL Reference No. 13-001410/EdM.

Yours faithfully,

Germanischer Lloyd

i.A. Jens Kohnagel

i. A. Eduard Maser



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*Only cover pages
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M/T Dara Desgagnés

Shipboard Marine Pollution Emergency Plan

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M/T Jana Desgagnés (1)
Transport Desgagnés Inc. Emergency Room (1)
Transport Canada, Marine Safety (1)

SHIPBOARD MARINE POLLUTION EMERGENCY PLAN

In accordance with Regulation 37 of Annex I and Regulation 17 of Annex II of MARPOL 73/ 78

SHIP'S IDENTIFICATION

GL-Register-Number	33862
Name of Ship	DARA DESGAGNES
Distinctive Number or Letters (Call Sign)	VCBW
IMO-Number	9040089
Type of Ship	Chemical Tanker
Port of Registry	Quebec
Gross Tonnage	6262
Flag	CANADA

Owner / Managers: see „Ship Interest Contacts“

GL 	Approved
as being in compliance with MARPOL 73/78 Annex II Reg. 17 and Annex I Reg. 37 (former Reg.16 and Reg. 26) authorised by the Government of Canada	
EdM	
Hamburg	2013-01-07
Ref.-No. 13-001410	



(occ.)	Employé(e) occasionnel(le), 90 jours / Temporaire
(C)	Coque / Hull (i.e. Architecte Naval)
(EL)	Électrique / Electrical
(EQ)	Équipement / Equipment
(IMH)	Installations de manutention d'hydrocarbures / Oil Handling Facilities
(M)	Machinerie / Machinery
(N)	Nautique / Nautical
(PB)	Petits bâtiments / Small Vessels
(IE)	Intervention environnementale

SÉCURITÉ ET SÛRETÉ MARITIMES	MARINE SAFETY AND SECURITY
Région du Québec 401-1550, avenue d'Estimauville Québec (Québec) G1J 0C8	Quebec Region 401-1550, d'Estimauville Avenue Quebec City, Quebec G1J 0C8
Michel Boulianne, Directeur régional Tél. : 418-648-4615 Télec. : 418-648-3790 Sans frais : 1-888-649-6292	Michel Boulianne, Regional Director Phone : 418-648-4615 Fax : 418-648-3790 Toll Free : 1-888-649-6292

QUÉBEC – POLITIQUES ET INITIATIVES DE GESTION	
401-1550, av. d'Estimauville Québec (Québec) G1J 0C8	401-1550, d'Estimauville Ave. Quebec City, Quebec G1J 0C8
Frédéric Sirois, Coordonnateur Tél. : 418-648-4356 Télec. : 418-648-3790	Frédéric Sirois, Coordinator Phone : 418-648-4356 Fax : 418-648-3790

QUÉBEC – SERVICE TECHNIQUE	
401-1550, av. d'Estimauville Québec (Québec) G1J 0C8	401-1550, d'Estimauville Ave Quebec City, Quebec G1J 0C8
Patrick Bérubé, Gestionnaire Tél. : 418-648-5343 Télec. : 418-648-3790	Patrick Bérubé, Manager Phone : 418-648-5343 Fax : 418-648-3790

MONTREAL – CENTRE DE SERVICES TC	
8-305, boul. René-Lévesque O. Montréal (Québec) H2Z 1X1	8-305, René-Lévesque W. blvd Montreal, Quebec H3B 1X9
Cédric Baumelle, Gestionnaire Tél. : 1-855-842-7042 Télec. : 514-283-6595	Cédric Baumelle, Manager Phone : 1-855-842-7042 Fax : 514-283-6595
Immatriculation Sans frais : 1-877-242-8770	Ship Registry Toll Free : 1-877-242-8770

RIMOUSKI – CENTRE DE SERVICES TC	
180, de la Cathédrale Rimouski (Québec) G5L 5H9	180 de la Cathédrale Rimouski, Quebec G5L 5H9
Robert Fecteau, Gestionnaire Tél. : 418-722-3040 Télec. : 418-722-3332 Sans frais : 1-800-427-4417	Robert Fecteau, Manager Phone : 418-722-3040 Fax : 418-722-3332 Toll-free : 1-800-427-4417

SEPT-ÎLES - CTC	
Case postale 596 701, boul. Laure, bureau 205 Sept-Îles (Québec) G4R 4K7	P.O. Box 596 701 Laure Blvd, suite 205 Sept-Îles, Quebec G4R 4K7
Charles Bhérer, gestionnaire int. Qc. : 418-648-5340 Sept-I. : 418-968-5439 Télec. : 418-296-6680	Charles Bhérer, Manager (int.) Qc. : 418-648-5340 Sept-I. : 418-968-5439 Fax : 418-296-6680

QUÉBEC – INTERVENTION ENVIRONNEMENTALE	
401-1550, av. d'Estimauville Québec (Québec) G1J 0C8	401-1550, d'Estimauville Ave. Quebec City, Quebec G1J 0C8
André Laflamme, Gestionnaire Tél. : 418-648-7481 Cell. : 613-854-3135 Télec. : 418-648-3790	André Laflamme, Manager Phone : 418-648-7481 Cell. : 613-854-3135 Fax : 418-648-3790

QUÉBEC – SÉCURITÉ NAUTIQUE	
Bureau de la sécurité nautique 401-1550, av. d'Estimauville Québec (Québec) G1J 0C8	Office of Boating Safety 401-1550, d'Estimauville Ave Quebec (Quebec) G1J 0C8
Sans frais : 1-800-267-6687	Toll-free : 1-800-267-6687
Sophie Noël, Gestionnaire Tél. : 418-572-5917 Télec. : 418-648-7337	Sophie Noël, Manager Phone 418-572-5917 Fax : 418-648-7337

QUÉBEC – CENTRE DE SERVICES TC	
401-1550, av. d'Estimauville Québec (Québec) G1J 0C8	401-1550, d'Estimauville Ave Quebec City, Quebec G1J 0C8
Denis Cormier, Gestionnaire Tél. : 418-648-3234 Télec. : 418-648-5106	Denis Cormier, Manager Phone : 418-648-3234 Fax : 418-648-5106
Immatriculation Sans frais : 1-877-242-8770	Ship Registry Toll Free : 1-877-242-8770

GASPÉ - CENTRE DE SERVICES TC	
Édifice Frédérica-Giroux 98-1, rue de la Reine Gaspé (Québec) G4X 3B3	Frederica-Giroux Building 98-1 de la Reine Street Gaspé Quebec G4X 3B3
Tél. : 418-368-2444 Télec. : 418-368-7022	Phone : 418-368-2444 Fax : 418-368-7022

PORT-CARTIER - CENTRE DE SERVICES TC	
Centre Transports Canada A l'intérieur du Centre local d'emploi, 2, rue Elie-Rochefort Port-Cartier (Québec) G5B 2N2	Transport Canada Center Inside the Local employment centre 2, rue Elie-Rochefort Port-Cartier (Quebec) G5B 2N2
Tél. : 418-766-2758 Télec. : 418-766-8711	Phone : 418-766-2758 Fax : 418-766-8711

QUÉBEC – CARGAISONS ET PRÉVENTION DE LA POLLUTION	
401-1550, av. d'Estimauville Québec (Québec) G1J 0C8	401-1550, d'Estimauville Ave. Quebec City, Quebec G1J 0C8
Paul Denis Vallée, Gestionnaire Tél. : 418-648-4617 Télec. : 418-648-3790	Paul Denis Vallée, Manager Phone : 418-648-4617 Fax : 418-648-3790

KANGISUJUAQ	
Nanuturlik Landholding Corporation of Kangirsujuaq Case postale 39 Kangiqsujuaq (Québec) J0M 1K0	Nanuturlik Landholding Corporation of Kangirsujuaq P.O. Box 39 Kangiqsujuaq, Quebec J0M 1K0
Tél. : 819-338-1213 Télec. : 819-338-1241 Sans frais : 1-888-649-6292 Satellite :011-8816-314-342926	Phone : 819-338-1213 Fax : 819-338-1241 Toll-free : 1-888-649-6292 Satellite : 011-8816-314-342926

ÎLES-DE-LA-MADELEINE- CENTRE DE SERVICES TC	
264, chemin du Quai Case postale 1030 Cap-aux-Meules (Québec) G4T 1J4	264 Chemin du Quai P.O. Box 1030 Cap-aux-Meules, Quebec G4T 1J4
Tél. : 418-986-3785 Télec. : 418-986-4751	Phone : 418-986-3785 Fax : 418-986-4751

BAIE-COMEAU - CENTRE DE SERVICES TC	
337, boul. Lasalle, bureau 212 Baie-Comeau (Québec) G4Z 2Z1	337 Lasalle Blvd, suite 212 Baie Comeau, Quebec G4Z 2Z1
Tél. : 418-296-3524 Télec. : 418-296-6680	Phone : 418-296-3524 Fax : 418-296-6680

QUÉBEC – SÛRETÉ MARTIME	
Sûreté maritime 401-1550, av. d'Estimauville Québec (Québec) G1J 0C8	Marine Security 401-1550, d'Estimauville Ave Quebec (Quebec) G1J 0C8
Olivier Vigneault, Gestionnaire Tél. : 418-648-4368	Olivier Vigneault, Manager Phone : 418-648-4368






















DORVAL – SÛRETÉ MARITIME	
Sûreté maritime 700, Leigh-Capreol, 3 ^e étage Dorval, Québec H4Y 1G7	Marine Security 700 Leigh-Capreol Dorval, Quebec H4Y 1G7
Olivier Vigneault, Gestionnaire Tél. : 514-633-2930	Olivier Vigneault, Manager Phone : 514-633-2930



Numéros importants en cas d'urgence au Canada

Important numbers in case of emergency in Canada

Catégorie Category	Nom et adresse Name and Address	Numéros Numbers	Contacts / Remarques Contacts / Remarks
Hot Lines	Shell	☎ 24hrs (713) 241-2532	Department Stasco
	Valero	☎ 1-800-964-2210 1-210-736-2210	
	Suncor	☎ (905) 399-9954	Masiz Rahman
		☎ Marshal Dunbar (905) 804-3449 ☎ cell.: (647) 459-2671	Contact 1 Suncor DPP
		☎ Francine Dagenais (905) 804-7153 ☎ cell.: (417) 200-9140	Contact 1 Suncor CPP
		☎ Marshal Dunbar <i>en interim</i> (905) 804-3449 ☎ cell.: (647) 459-2671	Contact 1 Suncor Lub
		☎ A. Haq (905) 804-7150 ☎ Cell.: (905) 320-6541	Contact 2 All products
		☎ 24hours / 7 days (403) 296-3000	Contact 3 All products
		☎ Jason He (403) 237-3498 ☎ cell.: (403) 813-8158	Contact 1
		☎ Emergency line (703) 217-6121	Contact 2
	Irving	☎ (506) 333-9379	Eric Olsen
	Kildair	☎ Steven Packwood (450) 746-0994 ext 322 ☎ (450) 746-0999 ☎ tracy@kildair.com ☎ kildair@kildair.com	
		☎ Hydro Quebec CAM Operator (418) 986-7299 ext 7230	Kildair – Cap-aux-Meules
	La fédération des coopératives du nouveau Québec (FCNQ)	☎ Jean-Luc Mallette (514) 457-9371 ext 356 ☎ (514) 457-4626	Directeur Principal/ Senior Manager Services Pétroliers/ Petroleum Services





























Ports <i>Ports</i>	Port de Montréal	Urgence Marine  (514) 640-3138  (514) 640-4509	Real Ricard Jr. Chargé de projet Ship Maintenance Expert  cell. (514) 829-6908 Stephen Chouinard Directeur des opérations Director of Operations  cell. (514) 821-7347
		Capitainerie  Général (514) 283-7011  Urgence (514) 283-6911	
	Port de Québec	Capitainerie  (418) 648-3556	24hrs sur la voie VHF 77
	Port-Cartier	 (418) 766-8753	Quai Arcelor Mittal  (418) 766-2000 Ext 2400, 2485 ou 2439
	Trois-Rivières	 (819) 378-2887	
	Port de Sept-Îles	 (418) 968-1231	Shawn Grant Harbour Master  (418) 961-1229
Fournisseurs <i>Suppliers</i>	Rio Tinto Alcan (Port Alfred)	 (418) 544-3311	
	Expédition quais et écluses 1621, rue Gladstone Montréal, QC H4E 1C6	 (514) 932-9959  (514) 932-2331	Jacques Chiasson
	Seagulf Marine Industries Inc. Bureau de Montréal 815, rue Mill Montréal, QC H3C 1Y5	 (514) 935-6933  (514) 935-3665	Robert Zeagman  dom. (514) 672-5202
	Seagulf Marine Industries Inc. Bureau de Halifax Burnside Industrial Park 38 Payzant Avenue Dartmouth, NS B3B 1Z6	 (902) 481-1661  (902) 481-8548	
	Seagulf Marine Industries Inc. Bureau de St Catharines 113 Cushman Road, Unit 16-17 St-Catharines, ON L2M 6S9	 (905) 688-2661	














Remorqueurs Tugs	Groupe Océan 105 Abraham-Matin, Bureau 500 Québec, (QC), G1K 8N1 Canada	☎ (418) 694-1414 📠 (418) 692-4572 💻 www.groupeocean.com ocean@groupeocean.com Hamilton : ☎ (905) 528-3960	Benoit Lefrenière ☎ cell. (418) 254-7487 benoit.lafreniere@groupeocean.com Maryse Paré (Bur. / Off. QC) Maryse.Pare@groupeocean.com Frank Montecalvo (Dir, ON) Frank.Montecalvo@groupeocean.com
	The Great Lakes Group 4500 Division Ave Cleveland, OH 44102-2228 USA Cette compagnie offre aussi un service de réparation d'urgence 24hr/7	☎ (216) 621-4854 📠 (216) 621-7616 💻 www.thegreatlakesgroup.com <i>This company also offer a 24hr/7 emergency repair services</i>	Kyles Fries Assistant Vice-President-Ship Repair ☎ 1-800-321-3663 ext 132 ☎ cell. (440) 714-1439
	McKeil Marine Limited Fleet Management	☎ (905) 528-4141 ext.248	Chris Kirby 💻 ckirby@mckeil.com
	Corporation de gestion de la Voie maritime du Saint-Laurent St. Lawrence Seaway Development Corporation 151, rue de l'Écluse Saint-Lambert, QC J4R 2V6	☎ (450) 672-4110 📠 (450) 672-7098 💻 www.grandslacs-voiemaritime.com	Position des navires Montréal au Lac Ontario ☎ (450) 672-4115 Surveillant ext :2232 Controlleurs ext :2229 Welland Canal Surveillant ext :5370 Control Center ext :5450

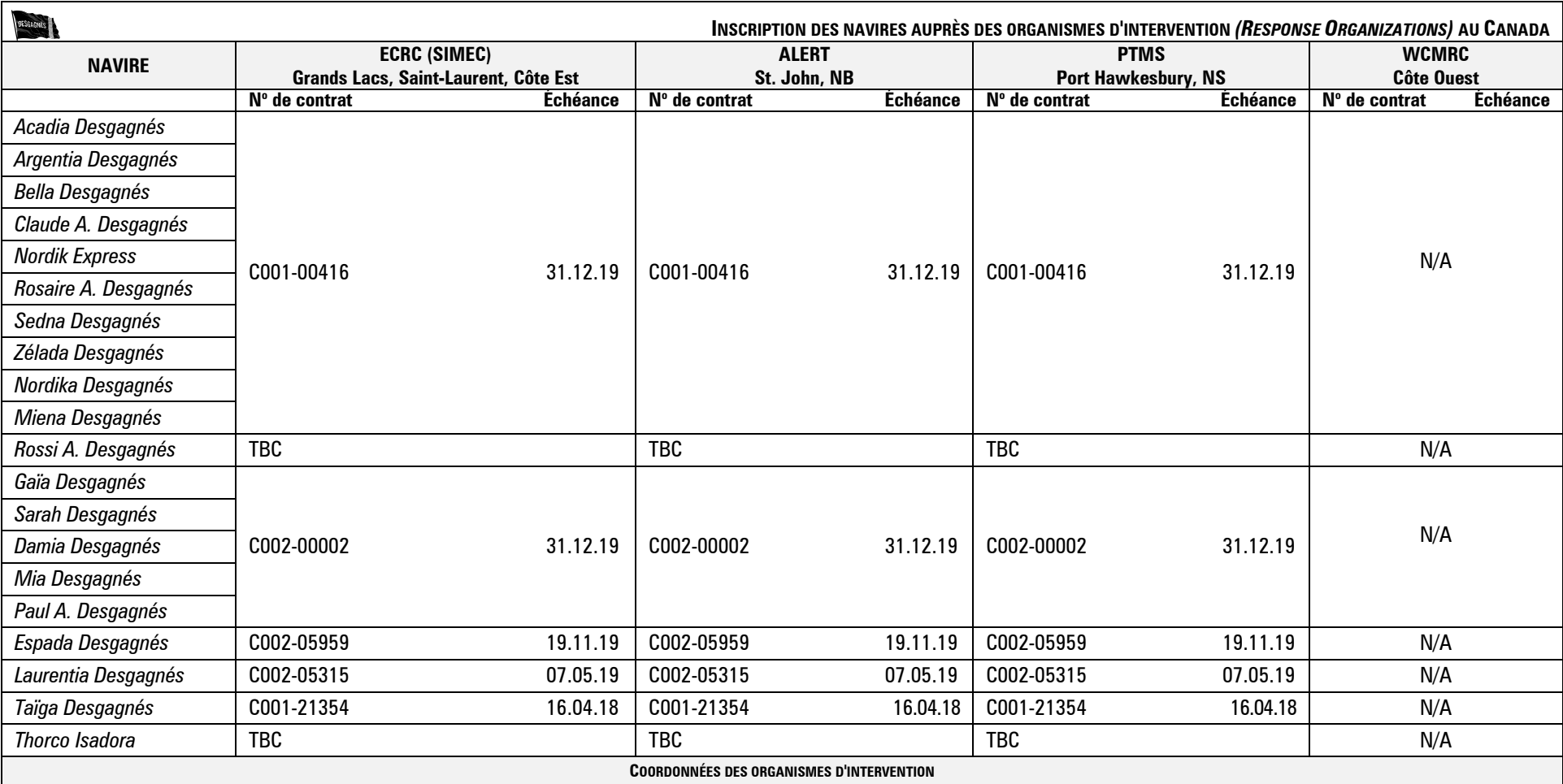
TC Sureté Maritime TC Marine Security	Sûreté des Transport Région du Québec 401-1550 av d'Estimauville Québec, QC, G1J 0C8	☎ 24hrs 1-888-857-4003 ☎ Bureau (418) 648-4351 ☎ cell: (418) 572-4604 ✉ langis.tremblay@tc.gc.ca	
Inspecteurs sécurité maritime Marine Safety Inspectors	St. Catharines	☎ (905) 688-4360 ✉ (905) 688-6285	
	Sarnia	☎ 1-877-281-8824 ☎ (519) 383-1826 ✉ (519) 383-1997	
	Thunder Bay	☎ (807) 345-6953 ✉ (807) 345-0521	
	Baie-Comeau	☎ (418) 296-3524 ✉ (418) 296-6680	
	Gaspé	☎ (418) 368-2444 ✉ (418) 368-7022	
	Îles-de-la-Madeleine	☎ (418) 986-6275 ✉ (418) 986-4751	
	Kangiqsuuaq	☎ (819) 338-1213 ✉ (819) 338-1241	
	Montréal	☎ Général: 1-888-649-6262 ☎ Inspection: (514) 496-2084 ✉ (514) 283-6595 ✉ marinesafetymtl@tc.gc.ca	
	Québec	☎ (418) 648-4166 ✉ (418) 648-3790	
	Rimouski	☎ 1-800-427-4417 ☎ (418) 722-3040 ✉ (418) 722-3332	
	Sept-Îles	☎ 1-877-303-3435 ☎ (418) 968-4991 ✉ (418) 968-5516	
	Charlottetown	☎ 1-855-859-3123 ☎ (902) 566-7987 ✉ (902) 566-7991	
	Corner Brook	☎ 1-855-859-3123 ☎ (709) 637-4390 ✉ (709) 637-4391	
	Dartmouth	☎ 1-855-859-3123 ☎ (902) 426-4421 ✉ (902) 426-6657	

	Saint-John	☎ ☎ 📄	1-855-859-3123 (506) 636-4748 (506) 636-4756	
	St. John's	☎ ☎ 📄	1-855-859-3123 (709) 772-5166 (709) 772-0210	
	Sydney	☎ ☎ 📄	1-855-859-3123 (902) 564-7002 (902) 564-7648	
Inspecteur en devoir / Surveyor on duty : : Se référer à la Garde Côtière / Refer to Coast Guard 1-800-363-4735				
Sécurité Maritime Garde Côtière Canadienne CCG Marine Safety	200 rue Kent, 5^e étage Ottawa, ON K1A 0E6	☎ 📄	(613) 993-6943 (613) 998-3255	
Intervention Environnementale Garde Côtière Canadienne Environmental Response Canadian Coast Guard	Région de Terre-Neuve et Labrador / Newfoundland and Labrador Region	☎	24hrs 1-800-563-9089	
	Région du Centre et de l'Arctique Central and Arctic Region	☎	24hrs 1-800-265-0237	
	Région du Québec Quebec Region	☎	24hrs 1-800-363-4735	
	Région des Maritimes Maritimes Region	☎	24hrs 1-800-565-1633	
	Région du Pacifique Pacific Region	☎	24hrs 1-800-889-8852	

Bureau des Glaces <i>Ice Office</i>	Région de l'Atlantique <i>Atlantic Region</i>	☎ (709) 779-2078 ☎ 1-800-565-1633 📠 (709) 772-5369 Telex : 016-4530 💻 CGGCICEWATCH@DFO-MPO.GC.CA	Basé à St-John's
	Région du Québec <i>Quebec Region</i>	☎ (418) 648-7290 ☎ (418) 648-5620 📠 (418) 648-7305	Basé à Québec
	Région du Centre et de l'Arctique <i>Arctic and Central Region</i>	☎ (519) 383-1814 ☎ 1-800-265-0237 📠 (519) 337-2498	Basé à Sarnia
Recherche et Sauvetage <i>Search and Rescue</i>	Terre-Neuve et Labrador <i>Newfoundland and Labrador</i>	☎ 1-800-563-2444 ☎ (902) 427-8200	Basé à Halifax
	Nouvelle-Écosse, Nouveau-Brunswick, Île-du-Prince-Édouard <i>Nova Scotia, New Brunswick, Prince Edward Island</i>	☎ 1-800-565-1582 ☎ (902) 427-8200	Basé à Halifax
	Québec <i>Quebec</i>	☎ 1-800-463-4393 ☎ (418) 648-3599	Basé à Québec
	Ontario, Territoires du Nord-Ouest, Nunavut <i>Ontario, NorthWest Territories, Nunavut</i>	☎ 1-800-267-7270 ☎ (613) 965-3870	Basé à Trenton
	Colombie-Britannique, Yukon <i>British-Columbia, Yukon</i>	☎ 1-800-567-5111 ☎ (250) 413-8933 ☎ cell. #727	Basé à Victoria

Société de classification Classification Society NAVIRES-CITERNES Maria Sarah NAVIRE PASSAGERS Bella Nordik Express NAVIRE DE CHARGE Acadia Thorco Isadora	Lloyd's Register North America Bureau de Montréal 1868, boul. des Sources, Suite 125 Pointe-Claire, QC H9R 5R2	 (514) 630-3784  (514) 630-3923  montreal@lr.org	Emmanuel Patrouille Senior Surveyor  cell. (514) 209-3710  Emmanuel-Patrouille@lr.org Igor Potey Surveyor (Quebec City)  cell. (418) 564-6736  igor.potey@lr.org
	Lloyd's Register North America Bureau de Halifax Suite 812, Queen Square 45 Alderney Drive Dartmouth, NS B2Y 2N6	 (902) 423-7506  (902) 425-2913  halifax@lr.org	Bud Streeter VP & Operations Manager  cell. (902) 499-0244  bud.streeter@lr.org Craig Williams Senior Surveyor In Charge  (902) 406-4166  cell. (902) 497-9849  Craig.Williams@lr.org
	Lloyd's Register North America Bureau de Toronto 3050 Harvester Road, Suite 208 Burlington, ON L7N 3J1	 (905) 631-9420  (905) 631-9430  toronto@lr.org	Barry Shepherd Marine Manager Eastern Canada  cell. (905) 515-7385  barry.shepherd@lr.org Vitaliy Melnyk Senior Surveyor In Charge  cell. (905) 320-6139  vitaliy.melnyk@lr.org Michael Skrzypczak Senior Surveyor  cell. (905) 515-7384  Michael.Skrzypczak@lr.org James Zheng Senior Surveyor  cell. (905) 320-9039  James.Zheng@lr.org
	Lloyds' Register of Shipping Bureau de Londres 71 Fenchurch Street London, England EC3M 4BS	 011 44 20 7709 9166  www.lr.org	

NAVIRE CITERNE Damia Mia Paul A. Rossi A. Gaïa NAVIRE DE CHARGE Argentina	Bureau Veritas (Canada) inc. 25 rue Marché-Champlain, Suite 403, Québec, Qc, Canada, G1K 8Z8	 (418) 914 1741  www.bureauveritas.com	Darrell Ashley Marine Surveyor  cell. (418) 806-3835  Darrell.Ashley@ca.bureauveritas.com
NAVIRES- CITERNES Dara Esta Jana Espada Laurentia NAVIRES DE CHARGE Claude A. Rosaire A. Sedna Taïga Zélada Nordika Miena	DNV GL Montreal office 4100 Rue Molson, Suite 100 Montreal, Qc., H1Y 3N1	 (514) 861-0660   montreal.maritime@dnvgl.com	Ozan Burhan Directeur DNV GL Montréal  (514) 974-1658  burhan.ozan@dnvgl.com Krieger, Kai Senior Surveyor  cell. (514) 815-8134  kai.krieger@dnvgl.com
	Halifax Office 99 Wyse Road, Suite 900 Dartmouth, Nova Scotia, B3A 4S5 Canada	 (902) 464-0905  halifax.maritime@dnvgl.com	



Organismes d'intervention	<p>ECRC / SIMEC Eastern Canada Response Corporation Ltd. Société d'intervention maritime de l'Est du Canada Itée</p> <p>275 Slater Street, Suite 1201 Ottawa (Ontario) K1P 5H9 Tél. : (613) 230-7369 Télec. : (613) 230-7344</p> <div> <p>Bureau régional de Québec 281, de l'Estuaire Québec (Québec) G1K 7J8 Tél. : (418) 692-8989 Télec. : (418) 694-9649 M. Pierre Samson, poste 2229</p> </div> <p>Mr. Paul Pouliotte, poste 304 Ms. Ann Therrien, poste 308 atherrien@ecrc.ca URGENCE 24 H (613) 930-9690</p>	<p>ALERT Atlantic Emergency Response Team</p> <p>P.O. Box 2353 Saint John (New Brunswick) E2L 3V6 Tél. : (506) 632-4499 Télec. : (506) 632-4450</p> <p>Mrs. Andrea Melanson</p> <p>URGENCE 24 H (506) 632-4499</p>	<p>PTMS Point Tupper Marine Services Ltd.</p> <p>P.O. Box 316 Port Hastings (Nova Scotia) B0E 2T0 Tél. : (902) 625-3611 ou 625-1846 Télec. : (902) 625-1556 ou 625-3098</p> <p>Capt. Ed Kehoe, Response Manager Cell. : (902) 227-7696 Téléav. : (902) 558-2572</p> <p>URGENCE 24 H (902) 625-1711</p>	<p>WCMRC Renseignements disponibles auprès de la Chamber of Shipping of British Columbia aux numéros ci-dessous : Tél. : (604) 681-2351 Télec. : (604) 681-4364</p> <p>Burrard Clean operations division URGENCE 24 H (604) 294-9116</p>
Zones d'intervention	<p>Le réseau canadien des Grands Lacs et les canaux les reliant dans la province de l'Ontario incluant le lac Supérieur, la rivière St. Mary, le lac Huron, la rivière St. Clair, le lac St. Clair, la rivière Detroit, le lac Érié, le lac Ontario; le fleuve St-Laurent, le lac Winnipeg, la rivière Athabasca de Fort McMurray au lac Athabasca, et le lac Athabasca.</p> <p>Les eaux de la Baie James, de la Baie d'Hudson et de la Baie d'Ungava; les eaux de la province de Québec (incluant le St-Laurent) et les eaux des provinces atlantiques (excluant les eaux au nord de la latitude 60° Nord et les régions couvertes par ALERT et PTMSL).</p>	<p>Les eaux canadiennes comprises entre la frontière Ouest constituée d'un arc d'un rayon de 50 milles nautiques du point 45°08'03" N, 66°17'12" W et la frontière Est constituée d'un arc d'un rayon de 50 milles nautiques du phare de Cape Spencer.</p>	<p>Les eaux canadiennes à l'intérieur d'un rayon de 50 milles nautiques à partir du phare de Bearhead, 45°33' N, 61°17' W, excluant le nord du détroit de Canso dans St. Georges Bay, les eaux des lacs Bras D'or, des canaux St. Andrew, St. Patrick, Great Bras D'or et les autres eaux intérieures de l'île du Cap Breton.</p>	<p>Les eaux bordant la province de la Colombie-Britannique, les eaux internes de cette province, et excluant les eaux au nord du 60° parallèle de latitude.</p>



Communications avec les bureaux *Communications with offices*

Coordonnées des compagnies

Companies' Contact Information

Nom <i>Name</i>	Statut <i>Status</i>	Contact <i>Contact</i>	Adresse <i>Address</i>	Numéros <i>Numbers</i>
Groupe Desgagnés inc.	Société mère <i>Parent company</i>	Louis-Marie Beaulieu	21, rue du Marché-Champlain Québec (Québec) G1K 8Z8	Siège social <i>Head Office</i> ☎ (418) 692-1000 📠 (418) 692-6044 info@desgagnés.com Salle d'intervention d'urgence <i>Emergency Response Room</i> ☎ (418) 692-5525 📠 (418) 692-5443 emergency@desgagnés.com
Transport Desgagnés Inc.	Armateur et exploitant <i>Shipowner and ship operator</i>	Serge Le Guellec	Même que ci-dessus <i>Same as above</i>	Mêmes que ci-dessus <i>Same as above</i>
Desgagnés Marine Cargo Inc.	Fournisseur d'équipage (navires de charge) <i>Crewing (general cargo ships)</i>	Pascal Lévesques	Même que ci-dessus <i>Same as above</i>	Mêmes que ci-dessus <i>Same as above</i>
Desgagnés Marine Petro Inc.	Fournisseur d'équipage (navires-citernes) <i>Crewing (tankers)</i>	Pascal Lévesques	Même que ci-dessus <i>Same as above</i>	Mêmes que ci-dessus <i>Same as above</i>
Navigation Desgagnés inc.	Affréteur (navires de charge) <i>Charterer (general cargo ships)</i>	Alexandre Beauchamp Parent	Même que ci-dessus <i>Same as above</i>	Mêmes que ci-dessus <i>Same as above</i>
Petro-Nav Inc.	Affréteur (navires-citernes) <i>Charterer (tankers)</i>	Christopher King	Bureau 601 204, rue Saint-Sacrement Montréal (Québec) H2Y 1W8	☎ (514) 843-8800 📠 (514) 843-9195 info@petro.nav.desgagnés.com

Nom Name	Statut Status	Contact Contact	Adresse Address	Numéros Numbers
Desgagnés Transarctik Inc.	Affréteur (navires de charges) Arctique <i>Charterer (general cargo ships) Artic</i>	Dominic Desgagnés	6565, boul. Hébert, bur. 201 Sainte-Catherine (Québec) J5C 1B5	☎ (450) 635-0833 📠 (450) 635-5126 info@transactik.desgagnes.com
Marlow Navigation	Fournisseur d'équipage à l'international (navires de charge) <i>International Crewing (general cargo Ship)</i>	Mike Naradko	13, Alexandrias Street P.O. Box 54077 CY-3720 Limassol Cyprus	☎ +357 25882588 📠 +357 25882599 marlow@marlow.com.cy



Liste des contacts en cas d'urgence *Emergency Contact List*

ARMATEUR ET OPÉRATEUR	TRANSPORT DESGAGNES INC.	OWNER & OPERATOR	TRANSPORT DESGAGNES INC.
SIÈGE SOCIAL		HEAD OFFICE	
Adresse :	21, rue du Marché-Champlain Québec (Québec) Canada G1K 8Z8	Address:	21 Marché-Champlain Street Quebec, Québec, Canada G1K 8Z8
Téléphone :	(418) 692-1000	Telephone:	(418) 692-1000
Télocopieur :	(418) 692-6044	Fax:	(418) 692-6044
Courriel :	info@desgagnes.com	E-mail:	info@desgagnes.com
Site Internet :	www.desgagnes.com	Website:	www.desgagnes.com
SALLE D'INTERVENTION D'URGENCE		EMERGENCY RESPONSE ROOM	
Téléphone :	(418) 692-5525	Telephone:	(418) 692-5525
Télocopieur :	(418) 692-5443	Fax:	(418) 692-5443
Courriel :	emergency@desgagnes.com	E-mail:	emergency@desgagnes.com
CONTACT 1 :	Surintendant du navire	CONTACT 1:	Vessel Superintendent
Pour les navires :	Dara, Esta, Jana et Maria Desgagnés Surintendant et OSC	For vessels:	Dara, Esta, Jana and Maria Desgagnés Superintendent and CSO
	Daniel Colan		Daniel Colan
Cellulaire :	(506) 533 0214	Cellular:	(506) 533 0214
Courriel	daniel.colan@rigelcanada.com	E-mail	daniel.colan@rigelcanada.com
Ou :	Officier en devoir	Or:	Officer on Duty
	(506) 533-9000		(506) 533-9000
Pour les navires :	Nordika, Sedna et Zélada Desgagnés	For vessels:	Nordika, Sedna and Zélada Desgagnés
	Eugen Milasan		Eugen Milasan
Cellulaire :	(418) 929-4961	Cellular:	(418) 929-4961
Cellulaire 2 :	(514) 473-6076	Cellular 2:	(514) 473-6076
Courriel :	eugen.milasan@desgagnes.com	E-mail:	eugen.milasan@desgagnes.com
Pour les navires :	Acadia, Argentinia et Claude A. Desgagnés	For vessels:	Acadia, Argentinia and Claude A. Desgagnés
	Angelo Lavoie		Angelo Lavoie
Cellulaire :	(418)-951-8499	Cellular:	(418)-951-8499
Courriel :	angelo.lavoie@desgagnes.com	E-mail:	angelo.lavoie@desgagnes.com
Pour le navire :	Thorco Isadora	For vessel:	Thorco Isadora
	Zélada Desgagnés		Zélada Desgagnés
Cellulaire :	(418) 563-7573	Cellular:	(418) 563-7573
Domicile :	(418) 635-2803	Home:	(418) 635-2803
Courriel :	zelada.desgagnes@desgagnes.com	E-mail:	zelada.desgagnes@desgagnes.com

Pour les navires :	Gaïa, Miena et Paul A. Desgagnés
	Éric Desrochers
Cellulaire :	(418) 569-3597
Domicile :	(418) 683-3849
Courriel :	eric.desrochers@desgagnes.com

For vessels:	Gaïa, Miena and Paul A. Desgagnés
	Éric Desrochers
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Home:	(418) 683-3849
E-mail:	eric.desrochers@desgagnes.com

Pour les navires :	Bella Desgagnés et Nordik Express
	Philippe Hémart
Cellulaire :	(418) 509-0740
Domicile :	(819) 699-3130
Courriel :	philippe.hemart@relais.nordik.desgagnes.com

For vessels:	Bella Desgagnés and Nordik Express
	Philippe Hémart
Cellular:	(418) 509-0740
Home :	(819) 699-3130
E-mail	philippe.hemart@relais.nordik.desgagnes.com

Pour les navires :	Damia, Rosaire A. et Rossi A. Desgagnés
	Sylvain Tremblay
Cellulaire :	(418) 571-0429
Domicile :	(418) 889-8917
Courriel :	sylvain.tremblay@desgagnes.com

For vessels:	Damia, Rosaire A. and Rossi A. Desgagnés
	Sylvain Tremblay
Cellular:	(418) 571-0429
Home:	(418) 889-8917
E-mail:	sylvain.tremblay@desgagnes.com

Pour les navires :	Espada et Laurentia Desgagnés
	Philip John
Cellulaire :	(418) 802-7977
Courriel :	philip.john@desgagnes.com

For vessels:	Espada and Laurentia Desgagnés
	Philip John
Cellular:	(418) 802-7977
E-mail:	philip.john@desgagnes.com

Pour les navires :	Mia, Sarah et Taïga Desgagnés
	Jeremy Girard
Cellulaire :	(418) 573-7608
Courriel :	jeremy.girard@desgagnes.com

For vessels:	Mia, Sarah and Taïga Desgagnés
	Jeremy Girard
Cellular:	(418) 573-7608
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Domicile :	(418) 908-0955
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CONTACT 2:	André Marmen Operations Manager
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CONTACT 3 :	David Fox, PDT - Navires Citernes Surintendant – Navigation
Cellulaire :	(418) 805-1384
Courriel :	david.fox@desgagnes.com

CONTACT 3:	David Fox, DPA - Tanker Vessels Superintendent – Navigation
Cellular:	(418) 805-1384
E-mail:	david.fox@desgagnes.com

CONTACT 3 :	Marc Desgagnés, PDT - Navires Cargo OSC - Tous les navires de la Flotte (à l'exception Dara, Jana, Esta, Maria) Directeur QSSE
Cellulaire :	(418) 569-6537
Domicile :	(418) 406-1059
Courriel :	marc.desgagnes@desgagnes.com

CONTACT 3:	Marc Desgagnés, DPA - Cargo Vessels CSO – All Fleet Vessels (Except Dara, Jana, Esta, Maria) QSSE Manager
Cellular:	(418) 569-6537
Home :	(418) 406-1059
E-mail:	marc.desgagnes@desgagnes.com

CONTACT 4 :	Claude Dumais Vice-président – Opérations et projets spéciaux, Groupe Desgagnés (Chef d'intervention d'urgence)
Cellulaire :	(418) 952-6486
Courriel :	claudio.dumais@desgagnes.com
CONTACT 5 :	Serge Le Guellec Président-directeur général (TDI)
Cellulaire :	(581) 888-8920
Courriel :	serge.lequelllec@desgagnes.com

CONTACT 4:	<i>Claude Dumais</i> <i>Vice-President – Operations and</i> <i>Special Projects, Groupe</i> <i>Desgagnés</i> <i>(Incident Commander)</i>
<i>Cellular:</i>	<i>(418) 952-6486</i>
<i>E-mail:</i>	<i>claudio.dumais@desgagnes.com</i>
CONTACT 5:	<i>Serge Le Guellec</i> <i>President and General Manager</i>
<i>Cellular:</i>	<i>(581) 888-8920</i>
<i>E-mail:</i>	<i>serge.lequelllec@desgagnes.com</i>

APPENDIX B - Transfer Conduit Annual Pressure Test

Hose TRACKER

ONTARIO HOSE SPECIALTIES LTD.

<i>Mississauga</i>	<i>Sarnia</i>	<i>Stoney Creek</i>	<i>Kingston</i>	<i>Montreal</i>	<i>Maritimes</i>
6295 Kestrel Road Mississauga, Ontario L5T 1Z4	480 Polymoor Drive Corunna, Ontario N0N 1G0	263 Barton Stree Stoney Creek, Ontario L8E 2K4	639 justus Drive Kingston, Ontario K7M 4H5	1900 Hymus Blvd Dorval, Quebec H9P 1J7	10 Akerley Blvd U#25 Dartmouth, Nova Scotia B3B 1J4
Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	Floater Hose	Size:	4"
Hose Number:	PNV00292	Length:	400'
Part Number:	GMFH4x400-ORANGE-F	HAWP (PSI):	200
Order:	1176561	Temperature Range:	
PO:	12894	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	MFG 2018	CRN:	N/A
Location:	Quebec	Colour:	-

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/10/2019	Hydro-Pressure:	6/10/2020
Static:	6/10/2019	Static:	6/10/2020
Visual:	6/10/2019	Visual:	6/10/2020

Test PSI:

300

Length Of Pressure Test:

No repair reasons listed

Test last conducted by: sbq

Printed: 6/26/2019

This report was created by HoseTracker.

Please refer to all instruction manuals, technical drawings and documents before using the above equipment.

All products have been tested and inspected in accordance with the appropriate ANSI standards.

Hose TRACKER

ONTARIO HOSE SPECIALTIES LTD.

<i>Mississauga</i>	<i>Sarnia</i>	<i>Stoney Creek</i>	<i>Kingston</i>	<i>Montreal</i>	<i>Maritimes</i>
6295 Kestrel Road Mississauga, Ontario L5T 1Z4	480 Polymoor Drive Corunna, Ontario N0N 1G0	263 Barton Stree Stoney Creek, Ontario L8E 2K4	639 justus Drive Kingston, Ontario K7M 4H5	1900 Hymus Blvd Dorval, Quebec H9P 1J7	10 Akerley Blvd U#25 Dartmouth, Nova Scotia B3B 1J4
Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	Floater Hose	Size:	4"
Hose Number:	PNV00291	Length:	400'
Part Number:	GMFH4x400-ORANGE-F	HAWP (PSI):	200
Order:	1176561	Temperature Range:	
PO:	12894	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	MFG 2018	CRN:	N/A
Location:	Quebec	Colour:	-

Last Test Date(s)	Scheduled Retest Date(s)
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Hydro-Pressure:	6/10/2019	Hydro-Pressure:	6/10/2020
Static:	6/10/2019	Static:	6/10/2020
Visual:	6/10/2019	Visual:	6/10/2020

Test PSI: 300	Length Of Pressure Test:
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No repair reasons listed

Test last conducted by: sbq
Printed: 6/26/2019

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Hose TRACKER

ONTARIO HOSE SPECIALTIES LTD.

<i>Mississauga</i>	<i>Sarnia</i>	<i>Stoney Creek</i>	<i>Kingston</i>	<i>Montreal</i>	<i>Maritimes</i>
6295 Kestrel Road Mississauga, Ontario L5T 1Z4	480 Polymoor Drive Corunna, Ontario N0N 1G0	263 Barton Stree Stoney Creek, Ontario L8E 2K4	639 justus Drive Kingston, Ontario K7M 4H5	1900 Hymus Blvd Dorval, Quebec H9P 1J7	10 Akerley Blvd U#25 Dartmouth, Nova Scotia B3B 1J4
Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	Floater Hose	Size:	4"
Hose Number:	PNV00290	Length:	400'
Part Number:	GMFH4x400-ORANGE-F	HAWP (PSI):	200
Order:	1176561	Temperature Range:	
PO:	12894	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	MFG 2018	CRN:	N/A
Location:	Quebec	Colour:	-

Last Test Date(s)	Scheduled Retest Date(s)
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Hydro-Pressure:	6/10/2019	Hydro-Pressure:	6/10/2020
Static:	6/10/2019	Static:	6/10/2020
Visual:	6/10/2019	Visual:	6/10/2020

Test PSI: 300	Length Of Pressure Test:
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No repair reasons listed

Test last conducted by: sbq
Printed: 6/26/2019

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 All products have been tested and inspected in accordance with the appropriate ANSI standards.

Hose TRACKER

ONTARIO HOSE SPECIALTIES LTD.

<i>Mississauga</i>	<i>Sarnia</i>	<i>Stoney Creek</i>	<i>Kingston</i>	<i>Montreal</i>	<i>Maritimes</i>
6295 Kestrel Road Mississauga, Ontario L5T 1Z4	480 Polymoor Drive Corunna, Ontario N0N 1G0	263 Barton Stree Stoney Creek, Ontario L8E 2K4	639 justus Drive Kingston, Ontario K7M 4H5	1900 Hymus Blvd Dorval, Quebec H9P 1J7	10 Akerley Blvd U#25 Dartmouth, Nova Scotia B3B 1J4
Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	Floater Hose	Size:	4"
Hose Number:	PNV00289	Length:	400'
Part Number:	GMFH4x400-ORANGE-F	HAWP (PSI):	200
Order:	1176561	Temperature Range:	
PO:	12894	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	MFG 2018	CRN:	N/A
Location:	Quebec	Colour:	-

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/10/2019	Hydro-Pressure:	6/10/2020
Static:	6/10/2019	Static:	6/10/2020
Visual:	6/10/2019	Visual:	6/10/2020

Test PSI:

300

Length Of Pressure Test:

No repair reasons listed

Test last conducted by: sbq

Printed: 6/26/2019

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Hose TRACKER

ONTARIO HOSE SPECIALTIES LTD.

<i>Mississauga</i>	<i>Sarnia</i>	<i>Stoney Creek</i>	<i>Kingston</i>	<i>Montreal</i>	<i>Maritimes</i>
6295 Kestrel Road Mississauga, Ontario L5T 1Z4	480 Polymoor Drive Corunna, Ontario N0N 1G0	263 Barton Stree Stoney Creek, Ontario L8E 2K4	639 justus Drive Kingston, Ontario K7M 4H5	1900 Hymus Blvd Dorval, Quebec H9P 1J7	10 Akerley Blvd U#25 Dartmouth, Nova Scotia B3B 1J4
Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	Floater Hose	Size:	4"
Hose Number:	PNV00288	Length:	400'
Part Number:	GMFH4x400-ORANGE-F	HAWP (PSI):	200
Order:	1176561	Temperature Range:	
PO:	12894	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	MFG 2018	CRN:	N/A
Location:	Quebec	Colour:	-

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/10/2019	Hydro-Pressure:	6/10/2020
Static:	6/10/2019	Static:	6/10/2020
Visual:	6/10/2019	Visual:	6/10/2020

Test PSI:

300

Length Of Pressure Test:

No repair reasons listed

Test last conducted by: sbq

Printed: 6/26/2019

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Hose TRACKER

ONTARIO HOSE SPECIALTIES LTD.

<i>Mississauga</i>	<i>Sarnia</i>	<i>Stoney Creek</i>	<i>Kingston</i>	<i>Montreal</i>	<i>Maritimes</i>
6295 Kestrel Road Mississauga, Ontario L5T 1Z4	480 Polymoor Drive Corunna, Ontario N0N 1G0	263 Barton Stree Stoney Creek, Ontario L8E 2K4	639 justus Drive Kingston, Ontario K7M 4H5	1900 Hymus Blvd Dorval, Quebec H9P 1J7	10 Akerley Blvd U#25 Dartmouth, Nova Scotia B3B 1J4
Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	Floater Hose	Size:	4"
Hose Number:	PNV00287	Length:	400'
Part Number:	GMFH4x400-ORANGE-F	HAWP (PSI):	200
Order:	1176561	Temperature Range:	
PO:	12894	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	MFG 2018	CRN:	N/A
Location:	Quebec	Colour:	-

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/10/2019	Hydro-Pressure:	6/10/2020
Static:	6/10/2019	Static:	6/10/2020
Visual:	6/10/2019	Visual:	6/10/2020

Test PSI:

300

Length Of Pressure Test:

No repair reasons listed

Test last conducted by: sbq

Printed: 6/26/2019

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Hose TRACKER

ONTARIO HOSE SPECIALTIES LTD.

<i>Mississauga</i>	<i>Sarnia</i>	<i>Stoney Creek</i>	<i>Kingston</i>	<i>Montreal</i>	<i>Maritimes</i>
6295 Kestrel Road Mississauga, Ontario L5T 1Z4	480 Polymoor Drive Corunna, Ontario N0N 1G0	263 Barton Stree Stoney Creek, Ontario L8E 2K4	639 justus Drive Kingston, Ontario K7M 4H5	1900 Hymus Blvd Dorval, Quebec H9P 1J7	10 Akerley Blvd U#25 Dartmouth, Nova Scotia B3B 1J4
Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	floater hose	Size:	4``
Hose Number:	PNV00285	Length:	400'
Part Number:	GMFH4x400-ORANGE-F	HAWP (PSI):	200
Order:	1176561	Temperature Range:	
PO:	12894	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	MFG 2018	CRN:	N/A
Location:	Quebec	Colour:	-

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/10/2019	Hydro-Pressure:	6/10/2020
Static:	6/10/2019	Static:	6/10/2020
Visual:	6/10/2019	Visual:	6/10/2020

Test PSI:

300

Length Of Pressure Test:

No repair reasons listed

Test last conducted by: sbq

Printed: 6/26/2019

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Hose TRACKER

ONTARIO HOSE SPECIALTIES LTD.

<i>Mississauga</i>	<i>Sarnia</i>	<i>Stoney Creek</i>	<i>Kingston</i>	<i>Montreal</i>	<i>Maritimes</i>
6295 Kestrel Road Mississauga, Ontario L5T 1Z4	480 Polymoor Drive Corunna, Ontario N0N 1G0	263 Barton Stree Stoney Creek, Ontario L8E 2K4	639 justus Drive Kingston, Ontario K7M 4H5	1900 Hymus Blvd Dorval, Quebec H9P 1J7	10 Akerley Blvd U#25 Dartmouth, Nova Scotia B3B 1J4
Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	floater hose	Size:	4``
Hose Number:	PNV00284	Length:	400'
Part Number:	GMFH4x400-ORANGE-F	HAWP (PSI):	200
Order:	1176561	Temperature Range:	
PO:	12894	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	MFG 2018	CRN:	N/A
Location:	Quebec	Colour:	-

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/10/2019	Hydro-Pressure:	6/10/2020
Static:	6/10/2019	Static:	6/10/2020
Visual:	6/10/2019	Visual:	6/10/2020

Test PSI:

300

Length Of Pressure Test:

No repair reasons listed

Test last conducted by: sbq

Printed: 6/26/2019

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6295 Kestrel Road Mississauga, Ontario L5T 1Z4	480 Polymoor Drive Corunna, Ontario N0N 1G0	263 Barton Stree Stoney Creek, Ontario L8E 2K4	639 justus Drive Kingston, Ontario K7M 4H5	1900 Hymus Blvd Dorval, Quebec H9P 1J7	10 Akerley Blvd U#25 Dartmouth, Nova Scotia B3B 1J4
Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	floater hose	Size:	4``
Hose Number:	PNV00282	Length:	400'
Part Number:	GMFH4x400-ORANGE-F	HAWP (PSI):	200
Order:	1176561	Temperature Range:	
PO:	12894	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	MFG 2018	CRN:	N/A
Location:	Quebec	Colour:	-

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/10/2019	Hydro-Pressure:	6/10/2020
Static:	6/10/2019	Static:	6/10/2020
Visual:	6/10/2019	Visual:	6/10/2020

Test PSI:

300

Length Of Pressure Test:

No repair reasons listed

Test last conducted by: sbq

Printed: 6/26/2019

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<i>Mississauga</i>	<i>Sarnia</i>	<i>Stoney Creek</i>	<i>Kingston</i>	<i>Montreal</i>	<i>Maritimes</i>
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Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	floater hose	Size:	4"
Hose Number:	PNV00271	Length:	400'
Part Number:	GMFH4X400orangeRT	HAWP (PSI):	200
Order:	1173960	Temperature Range:	
PO:	12884	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	MFG 2018	CRN:	N/A
Location:	Quebec	Colour:	Orange

Last Test Date(s)	Scheduled Retest Date(s)
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Hydro-Pressure:	6/10/2019	Hydro-Pressure:	6/10/2020
Static:	6/10/2019	Static:	6/10/2020
Visual:	6/10/2019	Visual:	6/10/2020

Test PSI: 300	Length Of Pressure Test:
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No repair reasons listed

Test last conducted by: sbq
Printed: 6/26/2019

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Hose TRACKER

ONTARIO HOSE SPECIALTIES LTD.

<i>Mississauga</i>	<i>Sarnia</i>	<i>Stoney Creek</i>	<i>Kingston</i>	<i>Montreal</i>	<i>Maritimes</i>
6295 Kestrel Road Mississauga, Ontario L5T 1Z4	480 Polymoor Drive Corunna, Ontario N0N 1G0	263 Barton Stree Stoney Creek, Ontario L8E 2K4	639 justus Drive Kingston, Ontario K7M 4H5	1900 Hymus Blvd Dorval, Quebec H9P 1J7	10 Akerley Blvd U#25 Dartmouth, Nova Scotia B3B 1J4
Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	floater hose	Size:	4
Hose Number:	PNV00222	Length:	400'
Part Number:		HAWP (PSI):	200
Order:	1124090	Temperature Range:	
PO:	12405	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	MFG 2015	CRN:	N/A
Location:	Quebec	Colour:	Orange

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/10/2019	Hydro-Pressure:	6/10/2020
Static:	6/10/2019	Static:	6/10/2020
Visual:	6/10/2019	Visual:	6/10/2020

Test PSI:

300

Length Of Pressure Test:

No repair reasons listed

Test last conducted by: sbq

Printed: 6/26/2019

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www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	floater hose	Size:	4
Hose Number:	PNV00221	Length:	400'
Part Number:		HAWP (PSI):	200
Order:	1124090	Temperature Range:	
PO:	12405	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	MFG 2015	CRN:	N/A
Location:	Quebec	Colour:	Orange

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/10/2019	Hydro-Pressure:	6/10/2020
Static:	6/10/2019	Static:	6/10/2020
Visual:	6/10/2019	Visual:	6/10/2020

Test PSI:

300

Length Of Pressure Test:

No repair reasons listed

Test last conducted by: sbq

Printed: 6/26/2019

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www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	floater hose	Size:	4
Hose Number:	PNV00216	Length:	400'
Part Number:		HAWP (PSI):	200
Order:	1125823	Temperature Range:	
PO:	12414	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	MFG 2015	CRN:	N/A
Location:	Quebec	Colour:	Orange

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/10/2019	Hydro-Pressure:	6/10/2020
Static:	6/10/2019	Static:	6/10/2020
Visual:	6/10/2019	Visual:	6/10/2020

Test PSI:

300

Length Of Pressure Test:

No repair reasons listed

Test last conducted by: sbq

Printed: 6/26/2019

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www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	SBQ	Size:	4
Hose Number:	PNV00164	Length:	400'
Part Number:		HAWP (PSI):	200
Order:	hose manufactured in 20	Temperature Range:	
PO:		Rating:	4/5 This Hose is in excellent condition and is ok to be in service
Unit Number:	MFG 2013	CRN:	N/A
Location:	Quebec	Colour:	-

Last Test Date(s)	Scheduled Retest Date(s)
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Hydro-Pressure:	6/10/2019	Hydro-Pressure:	6/10/2020
Static:	6/10/2019	Static:	6/10/2020
Visual:	6/10/2019	Visual:	6/10/2020

Test PSI: 300	Length Of Pressure Test:
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Reason for repair

Fitting(s)	Clamp/Ferrule	Tube	Cover
Cam Arm Damaged			

Test last conducted by: sbq

Printed: 6/26/2019

COMMENT Changed 2 Goodyear arms

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www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	SBQ	Size:	4
Hose Number:	PNV00163	Length:	399'
Part Number:		HAWP (PSI):	200
Order:	hose manufactured in 20	Temperature Range:	
PO:		Rating:	4/5 This Hose is in excellent condition and is ok to be in service
Unit Number:	MFG 2013	CRN:	N/A
Location:	Quebec	Colour:	-

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/10/2019	Hydro-Pressure:	6/10/2020
Static:	6/10/2019	Static:	6/10/2020
Visual:	6/10/2019	Visual:	6/10/2020

Test PSI: 300

Length Of Pressure Test:

Reason for repair

Fitting(s)	Clamp/Ferrule	Tube	Cover
Damaged			

Test last conducted by: sbq

Printed: 6/26/2019

COMMENT HOSE IS OKAY

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Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	MxF Hydrasearch
Hose Type:	Floater Hose	Size:	6"
Hose Number:	PNV00314	Length:	400'
Part Number:	GMFH6X4-OR-MXFHYD	HAWP (PSI):	200
Order:	1194716	Temperature Range:	
PO:	19053	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	May 2019	CRN:	N/A
Location:	Quebec	Colour:	Orange

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/4/2019	Hydro-Pressure:	6/4/2020
Static:	6/4/2019	Static:	6/4/2020
Visual:	6/4/2019	Visual:	6/4/2020

Test PSI: 300

Length Of Pressure Test: N/A

No repair reasons listed

Test last conducted by: N/A

Printed: 6/7/2019

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Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	MxF Hydrasearch
Hose Type:	Floater Hose	Size:	6"
Hose Number:	PNV00313	Length:	400'
Part Number:	GMFH6X4-OR-MXFHYD	HAWP (PSI):	200
Order:	1194716	Temperature Range:	
PO:	19053	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	May 2019	CRN:	N/A
Location:	Quebec	Colour:	Orange

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/4/2019	Hydro-Pressure:	6/4/2020
Static:	6/4/2019	Static:	6/4/2020
Visual:	6/4/2019	Visual:	6/4/2020

Test PSI: 300

Length Of Pressure Test: N/A

No repair reasons listed

Test last conducted by: N/A

Printed: 6/7/2019

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Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

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TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	MxF Hydrasearch
Hose Type:	Floater Hose	Size:	6"
Hose Number:	PNV00312	Length:	400'
Part Number:	GMFH6X4-OR-MXFHYD	HAWP (PSI):	200
Order:	1194716	Temperature Range:	
PO:	19053	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	May 2019	CRN:	N/A
Location:	Quebec	Colour:	Orange

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/4/2019	Hydro-Pressure:	6/4/2020
Static:	6/4/2019	Static:	6/4/2020
Visual:	6/4/2019	Visual:	6/4/2020

Test PSI: 300

Length Of Pressure Test: N/A

No repair reasons listed

Test last conducted by: N/A

Printed: 6/7/2019

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Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

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TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	MxF Hydrasearch
Hose Type:	Floater Hose	Size:	6"
Hose Number:	PNV00311	Length:	400'
Part Number:	GMFH6X4-OR-MXFHYD	HAWP (PSI):	200
Order:	1194716	Temperature Range:	
PO:	19053	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	May 2019	CRN:	N/A
Location:	Quebec	Colour:	Orange

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/4/2019	Hydro-Pressure:	6/4/2020
Static:	6/4/2019	Static:	6/4/2020
Visual:	6/4/2019	Visual:	6/4/2020

Test PSI: 300

Length Of Pressure Test: N/A

No repair reasons listed

Test last conducted by: N/A

Printed: 6/7/2019

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TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	MxF Hydrasearch
Hose Type:	Floater Hose	Size:	6"
Hose Number:	PNV00310	Length:	400'
Part Number:	GMFH6X4-OR-MXFHYD	HAWP (PSI):	200
Order:	1194716	Temperature Range:	
PO:	19053	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	May 2019	CRN:	N/A
Location:	Quebec	Colour:	Orange

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/4/2019	Hydro-Pressure:	6/4/2020
Static:	6/4/2019	Static:	6/4/2020
Visual:	6/4/2019	Visual:	6/4/2020

Test PSI: 300

Length Of Pressure Test: N/A

No repair reasons listed

Test last conducted by: N/A

Printed: 6/7/2019

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TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	MxF Hydrasearch
Hose Type:	Floater Hose	Size:	6"
Hose Number:	PNV00309	Length:	400'
Part Number:	GMFH6X4-OR-MXFHYD	HAWP (PSI):	200
Order:	1194716	Temperature Range:	
PO:	19053	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	May 2019	CRN:	N/A
Location:	Quebec	Colour:	Orange

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/4/2019	Hydro-Pressure:	6/4/2020
Static:	6/4/2019	Static:	6/4/2020
Visual:	6/4/2019	Visual:	6/4/2020

Test PSI: 300

Length Of Pressure Test: N/A

No repair reasons listed

Test last conducted by: N/A

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TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	MxF Hydrasearch
Hose Type:	Floater Hose	Size:	6"
Hose Number:	PNV00308	Length:	400'
Part Number:	GMFH6X4-OR-MXFHYD	HAWP (PSI):	200
Order:	1194716	Temperature Range:	
PO:	19053	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	May 2019	CRN:	N/A
Location:	Quebec	Colour:	Orange

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/4/2019	Hydro-Pressure:	6/4/2020
Static:	6/4/2019	Static:	6/4/2020
Visual:	6/4/2019	Visual:	6/4/2020

Test PSI: 300

Length Of Pressure Test: N/A

No repair reasons listed

Test last conducted by: N/A

Printed: 6/7/2019

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<i>Mississauga</i>	<i>Sarnia</i>	<i>Stoney Creek</i>	<i>Kingston</i>	<i>Montreal</i>	<i>Maritimes</i>
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Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	MxF Hydrasearch
Hose Type:	Floater Hose	Size:	6"
Hose Number:	PNV00307	Length:	400'
Part Number:	GMFH6X4-OR-MXFHYD	HAWP (PSI):	200
Order:	1194716	Temperature Range:	
PO:	19053	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	May 2019	CRN:	N/A
Location:	Quebec	Colour:	Orange

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/4/2019	Hydro-Pressure:	6/4/2020
Static:	6/4/2019	Static:	6/4/2020
Visual:	6/4/2019	Visual:	6/4/2020

Test PSI: 300

Length Of Pressure Test: N/A

No repair reasons listed

Test last conducted by: N/A

Printed: 6/7/2019

This report was created by HoseTracker.

Please refer to all instruction manuals, technical drawings and documents before using the above equipment.

All products have been tested and inspected in accordance with the appropriate ANSI standards.

Hose TRACKER

ONTARIO HOSE SPECIALTIES LTD.

<i>Mississauga</i>	<i>Sarnia</i>	<i>Stoney Creek</i>	<i>Kingston</i>	<i>Montreal</i>	<i>Maritimes</i>
6295 Kestrel Road Mississauga, Ontario L5T 1Z4	480 Polymoor Drive Corunna, Ontario N0N 1G0	263 Barton Stree Stoney Creek, Ontario L8E 2K4	639 justus Drive Kingston, Ontario K7M 4H5	1900 Hymus Blvd Dorval, Quebec H9P 1J7	10 Akerley Blvd U#25 Dartmouth, Nova Scotia B3B 1J4
Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	MxF Hydrasearch
Hose Type:	Floater Hose	Size:	6"
Hose Number:	PNV00306	Length:	400'
Part Number:	GMFH6X4-OR-MXFHYD	HAWP (PSI):	200
Order:	1194716	Temperature Range:	
PO:	19053	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	May 2019	CRN:	N/A
Location:	Quebec	Colour:	Orange

Last Test Date(s)	Scheduled Retest Date(s)
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Hydro-Pressure:	6/4/2019	Hydro-Pressure:	6/4/2020
Static:	6/4/2019	Static:	6/4/2020
Visual:	6/4/2019	Visual:	6/4/2020

Test PSI: 300	Length Of Pressure Test:	N/A
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No repair reasons listed

Test last conducted by: N/A
Printed: 6/7/2019

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ONTARIO HOSE SPECIALTIES LTD.

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6295 Kestrel Road Mississauga, Ontario L5T 1Z4	480 Polymoor Drive Corunna, Ontario N0N 1G0	263 Barton Stree Stoney Creek, Ontario L8E 2K4	639 justus Drive Kingston, Ontario K7M 4H5	1900 Hymus Blvd Dorval, Quebec H9P 1J7	10 Akerley Blvd U#25 Dartmouth, Nova Scotia B3B 1J4
Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	Floater Hose	Size:	4"
Hose Number:	PNV00319	Length:	400'
Part Number:	GMFH4X400-ORANGE-	HAWP (PSI):	200
Order:	1194715	Temperature Range:	
PO:	19052	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	May 2019	CRN:	N/A
Location:	Quebec	Colour:	Orange

Last Test Date(s)	Scheduled Retest Date(s)
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Hydro-Pressure:	6/4/2019	Hydro-Pressure:	6/4/2020
Static:	6/4/2019	Static:	6/4/2020
Visual:	6/4/2019	Visual:	6/4/2020

Test PSI: 300	Length Of Pressure Test: N/A
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No repair reasons listed

Test last conducted by: N/A
Printed: 6/7/2019

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www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	Floater Hose	Size:	4"
Hose Number:	PNV00318	Length:	400'
Part Number:	GMFH4X400-ORANGE-	HAWP (PSI):	200
Order:	1194715	Temperature Range:	
PO:	19052	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	May 2019	CRN:	N/A
Location:	Quebec	Colour:	Orange

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/4/2019	Hydro-Pressure:	6/4/2020
Static:	6/4/2019	Static:	6/4/2020
Visual:	6/4/2019	Visual:	6/4/2020

Test PSI: 300

Length Of Pressure Test: N/A

No repair reasons listed

Test last conducted by: N/A

Printed: 6/7/2019

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ONTARIO HOSE SPECIALTIES LTD.

<i>Mississauga</i>	<i>Sarnia</i>	<i>Stoney Creek</i>	<i>Kingston</i>	<i>Montreal</i>	<i>Maritimes</i>
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Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	Floater Hose	Size:	4"
Hose Number:	PNV00317	Length:	400'
Part Number:	GMFH4X400-ORANGE-	HAWP (PSI):	200
Order:	1194715	Temperature Range:	
PO:	19052	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	May 2019	CRN:	N/A
Location:	Quebec	Colour:	Orange

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/4/2019	Hydro-Pressure:	6/4/2020
Static:	6/4/2019	Static:	6/4/2020
Visual:	6/4/2019	Visual:	6/4/2020

Test PSI: 300

Length Of Pressure Test: N/A

No repair reasons listed

Test last conducted by: N/A

Printed: 6/7/2019

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Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	Floater Hose	Size:	4"
Hose Number:	PNV00316	Length:	400'
Part Number:	GMFH4X400-ORANGE-	HAWP (PSI):	200
Order:	1194715	Temperature Range:	
PO:	19052	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	May 2019	CRN:	N/A
Location:	Quebec	Colour:	Orange

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/4/2019	Hydro-Pressure:	6/4/2020
Static:	6/4/2019	Static:	6/4/2020
Visual:	6/4/2019	Visual:	6/4/2020

Test PSI: 300

Length Of Pressure Test: N/A

No repair reasons listed

Test last conducted by: N/A

Printed: 6/7/2019

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<i>Mississauga</i>	<i>Sarnia</i>	<i>Stoney Creek</i>	<i>Kingston</i>	<i>Montreal</i>	<i>Maritimes</i>
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Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	Floater Hose	Size:	4"
Hose Number:	PNV00315	Length:	400'
Part Number:	GMFH4X400-ORANGE-	HAWP (PSI):	200
Order:	1194715	Temperature Range:	
PO:	19052	Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	May 2019	CRN:	N/A
Location:	Quebec	Colour:	Orange

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/4/2019	Hydro-Pressure:	6/4/2020
Static:	6/4/2019	Static:	6/4/2020
Visual:	6/4/2019	Visual:	6/4/2020

Test PSI: 300

Length Of Pressure Test: N/A

No repair reasons listed

Test last conducted by: N/A

Printed: 6/7/2019

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<i>Mississauga</i>	<i>Sarnia</i>	<i>Stoney Creek</i>	<i>Kingston</i>	<i>Montreal</i>	<i>Maritimes</i>
6295 Kestrel Road Mississauga, Ontario L5T 1Z4	480 Polymoor Drive Corunna, Ontario N0N 1G0	263 Barton Stree Stoney Creek, Ontario L8E 2K4	639 justus Drive Kingston, Ontario K7M 4H5	1900 Hymus Blvd Dorval, Quebec H9P 1J7	10 Akerley Blvd U#25 Dartmouth, Nova Scotia B3B 1J4
Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	Goodyear	Size:	4"
Hose Number:	PNV00258	Length:	213'
Part Number:		HAWP (PSI):	200
Order:		Temperature Range:	
PO:		Rating:	5/5 This is a brand new Hose and is OK to be in service
Unit Number:	MFG 2014	CRN:	N/A
Location:	Quebec	Colour:	Orange

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/10/2019	Hydro-Pressure:	6/10/2020
Static:	6/10/2019	Static:	6/10/2020
Visual:	6/10/2019	Visual:	6/10/2020

Test PSI:

300

Length Of Pressure Test:

No repair reasons listed

Test last conducted by: sbq

Printed: 6/26/2019

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All products have been tested and inspected in accordance with the appropriate ANSI standards.

Hose TRACKER

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<i>Mississauga</i>	<i>Sarnia</i>	<i>Stoney Creek</i>	<i>Kingston</i>	<i>Montreal</i>	<i>Maritimes</i>
6295 Kestrel Road Mississauga, Ontario L5T 1Z4	480 Polymoor Drive Corunna, Ontario N0N 1G0	263 Barton Stree Stoney Creek, Ontario L8E 2K4	639 justus Drive Kingston, Ontario K7M 4H5	1900 Hymus Blvd Dorval, Quebec H9P 1J7	10 Akerley Blvd U#25 Dartmouth, Nova Scotia B3B 1J4
Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	floater hose	Size:	4
Hose Number:	PNV00224	Length:	199'
Part Number:	Other half of PNV-116	HAWP (PSI):	200
Order:		Temperature Range:	
PO:		Rating:	4/5 This Hose is in excellent condition and is ok to be in service
Unit Number:	MFG 2015	CRN:	N/A
Location:	Quebec	Colour:	-

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/27/2019	Hydro-Pressure:	6/27/2020
Static:	6/27/2019	Static:	6/27/2020
Visual:	6/27/2019	Visual:	6/27/2020

Test PSI: 300

Length Of Pressure Test:

Reason for repair

Fitting(s)	Clamp/Ferrule	Tube	Cover
Damaged			

Test last conducted by: sbq

Printed: 6/27/2019

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6295 Kestrel Road Mississauga, Ontario L5T 1Z4	480 Polymoor Drive Corunna, Ontario N0N 1G0	263 Barton Stree Stoney Creek, Ontario L8E 2K4	639 justus Drive Kingston, Ontario K7M 4H5	1900 Hymus Blvd Dorval, Quebec H9P 1J7	10 Akerley Blvd U#25 Dartmouth, Nova Scotia B3B 1J4
Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	floater hose	Size:	4
Hose Number:	PNV00176	Length:	400'
Part Number:	GOODYEAR FITTINGS	HAWP (PSI):	200
Order:		Temperature Range:	
PO:		Rating:	3/5 This Hose is acceptable for use in service
Unit Number:	MFG 2014	CRN:	N/A
Location:	Quebec	Colour:	-

Last Test Date(s)	Scheduled Retest Date(s)
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Hydro-Pressure:	6/27/2019	Hydro-Pressure:	6/27/2020
Static:	6/27/2019	Static:	6/27/2020
Visual:	6/27/2019	Visual:	6/27/2020

Test PSI: 300	Length Of Pressure Test:
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No repair reasons listed

Test last conducted by: sbq
Printed: 6/27/2019

COMMENT ok

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Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

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TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Type:	floater hose	Size:	4
Hose Number:	PNV00173	Length:	190'
Part Number:	GOODYEAR FITTINGS	HAWP (PSI):	200
Order:		Temperature Range:	
PO:	2014	Rating:	4/5 This is in excellent condition and is ok to be in service
Unit Number:	MFG 2014	CRN:	N/A
Location:	Quebec	Colour:	-

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/10/2019	Hydro-Pressure:	6/10/2020
Static:	6/10/2019	Static:	6/10/2020
Visual:	6/10/2019	Visual:	6/10/2020

Test PSI: 300

Length Of Pressure Test:

Reason for repair

Fitting(s)	Clamp/Ferrule	Tube	Cover
		Damaged	

Test last conducted by: sbq

Printed: 6/26/2019

***COMMENT* OTHER HALF (173"B") IS 213'**

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Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	floater hose	Size:	4
Hose Number:	PNV00116	Length:	200'
Part Number:		HAWP (PSI):	200
Order:		Temperature Range:	
PO:		Rating:	4/5 This Hose is in excellent condition and is ok to be in service
Unit Number:	MFG 2011	CRN:	N/A
Location:	Quebec	Colour:	-

Last Test Date(s)	Scheduled Retest Date(s)
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Hydro-Pressure:	6/27/2019	Hydro-Pressure:	6/27/2020
Static:	6/27/2019	Static:	6/27/2020
Visual:	6/27/2019	Visual:	6/27/2020

Test PSI: 300	Length Of Pressure Test:
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Reason for repair

Fitting(s)	Clamp/Ferrule	Tube	Cover
			Damaged

Test last conducted by: sbq

Printed: 6/27/2019

COMMENT ok

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Hose TRACKER

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6295 Kestrel Road Mississauga, Ontario L5T 1Z4	480 Polymoor Drive Corunna, Ontario N0N 1G0	263 Barton Stree Stoney Creek, Ontario L8E 2K4	639 justus Drive Kingston, Ontario K7M 4H5	1900 Hymus Blvd Dorval, Quebec H9P 1J7	10 Akerley Blvd U#25 Dartmouth, Nova Scotia B3B 1J4
Tel: 905-670-0113 Fax: 905-670-4958	Tel: 519-336-8541 Fax: 519-336-8543	Tel: 905-662-0276 Fax: 905-662-0542	Tel: 613-549-7316 Fax: 613-549-6214	Tel: 514-685-1266 Fax: 514-685-1606	Tel: 902-465-5220 Fax: 902-465-5296

www.ontariohose.com

TEST CERTIFICATE

Customer:	Petro-Nav	Fittings:	Stainless Steel Male x Female Camlock
Hose Type:	floater hose	Size:	4
Hose Number:	PNV00113	Length:	357'
Part Number:		HAWP (PSI):	200
Order:		Temperature Range:	
PO:		Rating:	4/5 This Hose is in excellent condition and is ok to be in service
Unit Number:	MFG 2011	CRN:	N/A
Location:	Quebec	Colour:	-

Last Test Date(s)

Scheduled Retest Date(s)

Hydro-Pressure:	6/27/2019	Hydro-Pressure:	6/27/2020
Static:	6/27/2019	Static:	6/27/2020
Visual:	6/27/2019	Visual:	6/27/2020

Test PSI: 300

Length Of Pressure Test:

Reason for repair

Fitting(s)	Clamp/Ferrule	Tube	Cover
Damaged			

Test last conducted by: sbq

Printed: 6/27/2019

***COMMENT* 6 patches installed**

This report was created by HoseTracker.

Please refer to all instruction manuals, technical drawings and documents before using the above equipment.

All products have been tested and inspected in accordance with the appropriate ANSI standards.

**APPENDIX C - MEL-ENV-0029: Agnico Pre-discharge and Spill Response
Seacan checklists & OHF Ship to Shore Fuel Discharge Procedure**

DOCUMENT ID: MEL-ENV-PRO Ship to Shore Fuel Discharge

People concerned: Agnico Eagle employees, contractors, visitors on the Meliadine site

Effective Date: 2017-07-12

This procedure corresponds to the required minimum standard. Each and everyone also have to comply with the rules and regulations of the Nunavut Government in terms of health and safety at work.

Rev #	Date	Description	Initiator
1	2019-03-25	Changed to Intelext format	Bethany Hodgins

Objective:

- To ensure that prior to the discharge of any fuel into the Agnico Eagle Rankin Inlet Tank Farm of Agnico Eagle Rankin Inlet Oil Handling Facility (OHF) that all proper steps are in place to ensure compliance with Canadian Shipping Act, Nunavut Water Board License, Nunavut impact review Board Certificate and other laws and regulations.

Definitions (If applicable):

Tool/Equipment Required	PPE Required
•	• Standard Site PPE

Specific Training Requirements

- N/A

Procedure

1. The Oil Pollution Emergency Plan (OPEP) must be reviewed on an annual basis and updated prior to the first annual discharge. This will include but not limited to:
 - a) Reviewing the Phone numbers for emergency's
 - b) Updating maps
 - c) Review and if necessary update equipment lists
 - d) Review roles and responsibilities
 - e) Update Declaration

This is the responsibility of the Environment department.

2. Contact Canadian Coast Guard and Transport Canada Pollution Prevention and make them aware of plans for transferring of fuel into our OHF for that season.

This is the responsibility of the Environment department.

3. Complete *Inventory report for Spill Response Sea Can at AEM's Oil Handling Facility in Rankin Inlet*. (*Inventory Checklist found on Page 6)

This is the responsibility of the Environment Department.

4. Ensure Shipping Company has provided Hose Testing Annual certification.
This is the responsibility of the Environment Department.

5. All personnel who will be a part of the fuel transfer (including Rankin Inlet Supervisor and third part contractor Intertek) must review the OPEP and be familiar with preventive measures to take and with the steps to take in the case of a spill event while fueling.

This is the responsibility of the Department of Procurement and Logistics.

6. Install secondary containment underneath each connection of conduit on land.
This is the responsibility of the Environment Department.

7. Monitor secondary containment underneath each connection of conduit on land.
This is the responsibility of the Department of Procurement and Logistics.

8. Ensure there is two way functional communications between the OHF and the off-loading Vessel.
This is the responsibility of the Department of Procurement and Logistics.

9. Ensure there is lighting in place at the transfer flange to provide illumination during any transfers taking place during the low to no light hours.
This is the responsibility of the Department of Procurement and Logistics.

10. Prior to any discharge Agnico Eagle must receive a copy of the Ship/Shore checklist completed by the shipping company. Agnico Eagle should also verify this has been completed (as much as realistically possibly without boarding the ship).
This is the responsibility of the Department of Procurement and Logistics.

11. Contact must be made with both the H&S and Environmental Departments prior to the discharge of fuels.

Meliadine Health & Safety
meliadine.healthandsafety@agnicoeagle.com
 Meliadine Environment

meli.environment@agnicoeagle.com

This is the responsibility of the Department of Procurement and Logistics.

12. The *Pre-discharge Checklist for AEM's Oil Handling Facility in Rankin Inlet* must be completed, signed and provided to the Environment Department prior to discharge. (*Checklist found on Page 5). This must be done for each fuel tanker for each campaign.
This is the responsibility of the Department of Procurement and Logistics.

Transfer

1. Once the above points are completed, the ship to shore transfer can commence.
2. Photos of the complete fuel transfer process should be taken, visually proving that all above procedures have been reached.
This is the responsibility of Environment and Procurement and Logistics Departments.
3. During the ship-to-shore transfer, Agnico Eagle will have competent personnel on location at all times to monitor the fuel transfer and maintain contact with the tanker's crew.
This is the responsibility of the Department of Procurement and Logistics.
4. During the ship-to-shore transfer, Agnico Eagle will have competent personnel on location at all times to monitor the fuel transfer and maintain contact with the tanker's crew.
This is the responsibility of the Department of Procurement and Logistics.
5. We are required by law to have a fuel spill scenario every two years. However, since we have shift work at Meliadine, to ensure adequate training annually we will do mock spill/training and switch shifts each year. This way each shift completes every second year.
This is the responsibility of the Environment Department in conjunction with the Emergency Response Team to plan and execute.

Related Documentation (If applicable):

- N/A

References (If applicable):

- N/A

Appendix



OHF / Ship to Shore Fuel Discharge

Pre-discharge Checklist for Agnico Eagle's Oil Handling Facility in Rankin Inlet

Date :

Inspected By :

Time :

Vessel Unloading :

Pre-Discharge Check List	Conform	Non-conform	Comments
Is there two way communications between the OHF and the off-loading Vessel?			
Has a review of response material checklist been completed?			
Current Copy of OPEP and Declaration at the OHF.			
Prior to discharge, have the certification of the transfer conduits been received?			
Has there been secondary containment placed underneath each connection of Conduit?			
Is lighting in place at the transfer flange to provide illumination during any transfers taking place during the low to no light hours.			
Prior to discharge, has the Vessels' Ship/Shore checklist been reviewed and a completed copy received by Agnico Eagle?			
Prior to discharge inform H&S and Environment Departments that fuel transfer will commence.			
Has the emergency response equipment been reviewed with all personnel and contractors on shore?			



Comments / Recommendations



OHF / Ship to Shore Fuel Discharge

Inventory report for Spill Response Sea Can at Agnico Eagle's Oil Handling Facility in Rankin Inlet

Date :

Inspected By :

Time :

Vessel Unloading :

Subject	Conform	Non-conform	Comments
Is the material and PPE stored in a manner that is <u>organized and accessible</u> in order to easily respond to spill?			
Are the sea cans in physically good shape? Easy to open?			
Are the sea cans identified as "Environmental Emergency Sea Can"?			
Is all the spill material in place?			
6 x Anchor sets (25 kg anchor, chain ballast, rode line and marker buoy)			
4 x Tow bridles with bullet float			
32 x 8" float x 12" skirt Optimax 2 Boom - 25' Sections			
1 x mini Max hydraulic skimmer with pump, power pack			
1 x Aluminum boat with 15 hp prop motor			
10 x 1/2" polyester yacht braid rope (600' rolls)			
5 x Drive pin anchors			
5 x slater anchors			
5 x wing anchors			
30 x sorbent boom, 5" x 4 per bag			
4 x mustang floater suit			



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8 x personal floatation devices			
12 x oil resistant gloves			
12 x leather gloves			
2 x sledge hammer with fiberglass handle			
2 x spade – long handle			
2 x Fire extinguisher – 20 lb ABC with brackets			
20 x Tyvex Suit XL			
1 x Alberta standard #3 First aid kit			
4 x Storage totes for small items			
1 x quick tank (500 gallon / 1893 ltrs.)			

Comments / Recommendations

Signature :

Authorization (Print Name)

Approved: _____
Name
JOHSC Worker Rep.

Date: _____

Approved: _____
Name
Department Superintendent / Delegate

Date: _____

Approved: _____
Name
Health & Safety Superintendent / Delegate

Date: _____

APPENDIX D – MSDS for P-50 Diesel

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : DIESEL FUEL

Synonyms : Seasonal Diesel, #1 Diesel, #2 Heating Oil, #1 Heating Oil, D50, Arctic Diesel, Farm Diesel, Marine Diesel, Low Sulphur Diesel, LSD, Ultra Low Sulphur Diesel, ULSD, Mining Diesel, Naval Distillate, Dyed Diesel, Marked Diesel, Coloured Diesel, Furnace special, Biodiesel blend, B1, B2, B5, Diesel Low Cloud (LC). Marine Gas Oil

Product code : 101802, 100107, 100668, 100658, 100911, 100663, 100652, 100460, 100065, 101796, 101793, 101795, 101792, 101794, 101791, 100768, 100643, 100642, 100103, 101798, 101800, 101797, 101788, 101789, 101787, 102531, 100734, 100733, 100640, 100997, 100995, 100732, 100731, 100994

Manufacturer or supplier's details
Petro-Canada
P.O. Box 2844, 150 - 6th Avenue South-West
Calgary Alberta T2P 3E3
Canada

Emergency telephone number
Suncor Energy: +1 403-296-3000;
Poison Control Centre: Consult local telephone directory for emergency number(s).

Recommended use of the chemical and restrictions on use

Recommended use : Diesel fuels are distillate fuels suitable for use in high and medium speed internal combustion engines of the compression ignition type. Mining diesels, marine diesels, MDO and naval distillates may have a higher flash point requirement.

Prepared by : Product Safety: +1 905-804-4752

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Appearance	Bright oily liquid.
Colour	Clear to yellow (This product may be dyed red for taxation purposes).
Odour	Mild petroleum oil like.

GHS Classification

Flammable liquids : Category 3

Acute toxicity (Inhalation) : Category 4

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Skin irritation : Category 2

Carcinogenicity : Category 2

Specific target organ toxicity - single exposure : Category 3 (Central nervous system)

Specific target organ toxicity - repeated exposure : Category 2 (Liver, thymus, Bone)

Aspiration hazard : Category 1

GHS Label element

Hazard pictograms



Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H373 May cause damage to organs (Liver, thymus, Bone) through prolonged or repeated exposure.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ eye protection/ face protection.
P281 Use personal protective equipment as required.
Response:
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.

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P308 + P313 IF exposed or concerned: Get medical advice/attention.
P331 Do NOT induce vomiting.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects

Primary Routes of Entry

: Eye contact
Ingestion
Inhalation
Skin contact
Skin Absorption

Target Organs

: Skin
Eyes
Respiratory Tract

Inhalation

: May cause respiratory tract irritation.
Inhalation may cause central nervous system effects.
Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

Skin

: Causes skin irritation.

Eyes

: Causes eye irritation.

Ingestion

: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.
Aspiration hazard if swallowed - can enter lungs and cause damage.

Aggravated Medical Condition

: None known.

Carcinogenicity:

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA

No component of this product present at levels greater than or

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equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Hazardous components

Chemical Name	CAS-No.	Concentration (%)
kerosine (petroleum), hydrodesulfurized	64742-81-0	70 - 100 %
kerosine (petroleum)	8008-20-6	
fuels, diesel	68334-30-5	
fuel oil no. 2	68476-30-2	
Alkanes, C10-20-branched and linear	928771-01-1	0 - 25 %
Soybean oil, Methyl ester	67784-80-9	0 - 5 %
Rape oil, Methyl ester	73891-99-3	
Fatty acids, tallow, Methyl esters	61788-61-2	

SECTION 4. FIRST AID MEASURES

- If inhaled : Move to fresh air.
Artificial respiration and/or oxygen may be necessary.
Seek medical advice.
- In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Wash skin thoroughly with soap and water or use recognized skin cleanser.
Wash clothing before reuse.
Seek medical advice.
- In case of eye contact : Remove contact lenses.
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Obtain medical attention.
- If swallowed : Rinse mouth with water.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Never give anything by mouth to an unconscious person.
Seek medical advice.
- Most important symptoms : First aider needs to protect himself.

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and effects, both acute and delayed

SECTION 5. FIREFIGHTING MEASURES

- | | |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable extinguishing media | : Dry chemical
Carbon dioxide (CO ₂)
Water fog.
Foam |
| Unsuitable extinguishing media | : Do NOT use water jet. |
| Specific hazards during firefighting | : Cool closed containers exposed to fire with water spray. |
| Hazardous combustion products | : Carbon oxides (CO, CO ₂), nitrogen oxides (NO _x), sulphur oxides (SO _x), sulphur compounds (H ₂ S), smoke and irritating vapours as products of incomplete combustion. |
| Further information | : Prevent fire extinguishing water from contaminating surface water or the ground water system. |
| Special protective equipment for firefighters | : Wear self-contained breathing apparatus for firefighting if necessary. |

SECTION 6. ACCIDENTAL RELEASE MEASURES

- | | |
|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Personal precautions, protective equipment and emergency procedures | : Use personal protective equipment.
Ensure adequate ventilation.
Evacuate personnel to safe areas.
Material can create slippery conditions. |
| Environmental precautions | : If the product contaminates rivers and lakes or drains inform respective authorities. |
| Methods and materials for containment and cleaning up | : Prevent further leakage or spillage if safe to do so.
Remove all sources of ignition.
Soak up with inert absorbent material.
Non-sparking tools should be used.
Ensure adequate ventilation.
Contact the proper local authorities. |

SECTION 7. HANDLING AND STORAGE

- | | |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advice on safe handling | : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Use only with adequate ventilation.
In case of insufficient ventilation, wear suitable respiratory equipment.
Avoid spark promoters. Ground/bond container and |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

equipment. These alone may be insufficient to remove static electricity.

Avoid contact with skin, eyes and clothing.

Do not ingest.

Keep away from heat and sources of ignition.

Keep container closed when not in use.

Conditions for safe storage : Store in original container.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep in a dry, cool and well-ventilated place.
Keep in properly labelled containers.
To maintain product quality, do not store in heat or direct sunlight.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
kerosine (petroleum), hydrodesulfurized	64742-81-0	TWA	200 mg/m ³	ACGIH
kerosine (petroleum)	8008-20-6	TWA	100 mg/m ³	NIOSH REL

Engineering measures : Use only in well-ventilated areas.
Ensure that eyewash station and safety shower are proximal to the work-station location.

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Filter type : organic vapour cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air-purifying respirators is limited. Use a positive-pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstances where air-purifying respirators may not provide adequate protection.

Hand protection
Material : neoprene, nitrile, polyvinyl alcohol (PVA), Viton(R). Consult your PPE provider for breakthrough times and the specific glove that is best for you based on your use patterns. It should be realized that eventually any material regardless of their imperviousness, will get permeated by chemicals. Therefore, protective gloves should be regularly checked for

	wear and tear. At the first signs of hardening and cracks, they should be changed.
Remarks	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Eye protection	: Wear face-shield and protective suit for abnormal processing problems.
Skin and body protection	: Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.
Protective measures	: Wash contaminated clothing before re-use.
Hygiene measures	: Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash face, hands and any exposed skin thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Bright oily liquid.
Colour	: Clear to yellow (This product may be dyed red for taxation purposes).
Odour	: Mild petroleum oil like.
Odour Threshold	: No data available
pH	: No data available
Pour point	: No data available
Boiling point/boiling range	: 150 - 371 °C (302 - 700 °F)
Flash point	: > 40 °C (104 °F) Method: closed cup
Auto-Ignition Temperature	: 225 °C (437 °F)
Evaporation rate	: No data available
Flammability	: Flammable in presence of open flames, sparks and heat. Vapours are heavier than air and may travel considerable distance to sources of ignition and flash back. This product can accumulate static charge and ignite.
Upper explosion limit	: 6 %(V)
Lower explosion limit	: 0.7 %(V)
Vapour pressure	: 7.5 mmHg (20 °C / 68 °F)

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Relative vapour density	: 4.5
Relative density	: 0.8 - 0.88
Solubility(ies)	
Water solubility	: insoluble
Partition coefficient: n-octanol/water	: No data available
Viscosity	
Viscosity, kinematic	: 1.3 - 4.1 cSt (40 °C / 104 °F)
Explosive properties	: Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Runoff to sewer may create fire or explosion hazard.

SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	: Hazardous polymerisation does not occur. Stable under normal conditions.
Conditions to avoid	: Extremes of temperature and direct sunlight.
Incompatible materials	: Reactive with oxidising agents and acids.
Hazardous decomposition products	: May release COx, NOx, SOx, H2S, smoke and irritating vapours when heated to decomposition.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	Eye contact Ingestion Inhalation Skin contact Skin Absorption
------------------------------------------	---------------------------------------------------------------------------

Acute toxicity

Product:

Acute oral toxicity	Remarks: No data available
Acute inhalation toxicity	Remarks: No data available
Acute dermal toxicity	Remarks: No data available

Components:

kerosine (petroleum), hydrodesulfurized:

Acute oral toxicity	LD50 (Rat): > 5,000 mg/kg
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Acute inhalation toxicity LC50 (Rat): > 5.2 mg/l
Exposure time: 4 hrs
Test atmosphere: dust/mist

Acute dermal toxicity LD50 (Rabbit): > 2,000 mg/kg

kerosine (petroleum):

Acute oral toxicity LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity LC50 (Rat): > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity LD50 (Rabbit): > 2,000 mg/kg

fuels, diesel:

Acute oral toxicity LD50 (Rat): 7,500 mg/kg

Acute dermal toxicity LD50 (Mouse): 24,500 mg/kg

fuel oil no. 2:

Acute oral toxicity LD50 (Rat): 12,000 mg/kg

Acute inhalation toxicity LC50 (Rat): 4.1 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Skin corrosion/irritation

Product:

Remarks: No data available

Serious eye damage/eye irritation

Product:

Remarks: No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

STOT - single exposure

No data available

STOT - repeated exposure

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No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Toxicity to algae : Remarks: No data available

Toxicity to bacteria : Remarks: No data available

Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Offer surplus and non-recyclable solutions to a licensed disposal company.
Waste must be classified and labelled prior to recycling or disposal.
Send to a licensed waste management company.
Dispose of as hazardous waste in compliance with local and national regulations.
Dispose of product residue in accordance with the instructions of the person responsible for waste disposal.

Contaminated packaging : Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulation

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IATA-DGR

UN/ID No. : 1202
Proper shipping name : Diesel fuel
Class : 3
Packing group : III
Labels : 3
Packing instruction (cargo aircraft) : 366

IMDG-Code

UN number : 1202
Proper shipping name : DIESEL FUEL
Class : 3
Packing group : III
Labels : 3
EmS Code : F-E, S-E
Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

49 CFR

UN/ID/NA number : 1202
Proper shipping name : Diesel fuel
Class : 3
Packing group : III
Labels : 3
ERG Code : 128
Marine pollutant : no

Special precautions for user

Not applicable

SECTION 15. REGULATORY INFORMATION

The components of this product are reported in the following inventories:

DSL On the inventory, or in compliance with the inventory
TSCA All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.
EINECS On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION

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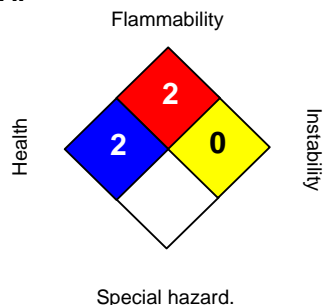
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Further information

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	2
PHYSICAL HAZARD	0
PERSONAL PROTECTION	H

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

For Copy of (M)SDS

: Internet: www.petro-canada.ca/msds
Canada-wide: telephone: 1-800-668-0220; fax: 1-800-837-1228
For Product Safety Information: 1 905-804-4752

Prepared by

: Product Safety: +1 905-804-4752

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

APPENDIX E –Ship to shore checklist and cargo pre arrival - Coastal Shipping LTD

OHF / Ship to Shore Fuel Discharge

Inventory report for Spill Response Sea Can at Agnico Eagle's Oil Handling Facility in Rankin Inlet

Date :

Inspected By :

Time :

Vessel Unloading :

Subject	Conform	Non-conform	Comments
Is the material and PPE stored in a manner that is <u>organized and accessible</u> in order to easily respond to spill?			
Are the sea cans in physically good shape? Easy to open?			
Are the sea cans identified as "Environmental Emergency Sea Can"?			
Is all the spill material in place?			
6 x Anchor sets (25 kg anchor, chain ballast, rode line and marker buoy)			
4 x Tow bridles with bullet float			
32 x 8" float x 12" skirt Optimax 2 Boom - 25' Sections			
1 x mini Max hydraulic skimmer with pump, power pack			
1 x Aluminum boat with 15 hp prop motor			
10 x 1/2" polyester yacht braid rope (600' rolls)			
5 x Drive pin anchors			
5 x slater anchors			
5 x wing anchors			
30 x sorbent boom, 5" x 4 per bag			
4 x mustang floater suit			

OHF / Ship to Shore Fuel Discharge

8 x personal floatation devices			
12 x oil resistant gloves			
12 x leather gloves			
2 x sledge hammer with fiberglass handle			
2 x spade – long handle			
2 x Fire extinguisher – 20 lb ABC with brackets			
20 x Tyvex Suit XL			
1 x Alberta standard #3 First aid kit			
4 x Storage totes for small items			
1 x quick tank (500 gallon / 1893 ltrs.)			

Comments / Recommendations

Signature :



OHF / Ship to Shore Fuel Discharge

Pre-discharge Checklist for Agnico Eagle's Oil Handling Facility in Rankin Inlet

Date :

Inspected By :

Time :

Vessel Unloading :

Pre-Discharge Check List	Conform	Non-conform	Comments
Is there two way communications between the OHF and the off-loading Vessel?			
Has a review of response material checklist been completed?			
Current Copy of OPEP and Declaration at the OHF.			
Prior to discharge, have the certification of the transfer conduits been received?			
Has there been secondary containment placed underneath each connection of Conduit?			
Is lighting in place at the transfer flange to provide illumination during any transfers taking place during the low to no light hours.			
Prior to discharge, has the Vessels' Ship/Shore checklist been reviewed and a completed copy received by Agnico Eagle?			
Prior to discharge inform H&S and Environment Departments that fuel transfer will commence.			
Has the emergency response equipment been reviewed with all personnel and contractors on shore?			



OHF / Ship to Shore Fuel Discharge

Comments / Recommendations

Signature :

APPENDIX F – The Central and Arctic Regional Response Plan (2008)

Canadian Coast Guard Central & Arctic Region



Regional Response Plan

LETTER OF PROMULGATION

The *Central & Arctic Regional Response Plan (2008)* replaces the *Central & Arctic Region Contingency Chapter (2006)* and the *Arctic Response Strategy (1999)*. This plan is a component of the *Canadian Coast Guard National Response Plan* which is the responsibility of the Director of Safety and Environmental Response Systems, Ottawa. It establishes the framework and the procedures by which Central & Arctic Region will prepare for, assess, respond to and document actions taken in response to pollution incidents in this Region.

The saving of life is of paramount consideration and the Plan is subordinate to the operational requirements of marine search and rescue.

The Plan has been reviewed by the internal partners identified in Section 3.3 in context to the services they may provide and by the external partners identified in Sections 3.4 and 3.5 to confirm their mandated response authorities.

Responsibility for the *Regional Response Plan* lies with the Assistant Commissioner Coast Guard Central & Arctic Region. The Central & Arctic Region Environmental Response branch is the custodian of the plan. The responsibility for specific sections is identified in Section 7 - Plan Maintenance and Custodians. Comments, recommendations and communications relating to the various sections are clearly identified in this section.

REVISION RECORD

[illegible]

Central & Arctic Regional Response Plan
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Section 1 - INTRODUCTION

1.1. Authority

This plan is based upon the policy and guiding principles set forth in the *National Response Plan* of the *Canadian Coast Guard National Response Strategy*.

1.2. Purpose

The *Central and Arctic Regional Response Plan* is designed as a guide to Canadian Coast Guard staff and relevant stakeholders involved in marine spill responses. It outlines the Regional application of the various roles of On-Scene Commander (OSC) (active response), Federal Monitoring Officer (FMO) (ensuring the Responsible Party fulfills their obligations), and as a Resource Agency (in assistance to other Lead Agencies).

It contains the specific information and activities that are pertinent to all spill response activities within Central & Arctic Region (C&A Region).

1.3. Area of Responsibility

For the purposes of marine pollution response Central & Arctic Region is defined geographically as:

- The contiguous waters of the Canadian Arctic (North of 60° Latitude) to the limits of the International Boundary, including the North Slope Area of the Yukon Territories, and internal waters of the Northwest Territories and the Territory of Nunavut; and
- The waterways contained within the provinces of Alberta, Saskatchewan, Manitoba, Ontario, and a western portion of Quebec commencing at the east wall of the Beauharnois Lock in the St. Lawrence River.

(see Figure 1-1 Fisheries and Oceans Central & Arctic Region)

Significant waterways include the Canadian Great Lakes and interconnecting waterways to the international Boundary with the United States, Hudson and James Bays, Lake Winnipeg, Lake Athabasca and interconnecting waterways, Great Slave Lake, Mackenzie River and the Northwest Passage in the Canadian Arctic.

There are also a number of specific geographic locations which, although not excluded from Canadian Coast Guard's mandate, require coordination between the managing authorities and this plan. These areas include the waters associated with

the various Port Authorities (Hamilton, Thunder Bay, Toronto and Windsor) and the St. Lawrence Seaway Authority (Welland Canal, St. Lawrence Locks) as defined by the *Canada Marine Act, 1998*.

Figure 1-1: Fisheries and Oceans Central & Arctic Region



1.4. Safety Policy

Safety is the first and foremost consideration in any pollution response in Central & Arctic Region. This commitment is expressed throughout this and other documents as well as in the programs relied on by the Environmental Response (ER) branch to prepare for such spills (i.e. training and exercising programs). General safety procedures and considerations to be followed by all members of the Regional Response Team are identified in Section 5.7 of this plan.

1.5. Links to the National Response Plan

The Guiding Principles and Mandate (including legislative, interdepartmental, intergovernmental and international agreements) as well as designation of Lead and Resource Agency roles are contained in the *National Response Plan Section 1 – Introduction*. The mechanism for activating the Environmental Response National Response Team is also defined in the *National Response Plan*.

1.6. Regional Response Plan Structure

The Regional Response Plan is structured to reflect the three fundamental phases of Environmental Response activities. These are:

- 1) Preparedness - through the regional application of Contingency Planning (resulting in specific response strategies), Training (state of personnel readiness), Exercising (state of system readiness) and Inventory Maintenance and Management (state of mechanical/equipment readiness).
- 2) Response Operations - identifying the mechanisms for:
 - *Initiating* (through a dedicated Duty Officer and Assessment process),
 - *Sustaining* (Operational functions as Lead or Resource Agency),
 - *Controlling* (using the Response Management System), and
 - *Finalizing* the response activity (decommissioning and reporting).
- 3) Claims, Recovery and After-action activities - for the documentation and recovery of spent resources from the polluter, their agents, national or international funding conventions.

Surrounding these fundamentals are the specifics of the Environmental Response Program in Central and Arctic Region that are too cumbersome to be included in the main text of this Response Plan. They include: Regional Agreements and Memoranda of Understanding, Regional Organization and the specific Annexes which support the program. Finally, the Response Plan includes the preliminary and supplementary matter such as Letter of Promulgation, Record of Revision and the Identification of Custodians and the Plan Maintenance process.

1.7. Linkages to other Response Plans in the Region

When a pollutant is spilled into the water, the Canada Shipping Act is not the only legislation that applies. Recognizing that being designated Lead Agency for pollution response to mystery spills and spills from vessels does not preclude other agencies from completing their mandate CCG acknowledges that the Internal and External Partners listed in Sections 3.4 and 3.5 have plans that are active within Central & Arctic Region.

1.8. Linkages to International Joint Plans

International Joint Plans and agreements affecting Central & Arctic Region include:

- Canada-United States Joint Marine Pollution Contingency Plan
- Canada-Denmark Agreement for Co-operation Relating to the Marine Environment, Annex B (Joint Marine Contingency Plan concerning Incidents resulting from Shipping Activities)
- Great Lakes Water Quality Agreement, Annex 9
- International Boundary Waters Treaty Act

The Canadian Coast Guard Environmental Response Branch also provides technical support for the Emergency Prevention, Preparedness and Response (EPPR) Working Group of the Arctic Council. The EPPR Working Group exchanges information on best practices for preventing spills, preparing to respond to spills should they occur, and practical response measures for use in the event of a spill.

The Arctic Council is an intergovernmental forum of the eight circumpolar countries (Canada, Denmark, Finland, Iceland, Norway, Sweden, the Russian Federation and the United States of America) that provides a mechanism to address the common concerns and challenges faced by the Arctic governments and the people of the Arctic.

Some work has been initiated with the Russian Federation for the development of a Joint Pollution Response Plan. To date no agreements have been signed.

Section 2 - AGREEMENTS AND MEMORANDA OF UNDERSTANDING

2.1 Overview

The Canadian Coast Guard (CCG), both Central & Arctic and National Headquarters, maintain numerous memoranda and letters of understanding and agreement between other government departments which outline shared responsibilities in pollution response. A brief description of the major agreements is listed below.

- Letter of Agreement between Canadian Coast Guard, Environmental Response Branch and Canadian Coast Guard, Operational Services and Canadian Coast Guard, Technical Services regarding the use of Environmental Response First Response Units (FRUs) by non-environmental response staff. This agreement concerns the use of FRUs at the various CCG facility sites (bases, sub-bases and search and rescue stations).
- Northwest Territories/Nunavut Spills Working Agreement. This agreement formalizes procedures whereby spill investigation and monitoring in the Northwest Territories (NT) and Nunavut (NU) can be coordinated.
- Fisheries & Oceans (DFO) and Environment Canada (EC) Letter of Agreement respecting transfer of responsibility as lead agency for mystery spills from Environment Canada (EC) to the Canadian Coast Guard/Fisheries & Oceans Canada (July 1996)
- Transport Canada (TC) and Fisheries & Oceans (DFO) Memorandum of Understanding respecting Marine Transportation Safety & Environmental Protection (May 1996). This MOU outlines the responsibilities transferred from TC to DFO in accordance with the *Public Service Rearrangement and Transfer of Duties Act*. Those pertinent to this plan include:
 - a) The responsibility for ensuring the provision of pollution clean up services
 - b) The authority to take actions to mitigate or prevent pollution from ships
- Letter of Understanding between the Canadian Coast Guard and the Hamilton Port Authority to outline the roles that the CCG and the HPA will

Central & Arctic Regional Response Plan

Section 2 – Agreements and Memoranda of Understanding

play in the event of a pollution incident which falls within the mandate of the Canadian Coast Guard.

- Letter of Understanding between the Canadian Coast Guard and the Thunder Bay Port Authority to outline the roles that the CCG and the TBPA will play in the event of a pollution incident which falls within the mandate of the Canadian Coast Guard.
- Letter of Understanding between the Canadian Coast Guard and the Toronto Port Authority to outline the roles that the CCG and the TPA will play in the event of a pollution incident which falls within the mandate of the Canadian Coast Guard.
- Letter of Understanding between the Canadian Coast Guard and the Windsor Port Authority to outline the roles that the CCG and the WPA will play in the event of a pollution incident which falls within the mandate of the Canadian Coast Guard.

Some memoranda of understanding and letters of agreement have been rendered defunct by virtue of the dissolution or reorganization of the entities that signed the original document. It is the Region's intent to assess the need for an MOU and in those cases where renewal is needed, to draft a new MOU and submit to the partner organization the request for re-entry into that agreement. For further information on these memoranda, please contact the Environmental Response Planning Section.

Section 3 - ORGANIZATION

3.1 General Application

This section describes the primary working relationships between Fisheries and Oceans (DFO), Canadian Coast Guard, Environmental Response branch (CCG/ER) and the various internal and external partners, clients and external resources.

Internal partners include: Other DFO sectors, directorates and branches, and other federal departments which provide direct assistance or have specific mandates which directly affect response activities.

External partners include those entities that share the burden of pollution response for their specific area of responsibility. These agencies include the provincial and territorial government ministries with the generic mandate of pollution response.

Clients include those entities that are specifically identified by the *Canada Shipping Act (CSA)* and have direct involvement in the response regime; they include Oil Handling Facilities (OHF), Legislated Ships and Non-legislated Ships.

External resources are those resources outside of the government that the Canadian Coast Guard may engage while conducting spill response activities. These include the Response Organizations (RO) certified by Transport Canada and other independent contractors which may perform more specific functions.

3.2 Fisheries and Oceans, Canadian Coast Guard - Environmental Response Branch (CCG/ER)

The Assistant Commissioner, Canadian Coast Guard through the Maritime Services Directorate and the Superintendent of Environmental Response (ER) directs the Regional Environmental Response Team. This team represents one facet of the overall crisis management structure within Central and Arctic Region and performs the function of the Lead Response Agency for pollution incidents as defined in the *National Response Plan – Section 1* of the *Canadian Coast Guard National Response Strategy*. The branch consists of approximately seventeen (17) full time employees (FTEs).

Internally, the Environmental Response Branch is made up of five (5) distinct but integrated functions:

- 1) *Direction and Administration* - providing the overall guidance, management and liaison with Headquarters. The Superintendent holds the responsibility for escalating a response and/or dedicating resources.
- 2) *Planning* - providing the design and management of plans and procedures to facilitate the preparedness posture of the Region (responsible for developing and maintaining intradepartmental, interdepartmental, client and regime stakeholder relationships).

- 3) *Operations and Inventory Maintenance & Management* - provide the management and maintenance of equipment to ensure the operational response readiness of the Region.
- 4) *Training* - provides the coordination and delivery of educational materials, to internal as well as external partners and clients, in support of the overall preparedness posture of the Region.
- 5) *Exercising* - provides the management and coordination of internal and external partners and clients to validate, practice and reinforce all aspects of the Response readiness of the Region.

In addition to these core functions, each staff member is required to actively participate in the operational aspects of the response regime based upon their skill and ability levels. This includes assuming various roles within the Response Management Structure acting as Duty Officer (DO) and supporting the overall emergency preparedness structure within the Region (not necessarily related exclusively to oil spills or pollution).

In the context of this Plan, the Environmental Response Branch is tasked to:

- Fulfill the Canadian Coast Guard's obligations as Lead Agency in an OSC or FMO posture in responding to marine pollution incidents from ships in waters of Canadian interest as well as from unknown sources.
- Act as a Resource Agency in support of a response led by another agency when requested.
- Staff a Duty Officer position on a 24/7 basis which, together with other agency representatives, will assess or direct the assessment of spill reports.
- Ensure that an appropriate response to pollution incidents is initiated on a timely basis.
- Provide initial response capabilities throughout the region.
- Monitor response and clean-up priorities when polluter has accepted responsibility.
- Ensure international commitments in spill preparedness and response are fulfilled.
- Provide a pollution response capability for lightering, salvage and offshore recovery operations.
- Provide Regional and HQ briefings on status of emergency operations.
- Evaluate, acquire and maintain specialized marine emergency countermeasures equipment and develop deployment techniques.
- Develop, distribute and maintain the *Central and Arctic Regional Response Plan* of the *Canadian Coast Guard National Response Strategy* (including area annexes) on behalf of Fisheries and Oceans.
- Review and comment on other government as well as industry pollution response plans upon request.
- Provide pollution response related training to Canadian Coast Guard and civilian personnel.

- Conduct spill response exercises according to the Canadian Coast Guard National Exercise Program (NEP) standards.
- Provide detailed explanations of response operations and policies to representatives of the media, interest groups, industry, police and Provincial and Municipal governments.
- Provide a centre of expertise for pollution concerns.
- Develop and foster a good working relationship with other authorities, shipping and oil/chemical handling communities.
- Working with Environmental Response Headquarters and the Chemical Industry to develop, implement and maintain a corresponding and complimentary regional capability for spills of hazardous and noxious substances other than oil.

3.3 Internal Partners – Fisheries and Oceans

Other branches and directorates within Fisheries and Oceans which directly and in a continuous active way support preparedness and response activities include:

Marine Traffic and Communications Branch (MTCS) – CCG/Marine Programs Directorate

Marine Traffic and Communications Services operates a marine VHF/MF/HF communications system (depending on location) primarily for the provision of marine safety information, distress coordination and marine traffic regulation. MCTS will support Environmental Response (ER) activities by:

- Establishment of Movement Restriction Areas (MRA's) or exclusion zones as directed by the Federal Monitoring Officer (FMO) or On Scene Commander (OSC).
- Providing communications/radio equipment operators in support of off-site ER operations.
- Dissemination of marine information and issuing marine Notices to Shipping (NOTSHIPS).
- Providing vessel tombstone information including, but not limited to, vessel name, call sign, nationality, tonnage, dangerous cargo type and quantity.

Regional Operations Centre (ROC) and Fleet Resources – CCG/Operational Services Directorate

Regional Operations Centre

The ROC provides notification to the Environmental Response Duty Officer (ERDO) when notified of a spill or an occurrence which may result in a spill. Upon receiving information regarding a spill, the ROC confirms the report using reliable resources and agencies. When the incident has been confirmed the Operation Centre begins the alerting and notification procedure. A schedule of ERDOs, approved by the Superintendent Environmental Response Canadian Coast Guard, will be maintained by the ER Regional Emergency Operations Officer (REOO) and forwarded to ROC for distribution.

The Regional Operations Centre will support the Environmental Response Branch during a marine pollution incident by:

- Maintaining up to date contact lists for Canadian Coast Guard and other government agencies for use as incidents progress.
- Coordinating the allocation of CCG resources as required by the FMO or the OSC to respond to a marine pollution incident.
- Provide communications support (when necessary).

Fleet Resources

Fleet Resources may be called upon to provide a host of support and/or lead services depending upon the type and severity of the situation and limitations or constraints of the vessel. Commanding Officers maintain full responsibility for the operation and safety of their vessel and personnel and therefore, will/may:

- Be called upon to be interim On-scene Commander.
- Be the principal point of contact aboard ship for the Environmental Response Duty Officer or On Scene Commander.
- Investigate spill reports for the purpose of confirmation.
- Provide surveillance and monitoring of third party (or pollutant) as required.
- Initiate early spill response; containment, boom or sorbent material deployment, clean up and recovery procedures.
- Provide site safety, (i.e. fire fighting, first aid and crowd control).

Fleet does maintain their own limited capabilities to respond to their needs as required.

Canadian Coast Guard Bases

In preparation for and during a pollution incident, CCG bases may also provide resources for response. These resources are generally within the scope of normal base activities and include:

- Small vessel use
- Base facilities (boardrooms, workshops)
- Helicopter landing pads
- Boat launch and docking slips
- Staging areas

Safety, Security and Emergency Services Branch – DFO Corporate Services

For large spills of a significant nature the Regional Manager of Safety, Security & Emergency Services may provide the following:

- Advice and recommendations to the On Scene Commander on issues of site and employee safety and the application of departmental security policy measures.
- General occupational health & safety and security advice to the On-Scene Commander/Deputy On-Scene Commander as per the departmental Loss Control Manual.

- A Health & Safety Officer to perform the functions of the Health & Safety Officer described in the Response Management System User Guide. This person will report directly to the OSC or FMO throughout the duration of the response.

On occasions when the Regional Manager of Safety & Security (or delegate) is not available, or when spills are of a minor nature, the On-Scene Commander shall appoint a member of the response team to fulfill the general duties required.

Communications Branch – DFO Communications

Communications team manages the media (external) handling inquiries from print, radio, television and internet news organizations through the application of *Fisheries & Oceans Crisis Communications Plan*. Communications branch coordinates all aspects of information being released to ensure the public is getting the most relevant, accurate information as soon as practicable.

Legal Services

The DFO Legal Services in CCG Headquarters section will provide legal advice and guidance in the event of a marine pollution incident where CCG may or has been engaged. This especially includes advice on the issuance of Letters of Undertaking (LOUs) and in situations where Canadian Coast Guard may have to take command and control of an incident away from the Polluter.

Other DFO Resources

Indirectly, but just as significant in the event of a spill, is the availability of other DFO resources. This includes any and all appropriate functions including, but not limited to the following:

- Trenton Joint Rescue Coordination Centre – CCG, Maritime Services Directorate, Search and Rescue Branch (SAR)
- Finance and Administration – Human Resources and Corporate Services Directorate
- Human Resources - Human Resources and Corporate Services Directorate
- Facilities – Real Property
- Other Technical Resources – CCG, Integrated Technical Services Directorate
- Fish Habitat Branch – Habitat Fisheries and Oceans Management

3.4 Internal Partners – Other Government Departments

Other federal departments which provide direct assistance or have specific mandates which directly affect response activities include:

Environment Canada (EC)

There are two (3) Environment Canada regions located within Central & Arctic region. They are Ontario, Prairie and Northern and Pacific and Yukon Regions.

The Environmental Emergencies Section provides:

- In Ontario, the Co-chair (with the Ontario Ministry of the Environment (MOE)) of the Regional Environmental Emergencies Team (REET).
- In the Arctic (consisting of the three Territories), the Co-chair (with the relevant Territorial Government, Department of Environment) for the Arctic Regional Environmental Emergencies Team.
- Coordination of the Shoreline Cleanup and Assessment Teams (SCAT).
- Advice concerning environmental impacts associated with vessel source spills, resource sensitivity and prioritization, environmental forecasting, spill and cleanup monitoring and clean up techniques and priorities
- Sampling assistance, identification and characterization of materials

The REET serves as a mechanism for the provision of consolidated, coordinated and comprehensive environmental information and advice concerning the fate and effects of hazardous and noxious substances, spill trajectories, resources and shoreline protection strategies, clean up priorities, physical and chemical counter measures, remedial endpoints, damage assessment, and the management of hazardous wastes generated during a spill and other matters which arise while planning and responding to emergency events which affect or risk environmental quality. In the planning mode REET members meet to improve contingency plans, resolve regional preparedness issues and exchange new scientific and response ideas.

In Ontario Region, Environment Canada has divided the province into eighteen (18) REET areas and plans to hold one (1) REET meeting per area per year, consolidating some areas where possible and maintaining annual meetings in the higher risk areas (Windsor, Sarnia, Sault Ste. Marie).

Two of three primary Arctic REET (AREET) areas are in Prairie and Northern Region: the Northwest Territories and Nunavut Territory. There is no REET established in Alberta, Saskatchewan and Manitoba.

The Meteorological Service of Canada (part of EC and REET) provides:

- Meteorological forecasting

The Canadian Wildlife Service (part of EC and REET) provides

- Advice on wildlife protection, rescue and rehabilitation
- Permits for wildlife hazing and capture

Transport Canada (TC)

The Environmental Response Systems Division in Ottawa is responsible for Canada's Marine Oil Spill Preparedness and Response Regime. It:

- works with other federal agencies and departments, such as Fisheries and Oceans Canada, the Canadian Coast Guard and Environment Canada to establish guidelines and regulatory framework for preparedness and response to oil spills and spills of noxious and hazardous substances into Canada's marine environment.

- Manages the National Aerial Surveillance Program

There are two Transport Canada regions located within Central & Arctic region. They are Ontario and Prairie and Northern regions.

The Aircraft Services Directorate provides:

- Aerial surveillance as part of the Prevention mandate within Transport Canada, and can provide aerial spill tracking, recording, and personnel transport.

The Marine Safety Branch provides:

- Technical advice and recommendations to the On-Scene Commander or the Ship Owner regarding, but not limited to, lightering, damage assessment and salvage.

Note: The MOU between Transport Canada and Fisheries & Oceans Respecting Marine Transportation Safety & Environmental Protection (May 1996) Annex D – E-5 states that “Transport Canada and Fisheries and Oceans will jointly approve salvage operations, emergency lightering or discharge of cargo.” After discussing this clause with two senior surveyors, they both agree – Marine Safety does not approve salvage plans. Marine Safety advises and recommends only.

- Restriction of transit or movement of a vessel following a damage assessment.
- Spill investigation and enforcement of the various aspects of the pollution prevention conventions and legislation in Canada
- Regional planning, in conjunction with EC and CCG, for the selection of Places of Refuge. *Note:* in the Great Lakes and connecting channels, selection of a place of refuge will be determined in conjunction with the USCG and USEPA.
- Monitoring of the spill preparedness activities of Oil Handling Facilities (OHFs) and certified Response Organizations (ROs) through a review and audit process.

Indian and Northern Affairs Canada (INAC)

Canadian Coast Guard (CCG) works most closely with INAC in Nunavut (NU) and the Northwest Territories (NT). INAC has lead responsibilities in the Arctic for spills on water which do not originate at federal facilities, exploration facilities or from ships and barges. INAC also, by letter of agreement, will investigate ship-source spills on behalf of CCG. INAC is also a member of the Beaufort Sea Emergency Preparedness Working Group, along with CCG/DFO, EC, TC and other appropriate agencies.

National Energy Board (NEB)

Based in Calgary, Alberta, the National Energy Board is an independent Agency that reports to parliament through the Ministry of Natural Resources. The NEB is the

Lead Agency for spills that occur at offshore and nearshore oil and gas exploration and production facilities.

In the event of a marine pollution incident where CCG is requested for assistance as a resource agency, CCG is available to provide pollution response expertise as indicated under Section 7.2 of the *National Response Plan* as it relates to NEB.

Public Safety Canada

Public Safety Canada is the federal coordinating department responsible for engaging relevant federal departments in an integrated Government of Canada response to an emergency.

For emergencies requiring an integrated Government of Canada response, federal support is based on a regional “single- window” concept. This concept is intended to facilitate regional interdepartmental and intergovernmental coordination, while not unduly restricting operations. Coordination includes sharing of pertinent information in order to maintain situational awareness.

The Government Operations Centre (GOC) is a 24/7 facility where an integrated Government of Canada response is managed. It is the focal point of information management flow and provides strategic-level activities. It’s permanent staff includes watch officers, duty officers specializing in national communications as well as a geomatics team to map incidents.

Indirect support from other federal departments in the form of advice or resources also comes from: Heritage Canada (Parks Service) in the form of support to REET, National Defense regarding assistance and resources, RCMP with respect to investigations and those sections or departments specifically identified in the various Memorandums of Understanding (MOU) as outlined in Section 2 of this chapter.

3.5 External Partners - Provincial and Territorial Ministries and Departments

In general, liaison with provincial and territorial concerns is facilitated through REET (Regional Environmental Emergencies Team), which is chaired by Environment Canada (EC) or, in the case of the Province of Ontario, is co-chaired by Environment Canada and the Ontario Ministry of the Environment (MOE). The following agencies have the primary mandate for marine or freshwater pollution response in their province or territory of jurisdiction:

Territory or Province	Department
Northwest Territories	Environment and Natural Resources
Nunavut	Department of Environment
Alberta	Alberta Environment
Saskatchewan	Saskatchewan Environment

Central & Arctic Regional Response Plan

Section 3 - Organization

Manitoba	Manitoba Conservation
Ontario	Ontario Ministry of the Environment

In emergency situations conflicts sometimes arise with respect to legal and administrative jurisdiction and application of standards and common practices. To facilitate these issues the various Ministries related to emergency measures are usually contacted to provide coordination and clarify where necessary the concerns. These include:

- Government of Nunavut – Department of Community of Government Services, Emergency Management Division
- Government of the Northwest Territories – Department of Municipal and Community Affairs – Emergency Services Division
- Government of the Yukon Territories – Department of Community Services, Emergency Measures Organization
- Government of Ontario - Ministry of the Community Safety & Correctional Service, Emergency Measures Ontario
- Government of Manitoba –Manitoba Emergency Measures Organization
- Government of Saskatchewan – Resource Management and Corrections & Public Safety, Saskatchewan Emergency Measures Organization
- Government of Alberta – Ministry of Municipal Affairs, Public Safety Division, Emergency Management Alberta

Provincial Governments can provide consolidated access to local, municipal and provincial resources.

Central & Arctic Region recognizes that First Nations have a vested interest in response operations that may occur in their territory and will ensure that they are represented on the REET or have access to the Federal Monitoring Officer or On Scene Commander through the CCG Liaison Officer.

3.6 Clients

With respect to ship-source pollution incidents, there are three major groups the Canadian Coast Guard will be directly engaged with. These are Oil Handling Facilities, Legislated Ships and Ships as defined in *Part XV* of the *Canada Shipping Act*.

Oil Handling Facilities (OHF)

Operators of facilities that transfer oil to or from oil tankers over 150 gross registered tonnes or other vessels over 400 gross registered tonnes are required by the Canada Shipping Act (2001) to:

- Have an Oil Pollution Emergency Plan (OPEP) on site.
- Have a declaration conforming to the regulations on site.
- Take reasonable measures to implement their required oil pollution emergency plan in the event of an oil pollution incident.

- Have on site the resources required to contain a spill of oil equal to the facility's rated capability within one hour.
- Begin recovery/cleanup operations of oil equal to the facility's rated capability within 6 hours.
- Have an arrangement with a certified Response Organization (RO) that permits the handling of spills beyond the rated capabilities of the Oil Handling Facility.¹

Legislated Ships

In Canadian waters, ships over 400 gross registered tonnes and oil tankers over 150 gross registered tonnes are required to have a Shipboard Oil Pollution Emergency Plan (SOPEP) and an arrangement with a certified Response Organization (RO) to respond to an oil pollution incident of an amount equivalent to the maximum amount of product that the vessel can carry as fuel and/or as cargo up to a maximum of 10,000 tonnes.¹

Other ships as defined by Part XV of the Canada Shipping Act (CSA)

Any ship that is less than 400 GRT or any tanker less than 150 GRT is still covered by the *Canada Shipping Act (2001)* in that it must report the potential or actual pollution incident to a Pollution Response Officer, or in the case of an incident in Canadian Arctic Waters as defined by the Arctic Waters Pollution Prevention Act to a Pollution Prevention Officer. The ship must take immediate steps to mitigate or remedy the situation. These ships are not required to have a Shipboard Oil Pollution Emergency Plan nor an arrangement with a certified Response Organization.

3.7 External Resources

There are two main categories of external resources that the Canadian Coast Guard (CCG) will engage. These are the Response Organizations certified by Transport Canada under the *Canada Shipping Act (2001)* and other contractors.

Response Organizations (ROs)

Response Organizations are privately established pollution response companies certified by Transport Canada. These companies hold a certificate of designation to handle oil spills of up to 10,000 tonnes (T). Response Organizations can provide the polluter or any lead agency with the resources, trained personnel and operational management structure to deal with a marine oil pollution incident within its identified Geographical Area of Response (GAR).

The Eastern Canada Response Corporation (ECRC) is the only certified response organization in Central & Arctic Region. The company is certified to ten thousand tonnes (10 000T) and two of its three regions cover Central & Arctic Region.

¹ There is no requirement for an Oil Handling Facility nor a Legislated Ship to have an arrangement with a Response Organization certified by Transport Canada in Canadian waters north of 60° North Latitude

- 1) ECRC Great Lakes Region is managed from the Response Centre in Corunna, Ontario. Its area of coverage includes all waters
 - south of 60 degrees north in the provinces of Alberta, Saskatchewan, Manitoba and Ontario to that portion of the St. Lawrence River in the Province of Ontario
 - to a line drawn between Butternut Bay (Latitude 44 31' 12" north and Longitude 75 46' 54" west) on the Canadian side
 - to Oak Point (Latitude 44 30' 48" north and Longitude 75 45' 20" west) on the US side of the St. Lawrence River.

- 2) ECRC Quebec Region (also known as Société d'Intervention Maritime Est du Canada - SIMEC) is managed from the Response Centre in Quebec City, Quebec and has staffed Response Centres in Verchères, Quebec and in Sept-Îles, Quebec. Their coverage includes:
 - James Bay, Ungava Bay and in Hudson Bay south of the sixtieth parallel North and that portion of the St. Lawrence River in the Province of Ontario
 - to a line drawn between Butternut Bay (Latitude 44 31' 12" North and Longitude 75 46' 54" West) on the Canadian side to Oak Point (Latitude 44 30' 48" north and Longitude 75 45' 20" West) on the US side of the St. Lawrence River.

There are no certified response organizations established north of 60° N latitude.

Although resources from the Response Organizations in the south may be made available for use north of 60°, they must obtain the necessary approvals to move equipment from their designated area of response.

Contractors

Private sector contractors may be engaged by the CCG as required. All standard government contracting rules apply.

Section 4 – PREPAREDNESS

4.1 Overview

Oil spill preparedness is defined by the advanced planning used to create systems to effectively and efficiently combat the range of spills likely to be encountered.

In Central and Arctic Region, preparedness involves:

- The development of regional procedures to be followed in the event of an incident, coordinated by the Planning section.
- The implementation, training and maintenance of the Response Management System (RMS) to manage and combat the incident.
- The identification of priorities, development of strategies, logistics and tactics necessary to fulfill those priorities, lead by the Planning section.
- The liaising with internal and external partners, clients and resources that may be involved in pollution response activities, lead by the Planning section.
- The training and continued maintenance and upgrading of skills, coordinated through the Training specialist.
- The exercising and quality assurance activities required to continuously reinforce the training and contingency planning activities, facilitated through the Exercise specialist.
- The asset management including the acquisition, lifecycle maintenance, operational readiness and storage of equipment lead by the Operations section and Inventory specialist.
- The integration of other Canadian Coast Guard Assets and Human Resources, when necessary, through the Training and Exercising processes.

The Memorandum of Understanding (MOU) between the Director General/Maritime Services (MS) and the Director General/Integrated Technical Support (ITS) of the Canadian Coast Guard (March 2004) specifies that the ITS Directorate will be the single CCG focus for the life cycle management of all CCG physical assets and for the development of all technical solutions. It is unknown when ITS will assume the services of design, procurement, in-service support and disposal of all equipment and systems required to satisfy ER's mandate. In the interim, ER will remain the focal point.

4.2 Response Management System (RMS)

The Canadian Coast Guard uses the Response Management System (RMS) as its emergency management system. It is based on, and operates under the same principles as the Incident Command System (ICS) which was developed in the U.S. to coordinate multi-agency responses to large forest fires. The system was adjusted to reflect the current marine oil spill response regime and Canadian law. The Canadian Coast Guard does not implement the ICS principle of unified command, but will participate in any command structure used by the Polluter or Other Lead Agency.

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The RMS uses a “management by objectives” approach. It outlines the roles and responsibilities of individual positions, identifies the reporting structure, establishes a common set of terminology and uses standardized forms and paperwork. The central document in the RMS process is the Incident Action Plan, which documents the existing conditions and outlines objectives and strategies for recovery and response.

The system structure is designed to expand or contract to best fit the specific circumstances of the incident. Not all positions within the system will be staffed for every incident; in those cases the supervising position shall be responsible for all subordinate tasks/roles. Regional staff members have been designated as members of the Regional Response Team and may be called upon to fill specified roles in this management system (see Figure 4.1 for a fully expanded system design).

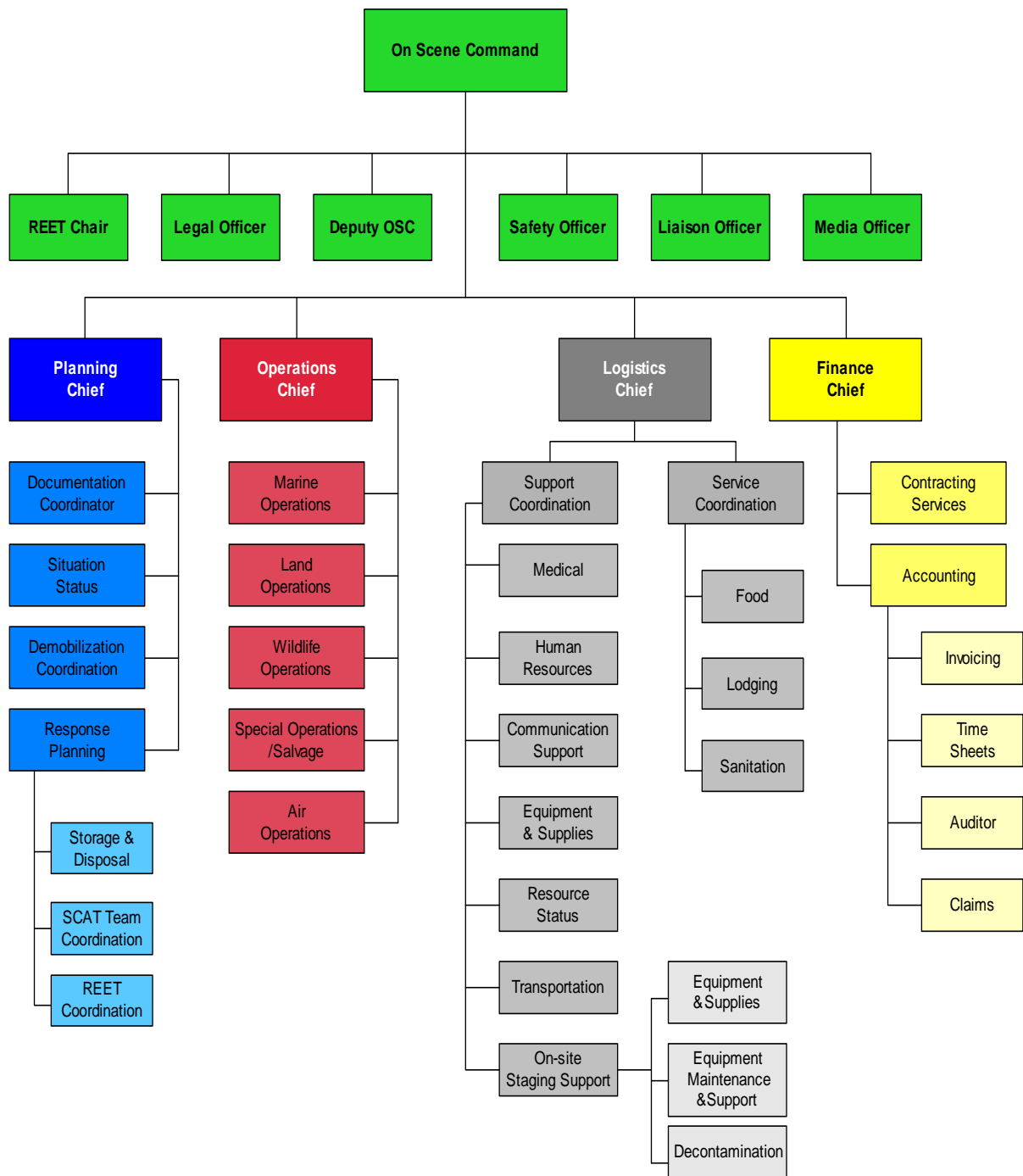
The system also contains management tools that can be used by the On Scene Commander and response personnel to better manage the system and the spill incident. These tools include a field operations guidebook, forms, reports, established meeting schedules and agendas. The RMS will also be used by the Federal Monitoring Officer and their Incident Monitoring Team while monitoring the Polluter’s response to an incident.

The detailed RMS process is contained in a separate document referenced in Section 9.1 of this plan (Response Management Systems User’s Guide, Version 3.0 (May 2006)).

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Figure 4.1 - CCG RMS Command Structure



4.3 Planning

Area Plans

To facilitate an effective and efficient response, Canadian Coast Guard administers 16 area plans as an annex to the Central & Arctic Regional Response Plan. They are Keewatin, Baffin, Beaufort Sea & Amundsen Gulf, Great Slave Lake, Hudson & James Bay, Kitikmeot, Mackenzie River & Delta, Inland Waters S of 60, Lake Erie, Lake Huron, Lake of the Woods, Lake Ontario, Lake Superior, St. Lawrence, St. Mary's and St. Clair & Detroit areas. These plans incorporate detailed response information for specific manageable geographic areas or response communities. The normal operating period for an area plan is the first 12-24 hours of a spill response.

They are developed and maintained as follows:

1) Risk Analysis

The risk analysis determines which communities or areas are most likely to be endangered by a potential oil spill and why, their associated environmental sensitivities, plus the typical type of spill that could be expected. When considering the environmental sensitivities, the focus is on what is most likely to be impacted and to consider as many factors as are applicable. A single factor discovered in the risk assessment is just one of many layers in the decision to make a site a priority.

2) Priority Identification/Verification

Current priorities are discussed with members of the Regional Environmental Emergencies Team (REET) at planning meetings. It provides the opportunity for additions, deletions or modifications. Where there are no REET meetings held, community consultations are organized by the Planning section.

3) Strategy and Tactics Development

Canadian Coast Guard determines RMS objectives for the agreed upon priorities. Strategies are designed, that name the activities relative to those objectives. Those activities may be response actions to be implemented, or may be the type of resources that could be affected by the spill. For area plan development, tactics provide the detail for implementing the selected strategies. Tactics then specify the resources, both human and equipment, to facilitate, to install or to maintain the strategy.

4) Updating

Area plans are reviewed and updated annually.

Regional Procedure Development

Regional procedures for notification, verification, activation and cost recovery of a response are all described in the *Central & Arctic Regional Response Plan* of the *Canadian Coast Guard National Response Plan*. Supporting documentation in the

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form of Standard Operating Procedures and supplementary plans (e.g. Health & Safety Plan and Media Relations Plan) are not included in the Regional Response Plan but are referenced in Section 9.

Liaison with External and Internal Partners, Clients and Resources

To ensure that all partners, clients and resources are aware of the Canadian Coast Guard's mandate and responsibilities as they pertain to pollution preparedness and response, the Environmental Response Planning Section takes the initiative to:

- Work with Internal Partners within Fisheries & Oceans to communicate the branch's needs in the event of a pollution incident.
Exception: Coordination of the Duty Officer (DO) function between Environmental Response (ER) and the Regional Operations Centre (ROC) is coordinated by the Regional Emergency Operations Officer (REOO).
- Work with other government departments that have a mandate for pollution response within their jurisdiction to communicate the role that Canadian Coast Guard plays in marine and freshwater pollution incidents and to share what resources Canadian Coast Guard maintains for pollution response activities and the mechanism to access these resources in the event that another Lead Agency may require them for a non-CCG mandated spill or other type of emergency.
- Liaise with potential clients (oil handling facilities, shipping companies and other operators) so that CCG expectations in the event of an incident are understood.
- Provide copies of area plans to CCG vessels that are relevant to their area of operations. CCG ER will brief Operations at the pre and post season conferences on any changes to the plans and/or to the captain and/or crew's responsibilities.
- Maintain a network of contractors that can provide services to Canadian Coast Guard in the event of a pollution incident that exceeds the resource capability of the region.
- Upon request of the Regional Advisory Councils (RACs) or Secretariat (Transport Canada) on Marine Oil Spill Response, provide information on Central & Arctic Region's preparedness and spill response activities.

Arctic Community Emergency Plans

The Canadian Coast Guard is committed to assisting Arctic communities in the development of the marine pollution component of their Community Emergency Plans. This commitment was made in 1999 when the CCG Arctic Response Strategy (ARS) was published. The Arctic Response Strategy has since been re-assessed and viable components have been incorporated into the text of this Plan.

4.4 Training Program and Curriculum

Introduction

The Training Curriculum of the Environmental Response Branch is focused on providing the necessary skills and knowledge for responders to function effectively during a spill response operation. As the competencies required for an effective spill response are described and organized within the Response Management System (RMS), so too can the training curriculum be described in the context of RMS.

With RMS as the framework for spill response, all response team members will be trained in theory and application of RMS. The level of training complexity will vary by level of individual responsibility, but all members will have fundamental knowledge of the structure and processes that drive the RMS.

In addition to the training curriculum described in this section, it is understood that there are competencies and certifications required that are not specific to ER or spill response. These would include driver's licenses, radio operator's licenses, and familiarity with basic electronic equipment such as phones, fax machines, cell phones and laptop computers.

Training Curriculum

Command Staff

During a spill response operation, the command staff will vary depending on the size and complexity of the spill.

On a smaller spill, senior ER staff members may be appointed to command positions with few subordinate or supporting positions.

On larger scale spills, the OSC may be the Director of Maritime Services, or Assistant Commissioner Canadian Coast Guard, with multiple support positions from ER staff, CG fleet, base personnel and contractors.

To adequately prepare personnel for the management functions of spill response, the following curriculum has been identified:

On Scene Command Course (OSC)

This course trains participants in all aspects of spill response including planning, implementation, and supervision. Other topics include legislation, legal issues, financial responsibilities, and media relations. Prerequisites include BOSRC, MSROC, PPO designation, media relations and management training.

Response Management System Course (RMS)

The current RMS curriculum is an introductory two-day course on the system and its user's guide. It is anticipated that future development will include multiple levels of training which will include organizational structure and

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responsibilities, as well as in-depth requirements of each position within this emergency management structure.

Federal Monitoring Course (FMO) - Proposed

Subject to national development, this course will augment the On Scene Command Course to provide those persons designated as Canadian Coast Guard Federal Monitoring Officers the necessary skills and knowledge to perform FMO duties.

Operations Section

During a spill response operation, the operations section of the RMS may be populated by regional ER staff, CCG fleet officers and crew, CCG/DFO base personnel or contractors. The resident knowledge of this group will vary, and a comprehensive ER training program exists to train responders in spill response operations. Training for members of the CCG Regional Response Team (RRT) personnel is offered in the following three areas:

- (a) Safety Training
- (b) Operational Training
- (c) Specialty Training

(a) Safety Training

Health and Safety training is required to ensure compliance with federal and provincial legislation with the ultimate goal of ensuring the health and safety of response personnel. Additional video and printed reference material is available through the Canadian Coast Guard ER Training Officer.

Site Safety Course

The Site Safety Course is designed for response personnel prior to commencing work on a response site. Topics include employer and employee responsibilities, classification and hazards of petroleum products, and the safety practices and considerations associated with both water-based and shore-based operations. Site safety training is mandatory for Regional Response Team members and all volunteers or short time workers who may be employed during a response.

Workplace Hazardous Materials Information System (WHMIS)

This 3-hour course is provided to Canadian Coast Guard employees to ensure compliance with appropriate worker safety legislation. It was developed to ensure workers have the necessary information to work safely with hazardous materials in their workplace.

First Aid/CPR

This 16 hour course provides the participants with the skills and knowledge to successfully obtain the St. John Ambulance Standard First Aid Certificate. The primary focus of this 14-hour course is to provide adequate knowledge

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and level of skill to persons in positions of responsibility to provide for persons suffering from respiratory and circulatory arrest. Preventative measures are discussed.

Small Non-Pleasure Vessel Basic Safety Course - MED A3

The 8-hour MED A3 course is *required by regulation* for crewmembers of small non-pleasure vessels of not more than 150 GT operating not more than 20 miles offshore. Topics include marine hazards and emergencies, marine firefighting, lifesaving appliances and abandonment and survival and rescue skills.

Transportation of Dangerous Goods (TDG)

This 6-hour course provides personnel with the responsibility for the transportation of dangerous goods to be aware of and comply with safety measures and appropriate legislation concerning TDG.

(b) Operational Training

There are various levels of oil spill response courses designed for response team members, ships crews and other responders who may be expected to assist with marine oil spill response. Operational training related to the assessment and response to petroleum spills is delivered by ER while training for response to hazardous and noxious materials spills is obtained outside of the Branch.

First Responder Oil Spill Training (FROST)

This 1 day course is designed specifically for CCG personnel in Central & Arctic Region who are designated custodians of First Response Units (FRUs), and may be tasked with deployment of the pollution countermeasures equipment. It has also been adapted for use in communities north of 60° where Arctic Community packs function as first response units.

It teaches First Responders to:

- assess an oil spill according to its extent, possible source and likely behavior
- deploy boom for containment and protection purposes and in support of response activities
- work safely at the spill site

Basic Oil Spill Response Course (BOSRC)

This 20 hour course instructs First Responders how to:

- assess an oil spill according to its extent, possible source and likely behavior
- deploy boom for containment and protection purposes and in support of response activities
- operate oil recovery equipment
- undertake basic shoreline cleanup operations
- work safely at the spill site

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Marine Spill Response Operations Course (MSROC)

This 40-hour course will enable trained and experienced personnel to coordinate and supervise the response operations of a marine oil spill. It is intended to train individuals to be On Scene Commander (OSC) for small (tier 1) spills, or operations section chief on larger spills. Topics include legislative framework, safety, equipment suites and strategies, media relations, RMS, shoreline assessment and cleanup techniques, and disposal. Prerequisites include BOSRC, a Radio Operator License and current or future deployment to a spill response team.

Environmental Response Duty Officer (ERDO) Training

This 15 hour course is a prerequisite for duty officers for the ER branch and the regional operations centre. It introduces the participant to CCG mandate, lead agency responsibilities and introductory spill assessment techniques. It also integrates delivery of training on the Marine Pollution Incident Reporting System (MPIRS), the database used to capture spill report and response information.

Pollution Response Officer (PRO) Training

This three day course is currently provided by the Environmental Response Branch of the Canadian Coast Guard and is required training for all Environmental Response personnel. Participants who successfully complete this course earn the designation of Pollution Response Officer under Part 8 of the Canada Shipping Act (2001). This course examines the powers of a PRO, specific procedures related to vessel directions and detentions and the legal framework and implications surrounding the execution of those powers. Course participants also learn sampling procedures and gain an understanding of the role of other government agencies involved in a marine pollution incident.

Pollution Prevention Officer (PPO) Training

This 40 hour course is currently provided by the Marine Safety Branch of Transport Canada. It is a prerequisite for any officer of the Canadian Coast Guard to be delegated Pollution Prevention Officer (PPO) powers under the *Arctic Waters Pollution Prevention Act*. Participants learn the existing pollution prevention and response regime, the powers of a PPO and the specific tasks of prevention, control, investigation and prosecution.

Small Vessel Operator Proficiency

This 21-hour course meets the training needs of the small vessel master. This course is required by regulation (for vessels less than 5GT on sheltered and near coastal voyages) and teaches participants to effectively manage safety of those on board, protect the vessel from damage and protect the marine environment.

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Basic Barge Operator Training

This course was developed and is delivered by regional ER staff. Through both classroom and practical sessions, the course introduces participants to safe boating practices and procedures, rules of the road, collision regulations, load plans for pollution response vessels, safe deployment of oil spill response equipment and basic trailer towing and maneuvering.

Single Side Sweep System

The single side sweep is an equipment suite designed to allow one vessel to perform oil containment and recovery, and allow for temporary storage. This two day training session is provided to some ER staff and crews of Canadian Coast Guard vessels that can support this equipment. This training typically is conducted with crews who have previously completed BOSRC.

HAZMAT Awareness

This 6-hour course is intended for First Responders on the scene of a hazardous materials incident and shows how to assess the incident. Topics include; First Responder's role and responsibilities, scene safety, recognizing and identifying hazardous materials, incident management, and sources of assistance.

HAZMAT Technicians Level

This 40-hour course is designed for responders to releases or potential releases of hazardous substances. The focus is on recognizing and evaluating a hazardous materials incident, organizing the response team, protecting response personnel, identifying and using response resources, implementing basic control measures, decision-making, and protecting the public and environment. Emphasis is on hands-on use of equipment practically applying lecture information through exercises. Participants will wear fully encapsulating suits.

Prerequisite: Hazmat Awareness.

(c) Specialty Training

Specialty training includes training that only select members of the Regional Response Team (RRT) will have to apply.

Shoreline Clean up and Assessment (SCAT)

This 24-hour course covers how oil impacts the shoreline. Specific topics include shoreline types and effects of oil, wind, waves and ice on shorelines. Shoreline protection and cleanup methods are described in depth. Field exercises are conducted as part of the training.

Media Training

This 16-hour course is designed to provide participants with the skills and knowledge to communicate effectively and proficiently with various forms of media. Topics include; developing and disseminating incident information to

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news media, incident personnel, other appropriate agencies and organizations.

Communications System Training

This 8 hours hands-on course provides participants with the knowledge and skills to provide communications in support of a spill response. Topics include; mobile telephone, fax, and intercom set up, preparing communication plans, and internal/external spill response communications.

Wildlife Rehabilitation

The capture and treatment of oiled wildlife is typically assigned to the trained experts at Canadian Wildlife Service (CWS). This CWS training is periodically made available to outside agencies, and some ER staff may participate to facilitate a better understanding of each others' role at the time of a spill.

Financial Management

This training is provided by the Public Service Commission (PSC) and teaches government spending and cost accounting principles. It is imperative that any response team member who may have to purchase assets or manage contracts be familiar with these practices and procedures.

Planning Section

During a spill response operation, the planning section of the RMS will likely be populated with ER staff whose substantive positions are as Planning Officers within the branch. Therefore, the planning skills and training required to effectively and efficiently perform these tasks should be resident within our branch staff.

Should additional personnel be required to fulfill these roles, they would require training in RMS, as well as Site Safety (as required by OSH regulation). The required planning skills and spill response knowledge may be acquired through various training or experience factors, and would be assessed prior to assignment on the response team. In addition to planning skills, preferred training might include SCAT, FROST and/or BOSRC, and MSROC.

Logistics Section

During a spill response operation, the logistics section of the RMS will likely be populated with ER staff whose substantive position involves the tracking of spill response equipment inventory and human resources within the region. Therefore, the skills and training required to efficiently and effectively perform the logistics function should be resident within our regional ER staff.

Should additional personnel be required to fulfill these roles, they would require training in RMS, as well as Site Safety (as required by OSH regulation). The required logistical skills may be acquired through various training or experience factors (knowledge of IRCMS and TMA, BOSRC training) and would be assessed prior to assignment on the response team.

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Finance Section

During a spill response operation, the finance section of the RMS will likely be populated by regional finance staff whose substantive positions involve government expenditure and cost accounting knowledge and application. Therefore, the skills and knowledge required to effectively and efficiently perform the finance function should be resident within regional Canadian Coast Guard staff. These personnel will require RMS and Site Safety training prior to deployment on a spill response team.

Training Records

Records for personnel trained in spill response and/or emergency management are maintained by the Region.

4.5 Exercise Program

Introduction

Under the guidelines of the National Exercise Program (NEP), the Environmental Response Branch will implement a Regional Exercise Program. This program will be conducted over a three-year cycle. Coordination of the program will be the responsibility of the Regional Exercise Officer (RXO) of the Environmental Response Branch. Exercises will be designed and conducted in coordination with departmental staff, CCG base staff and CCG vessels on a regular basis. The purpose of the Regional Exercise Program is to validate environmental response training and regional emergency preparedness standards, policies and procedures.

Canadian Coast Guard will, through regional and area-specific exercising, ensure high priority initiatives such as exercising complex equipment (i.e. Lori Brush skimmers, sweep systems and command/communications facilities) are undertaken and will use industry and private sources of personnel where possible and/or appropriate.

Exercise Planning Matrix

The matrix below represents a typical three year exercising cycle followed by Canadian Coast Guard. The program cycle is designed to test all 17-response functions as outlined under NEP as well as including the different types of exercises. It includes internal, external (with other government departments as well as private sector organizations) and international exercises.

Table 4.1 - Central & Arctic Region Exercise Matrix

EXERCISE TYPE	YEAR1	YEAR2	YEAR3
Notification	Quarterly	Quarterly	Quarterly
Management	2	2	2
Operational drills	3	3	3
Combined Functional	1	1	1
Full Scale	0	1	0

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Notification exercises will test the regional call-out system. Some of these exercises will be internal to the branch, some will be a full regional call-out to all CCG and DFO staff as well as to external resources (eg: freight contractors to check their availability to move Marine Emergency Response Trailers (MERTs) or First Response Units (FRUs).

Management exercises will focus on the development of the spill through the Response Management System (RMS).

Operational Drills will focus on equipment deployments in packages (i.e. a First Response Unit, NOFI V-Sweep).

Combined Functional exercises will be an equipment deployment (operational drill) with the goal of implementing a tactic designed in one of the Region's Area Plan Annexes.

A Full Scale exercise will incorporate a management-type exercise with the concurrent deployment of a spill countermeasure system (system = pollution containment, recovery, primary and secondary storage devices)

Exercising Partnership

Canadian Coast Guard will endeavor to participate, by request and on a situation by situation basis, in exercises lead by Oil Handling Facilities (OHFs), certified Response Organizations (ROs) and other government agencies throughout the Region.

Central and Arctic Region is a part of the Canadian Coast Guard response community and as such is also part of the International Response Community. Canadian Coast Guard's regional boundaries are in such close proximity with our United States neighboring response communities that joint exercising is a high priority. Specifically this region conducts joint exercises in the geographic areas of the Great Lakes and the Beaufort Sea with the United States Coast Guard's (USCG) (9th) ninth (Great Lakes) and (17th) seventeenth (Alaska) districts, respectively.

Exercise Evaluation and Shared Learnings

An important part of the National Exercise Program is the evaluation and use of subsequent findings. Four types of information can be learned from an exercise, all of which lead to improvement of overall response capability.

- 1) Contingency planning
- 2) Response techniques
- 3) Response training
- 4) Exercise program development

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The primary sources of the information and learning will be the formal exercise evaluation report that is produced for every exercise by the evaluation team. This formal exercise report will follow the format laid out in Section 11 of the *Canadian Coast Guard National Exercise Program Planning and Evaluation Guide*.

4.6 Inventory Management, Maintenance and Infrastructure

Inventory Response Control Management System

To ensure that a nationally consistent and effective state of preparedness is maintained, an Inventory Response Control & Management System (IRCMS) has been implemented which utilizes The Management Authority database as its main tool. CCG HQ administers this system in concert with regional IRCMS Officers. In this region the program is administered by the Logistics and Statistics Officer in the Operations Section.

This system has been developed to:

- Maintain a real time record of the location and quantity of resources;
- Maintain a proper state of readiness through a pro-active approach using work orders and preventative maintenance;
- Assist in keeping response managers informed about Environmental Response's state of preparedness;
- Assist in the tracking of National Response Team personnel or equipment assigned to National or International incidents

Pre-positioned Equipment Caches and Depots

Central and Arctic Region covers an extremely large geographical and culturally diverse portion of Canada. There are, in essence, two zones of operation which are entrenched in the *Canada Shipping Act*. These are:

- the Arctic Zone, or all areas of Canadian jurisdiction north of 60° North Latitude; and
- the Central Zone, dominated in a marine transportation sense by the Great Lakes, but which include the southern portions of Hudson and James Bay, along with the major waterways and watersheds of Lake Winnipeg, Winnipegosis, Lake of the Woods, and Lake Athabasca.

The Environmental Response (ER) Branch has pre-positioned equipment to facilitate and maintain an effective response operation. Response strategies in each of the two zones (Central or Arctic) are based upon identification of local and regional response. This means that the equipment generally required for such a spill size is contained within the Region. This capacity is supplemented by nationally available resources, which would be "cascaded" from/to other regions when and if required. Preparedness capacities in other regions are identified in their respective Regional Response Plans.

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Arctic Zone

Arctic Community Packs (ACPs) are placed in northern communities for rapid (local) initial response. Canadian Coast Guard provides initial response training to members of the communities so that they may effectively deploy equipment in the ACPs in the event of a spill. Access (keys) for the ACPs have been given to an official in each community in most cases. The Senior Response Officer (ER-Hay River) maintains the current key holder listing.

The inventory for each Canadian Coast Guard Arctic Community Pack location is listed in Table 4-2. The program has received funding under the Health of the Oceans Initiative to proceed with placing Arctic Community Packs in additional sites. The equipment profiles at the existing Arctic Community Pack sites will be changed to reflect characteristics of the community. The inventory at all communities will be "site specific" and will coincide with response strategies designed by the ER planning group. The locations for the proposed additional Arctic Community Packs are: Baker Lake, Broughton Island (Qikiqtarjuaq), Chesterfield Inlet, Churchill, Hall Beach, Kimmirut, Iqaluit, Pangnirtung, Tuktoyaktuk and Yellowknife.

The main base of operations with Environmental Response dedicated personnel is located in Hay River, Northwest Territories. This base is home to a Rapid Air Transportable (RAT) cache of equipment known as the "RAT150". The RAT150T used in conjunction with the "Delta" (Δ) 1000T meets planning standards for a 1000 tonne (T) response. The selection of equipment for the RAT150 must meet pumping rates / capacities of 1000T thresholds and be complimentary² to the equipment held in the Δ 1000T depots.

The response package, warehoused in Hay River, will be maintained in 100% readiness during the shipping season. The equipment will be broken down and be containerized such that it will fit through the smallest cargo door of any of the selected aircraft. Equipment will be TDG compliant, be palletized as appropriate, and labelled for ease of selection and loading.

² The logistics of moving large bulky items (ISO containers) in the arctic necessitates a LCM, deck barge, cargo vessel, icebreakers or any combination thereof. Consequently it is estimated that the 1000T design capacity would be available staged on-scene in 5 - 7 days. Following the doctrine *something sooner rather than everything later* having 150T of the 1000T equipment suite air-lifted within 48 hours is preferable to having nothing until the entire 1000T capacity arrives a week later.

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Table 4-2 - Canadian Coast Guard Arctic Community Pack Locations

LOCATION	EQUIPMENT SUMMARY			
	Boom (24")	Skimmers	Boats	Storage
Arctic Bay (Ikpiarjuk)	3,650'	TDS-118	16' Aluminum	Open top Tank
Cambridge Bay (Ikaluktutiak)	1,350'	TDS-118	16' Aluminum	Open top Tank
Cape Dorset (Kinngait)	1500'	TDS-118	16' Aluminum	Open top Tank
Clyde River (Kangiqtugaapik)	4,500'	TDS-118	16' Aluminum	Open top Tank
Coppermine (Kugluktuk)	1,350'	TDS-118	16' Aluminum	Open top Tank
Coral Harbour (Salliq)	1,500'	TDS-118	16' Aluminum	Open top Tank
Gjoa Haven (Uqsuqtuuq)	1,350'	TDS-118	16' Aluminum	Open top Tank
Holman (Ulukhaktok)	1,500'	TDS-118	16' Aluminum	Open top Tank
Rankin Inlet (Kangiqtiniq)	2,200'	TDS-118	16' Aluminum	Open top Tank
Resolute (Qausuittuq)	1,350'	TDS-118	16' Aluminum	Open top Tank
Hay River FRU +	1,000'	-	37' Seatruck 42' Cutter	-

In combination with the RAT150T, equipment found in the Δ1000T depots will be at a 1000T capacity. Hence, the delta or “Δ” is the difference between the RAT150T and a full 1000T. The Δ1000T depots will have containerized heavier equipment (not suitable for air transport to smaller communities) augmenting the RAT150T to a 1000T capacity, ready to be loaded on deck barge, Canadian Coast Guard icebreaker or freighter. While response personnel cascade in to the spill site pre-identified local, CCG base and available ER personnel will mobilize to the centres and load the equipment on suitable marine transport.

Three Δ1000T depots are strategically located in the northern communities of Tuktoyaktuk (NorthWest Territories), Iqaluit (Nunavut), and in Churchill (Manitoba). For the purposes of response in Central & Arctic Region, Churchill is included in the Arctic Zone of operations despite it being south of 60° North Latitude due to the similarities in response characteristics that it shares with locations north of 60° North Latitude.

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Table 4-3 - Canadian Coast Guard Arctic Design Inventory³

PCM equipment	Description	Hay River RAT150T	Tuk Δ1000T	Iqaluit Δ1000T	Churchill Δ1000T
Skimmers	Light to medium product /disk type	3	1	1	1
	Heavy product /weir type	0	2	2	2
Boom	24" river type	0	10000'	10000'	10000'
	24" lay-flat type	5000'	0	0	0
Land storage	4T Open top tank	0	0	0	0
	8T Open top tank	7	3	3	3
	45T shore bladders	3	0	0	0
O/w storage	Total (in 5-25T Seaslugs)	50	250T	250T	250T
Pumps	2" low pres / volume style	4	1	1	1
	4" trash	5	1	1	1
	3" positive displacement	6	1	1	1
Vessels	"Car-topper" + 9.9hp	0	0	0	0
	Seatruck	0	2	2	2
	RAT RHI	2	0	0	0
Generators	5KW gas	7	2	2	2
Pressure washer	Larger hot water type	1	1	1	1
	Small cold water type	3	1	1	1
Incinerator	Sorbent	2	0	0	0
	Liquid waste	2	0	0	0

Central Zone

The Central zone is dominated by the Great Lakes and has well defined road transportation infrastructure.

Local / first response inventories have been established at all regional Canadian Coast Guard shore-side facilities that have fleet assets or a significant number of program vessels and that have operational personnel to deploy the equipment. Standardized inventory consists of a 20-24' trailer with a 1000' (nominal) of 24" boom and related accessories.

The 2500T Rapid Road Transportable cache is centred around the St. Mary's River and from time to time in major CCG facilities in Ontario. The response package warehoused in a series of 45' transport trailers will be maintained in 100% readiness during the shipping season. The primary purpose of the RRT 2500T system is significant containment of resources; shoreline, sheltered, and off-shore sweep and recovery ability; and staging and storage transfer area equipment.

³ Inventories in Tuktoyaktuk and Iqaluit are at 95% completion. The Churchill Depot is at about 50% (pending the construction of a new and adequate facility) with the bulk of the inventory in storage at the Thundar Bay Coast Guard base. The RAT 150 needs an evaluation of the command and control component as well as storage for the second Saccke burner.

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Table 4-4 Canadian Coast Guard RRT 2500T Design Inventory

PCM equipment	Description	BOOMERT #1-5 (each)	SKIMMERT #1 and #2 ⁴	Softside
Skimmers	Light to medium product/ disk type	-	3	
	Heavy product/ weir type	-	1	1
Boom	24" river type	4000'		
Sweep	36" Nofi V-sweep	-		1
Land storage	4T Open top tank	-	7	1
O/w storage	25T Towable bladders	-	4	4
Pumps	3" positive displacement	-	4	1
Generators	5KW gas	-	2	

Table 4-5 Canadian Coast Guard locations for First Response Units (FRUs)

Location	Relevant Area Plan(s)	Primary custodian	Secondary custodian
Amherstburg	Lake Erie/St. Clair-Detroit	SAR crew	ITS field services
Cobourg	Lake Ontario	SAR crew	
Gimli	Lake Winnipeg	SAR crew	
Goderich	Lake Huron	SAR crew	
Kenora	Lake of the Woods	ITS field services	
Kingston	Lake Ontario	SAR crew	
Meaford	Lake Huron	SAR crew	
Parry Sound	Lake Huron	ER personnel	ITS field services
Port Dover	Lake Erie	SAR crew	
Port Weller	Lake Ontario	SAR crew	
Prescott	St. Lawrence River	ER personnel	ITS field services
Selkirk	Lake Winnipeg	ITS field services	
Thunder Bay	Lake Superior	SAR crew	ITS field services
Tobermory	Lake Huron	SAR crew	
Hay River	Mackenzie River & Delta	ER personnel	ITS field services

⁴ An additional SkimMERT is being added this year to accommodate additional hoses. The exact configuration of each SKIMMERT is not known yet so the inventories will remain listed together for this year.

Section 5 - RESPONSE OPERATIONS

5.1 Pattern of Response

Based upon the principles outlined in the *National Response Plan*, (Sections 1.3, 1.5 & 4.4), Central and Arctic Region assesses, notifies relevant parties, and initiates the tasking/deployment of necessary resources. This is based upon the determination of CCG's role as Lead or Resource Agency and the appropriate CCG Posture. The Duty Officer (DO) is tasked with this initial assessment, which is then verified by the Superintendent, Environmental Response. The appropriate response is activated by the Superintendent who in turn assigns an On-scene Commander (OSC) or Federal Monitoring Officer (FMO) and notifies Canadian Coast Guard (CCG) Management. Upon termination of the incident cost recovery actions are undertaken. To illustrate the generic process see Figure 5-1-Typical Sequence of Events and Table 5-1-Typical Functions Descriptions has been provided.

CCG Expectations of Ships for Response

In most instances when a spill occurs the initial report will trigger the mobilization of local response organizations. It is not normally practical for ship personnel to be directly involved in the clean up activities.

Small Spills

Ships are expected to take whatever actions listed in their Shipboard Oil Pollution Emergency Plan (SOPEP) that are reasonable and necessary to prevent the oil from escaping over the side and having done so, to take action to clean-up the oil contained on deck. Spilled oil should not be washed overboard, nor should degreasers or dispersants be used on spilled oil in the water. Once the oil is in the water, the ship's ability to respond in a practical manner is greatly reduced. It is Canadian Coast Guard's expectation that a response organization or other competent contractor be called upon to provide operational response capability at the discretion of the Polluter.

Where there is no availability of local response contractors or where there is a delay in response activation, the Master of the vessel should consider the use of available materials to contain and clean up the spilled oil by, for example, using ship-stocked absorbent material or utilizing mooring ropes or air filled hoses as makeshift booms.

Large Spills

The ship is restricted as to what action it can take to respond to a major spill. In the case of a casualty the safety of the ship and crew take priority. Therefore the ship's actions will be limited to reporting the incident details

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to the appropriate authorities and to ensure that a response is initiated. In large spills it is Canadian Coast Guard's expectation that the Polluter appoint an On-Scene Commander (OSC) which may be a representative of the company that owns the ship or the ship's insurer.

Canadian Coast Guard needs to be kept informed as to the escalating response costs accrued by the Polluter during a response in order to prepare for the possibility that the Polluter will cease their response activities once their Limit of Liability is reached.

CCG expectations of Oil Handling Facilities (OHF) for Response

In most instances when a spill occurs, the initial report will trigger the mobilization of the facility response team. It is normal, in most cases, for the oil handling facility personnel to be the initial responders when a spill occurs.

Small Spills

For the purpose of this plan, a small spill will be defined based on the maximum oil transfer rate of the oil handling facility (i.e. what Level it is assigned under the *Canada Shipping Act, 2001*), which directly links to the minimum spill size to which it must be prepared to respond to within one hour. Oil handling facilities are required to have the resources on site to contain a spill of a minimum size within one hour and have the resources required to recover, or where the oil cannot be recovered the resources to control a spill of a minimum spill size within six hours. Response organizations may be called upon to provide additional operational response capability at the discretion of the Polluter.

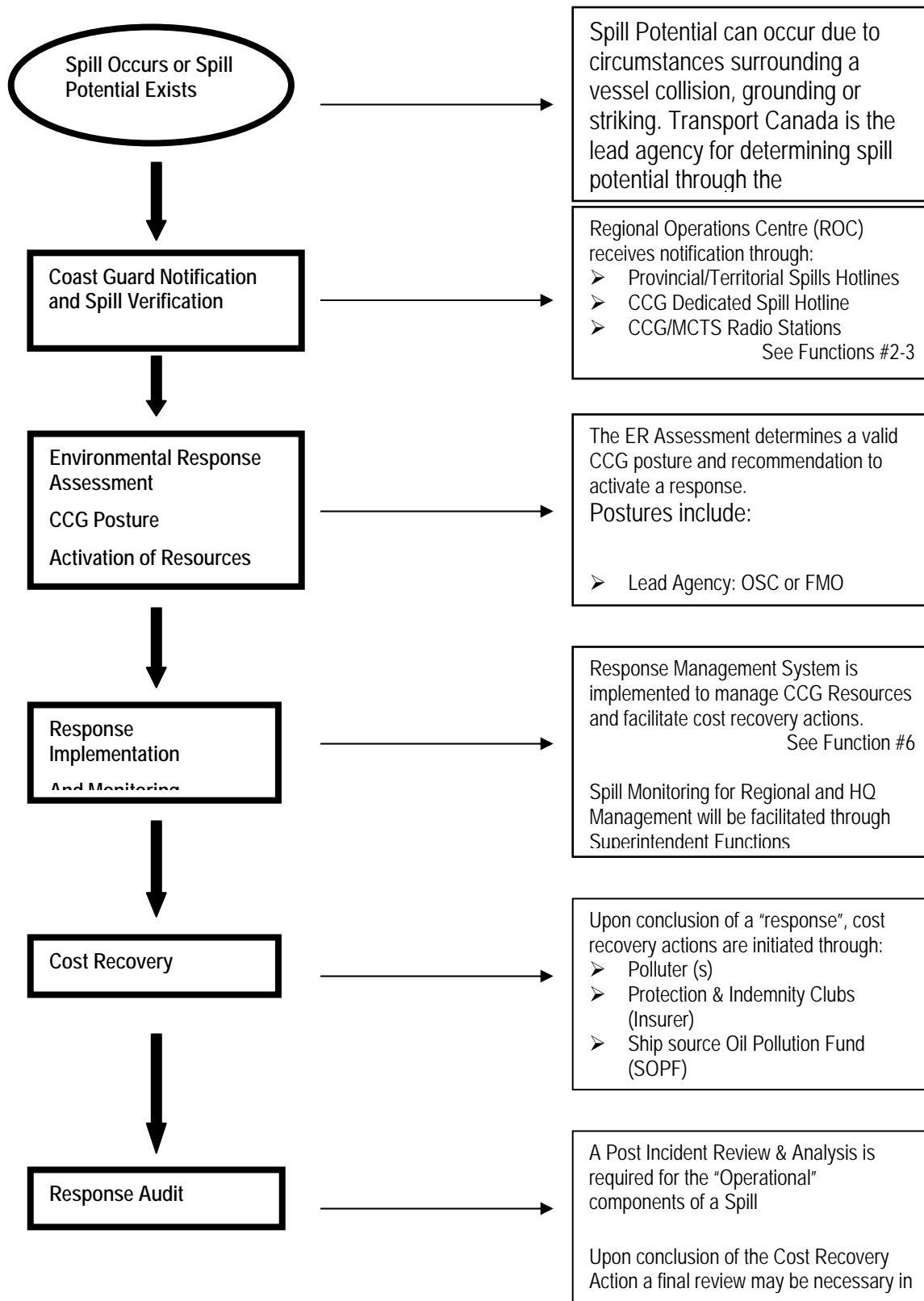
Large Spills

For the purposes of this plan, any spill above the facility's minimum spill size will be characterized as a large spill. Oil handling facility personnel are still expected to deploy their on-site equipment. Response organizations will likely be called upon to provide additional operational response capability at the discretion of the Polluter.

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Figure 5-1 - Pattern of Response – Typical Sequence of Events



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Table 5-1 - Pattern of Response – Function Descriptions

Function		Description
1	Responsible Party/Third Party Functions (<i>Spill occurs or sufficient potential risk exists</i>)	<ul style="list-style-type: none"> • Spill is sighted/reported. Spill reports originate from source (to regulatory body) or by third party (to various emergency or dedicated pollution hotlines) • Transport Canada is responsible for determining potential risk
2	Spills Hotline Functions (<i>Canadian Coast Guard Notification</i>)	<ul style="list-style-type: none"> • Assessment for dissemination • Dissemination (fan out according to applicable procedures) to relevant parties, calls from other spill hotlines are received by CCG-ROC.
3	CCG-ROC Duty Officer Functions (<i>Canadian Coast Guard Spill Verification</i>)	<ul style="list-style-type: none"> • Spill Assessment-pollution verification <ul style="list-style-type: none"> ➢ Mandate Confirmation ➢ Pollution Verification ➢ Source Credibility • Notification to ERDO • Dissemination • Initiation of MPIRS
4	ER Duty Officer Functions (<i>Environmental Response Assessment – CCG Posture</i>)	<ul style="list-style-type: none"> • Spill Assessment-response analysis • Source Control/Mitigation • Safety Issues • Tactical & Logistical Issues • Recommendation to Superintendent of likely Response Posture • Documentation – MPIRS
5	Superintendent Functions (<i>Environmental Response Assessment – Activation of CCG Resources</i>)	<ul style="list-style-type: none"> • Response Posture Evaluation <ul style="list-style-type: none"> ➢ Potential Risk to CCG Personnel and Equipment ➢ Propriety of request ➢ International Implications • Identification of OSC/FMO • Obtain an Order-In-Council (Arctic) • Obtain a Finance Code & Regional File Number • Notification of Senior Management and ongoing monitoring • MPIRS documentation • Obtain AC CCG sign off on MPIRS situation report
6	OSC/FMO Functions (<i>Response Implementation</i>)	<ul style="list-style-type: none"> • Management or monitoring of response using the Response Management System (RMS). Escalation or de-escalation in accordance with needs of the incident. • Consolidation of all documentation upon conclusion of the response for Cost Recovery purposes. • Coordinate final debrief to facilitate future improvements to the systems and processes in place.
7	Chief Financial Officer Function (<i>Cost Recovery</i>)	<ul style="list-style-type: none"> • Utilizing CCG Ship-source and Marine Pollution Response Costing Principles and Documentation Standards (DFO 6332) compile pollution response costs recovery claim.

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8.	Internal Review Team Functions (Audit)	<ul style="list-style-type: none">Utilizing the National Exercise Program Planning and Evaluation Guide, a Team is selected to complete the Post-Incident Review of an incident.Improvements & corrective actions are to be documented
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5.2 Spill Potential or Pollution Risk Assessment

Given an actual spill (i.e. pollutant in the water), the activities specified in this plan are rather obvious. However, in the event of vessel grounding, striking or collision that does not immediately result in a release, the responsibility for determining the risk of pollution rests with a Pollution Prevention Officer (PPO) within the Marine Safety (MS) branch of Transport Canada (TC). Should TC-MS be unable to make that determination, the Canadian Coast Guard (CCG), Environmental Response Duty Officer (ERDO) will complete that requirement. In some cases this may involve engaging a marine architect as no accredited expertise for vessel stability assessment resides within the ER section.

For all other areas where Canadian Coast Guard is the Lead Agency, this activity shall be considered the responsibility of the Canadian Coast Guard, Environmental Response Duty Officer.

5.3 Notification

To facilitate the notification of Canadian Coast Guard, and in addition to the existing Marine Communications system, a series of call-out or “Spill Hotline” agreements with the Province of Ontario, Nunavut and Northwest Territories and other Federal Departments within the Region have been implemented.

In addition, Central and Arctic Region, provides a 24 hr public access spills hotline:

**24 hour toll free - Spills Hotline:
1-800-265-0237**

Notification may occur through various mechanisms, depending upon the manner in which the spill (incident) occurs.

5.4 Verification

In all cases, spill information is initially processed and verified through the Regional Operations Centre (ROC) located in Sarnia, Ontario (See Section 3.3 – Organization). The ROC Officer on duty:

1. Determines whether the pollution is within Canadian Coast Guard’s mandate as Lead Agency or as a potential Resource Agency
2. Establishes the credibility of the source

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3. Identifies the following:
 - Incident name (nature of incident)
 - Time of call (local / UTC)
 - Time of spill (local/UTC) (*if available*)
 - Reported by / call back particulars
 - Source determination
 - Incident background and description of clean-up activities (if any)
 - On-scene environmental/atmospheric conditions
 - Pollutant type and quantity
 - Verifying party contact information (as applicable)
4. Initiates an MPIRS entry for the following cases:
 - Originally pursuing verification as Canadian Coast Guard mandate but additional information about source changes lead to another agency
 - Canadian Coast Guard mandate and verified no pollution
 - Canadian Coast Guard mandate and verified pollution
 - Likely to impact on / impacting on foreign waters
 - Significant impact on region, though not falling under Canadian Coast Guard mandate.
 - Request for Canadian Coast Guard as a resource agency.
5. Enters information into MPIRS (indicated in #3 above) as well as name of paged ERDO.

This information is then relayed to the Environmental Response Duty Officer to determine Canadian Coast Guard posture. It should be noted that all spill incidents, irrespective of CCG's mandate, may require Canadian Coast Guard resources if requested (see Resource Agency Role in Section 1.5 of the *National Response Plan*).

By agreement, spill verification will be completed by the Regional Operations Centre (ROC) Duty Officer. The verification will be complete when the ER Duty Officer is advised where Canadian Coast Guard is Lead Agency. (see Figure 5.2 Pollution Verification Process and Figure 5.3 Response Analysis Process)

5.5 Spill Assessment – Environmental Response Duty Officer

To facilitate the requirement for efficient and rapid notification and assessment of incidents, Central and Arctic Region, in accordance with the *National Response Plan*, Section 4.4, has instituted a 24-hr year round monitoring regime integrated with the Regional Operations Centre (ROC). The following sections identify the context in which this activity is carried out.

Coordination

The coordination of the ER Duty Officer is the responsibility of the ER Regional Emergency Operations Officer (REOO). These duties include assigning shifts in an equitable manner, keeping records of the duty officer schedules, maintaining equipment required to perform ER Duty Officer functions, reviewing individual ER Duty Officer performance, reviewing ER Duty Officer procedures, and liaising with the ROC and National HQ.

Performance

The ER Duty Officer function shall be performed by the following positions provided sufficient experience, appropriate training, and at the discretion of the Superintendent ER:

- ✓ Senior Officers
- ✓ Those in capacity to act for Senior Officer.

Review

The ER Duty Officer procedures shall be reviewed in reaction to:

- Changes at the Regional Operations Centre (ROC) affecting the ER Duty Officer function
- Changes in Canadian Coast Guard (CCG) policy on the response to ship source pollution
- In consideration of accepted recommendations stemming from exercises and operational responses.

The individual officer performance shall be reviewed in context of their execution of a spill assessment.

Responsibilities

At the beginning of the ER Duty Officer's shift the following are required:

- Functioning communication equipment (pager, cell phone/Blackberry);
- The necessary analytical tools (e.g. spill assessment forms, Greenwood's Guide to Great Lakes Shipping, Area Plans, Oil Spill Response Field Guide, OSH reference tools, and the CANUTEC Emergency Response Guide book.)

During the ER Duty Officers shift the following are required to be complete:

- MPIRS cases for any spill reports that required ER Duty Officer analysis by noon of the next business day;
- Extra Duty Reports;
- Notification of the next ER Duty Officer and the ER Regional Emergency Operations Officer of any on-going cases.

Availability

The availability of the ER Duty Officer is 24 hours/7 days a week. Pages must be responded to within 10 minutes of notification. Should the ER Duty Officer (DO) be unable to fulfill their duties at any time during the shift, they are required to

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notify the ER Regional Emergency Operations Officer (REOO) immediately who will notify the ROC of any changes immediately. The following activities conflict with the performance of the ER Duty Officer function:

- travel out of country / region / pager range;
- inability to respond immediately due to performance of other job functions (instructing a course, running an exercise, delivering a presentation, involved in a maintenance run that would be too difficult to reschedule, chairing a meeting, or participating in any activity that requires attendance or would be inappropriate to leave);
- inability to respond immediately due to personal reasons (vacation, sickness, etc.).

Should an individual become unavailable for a significant portion of the shift for reasons noted above, that shift may be assigned to another officer at the discretion of the ER Regional Emergency Operations Officer.

Function

The primary function of the ER Duty Officer is to complete an initial incident assessment and analysis, making a recommendation to the Superintendent of ER as to the appropriate course of action. **

The initial assessment will be complete for the following cases:

- Canadian Coast Guard mandate and verified pollution
- Likely to impact on / impacting on foreign waters
- Significant impact on region, though not falling under Canadian Coast Guard mandate.
- Request for Canadian Coast Guard as a resource agency.

The analysis function is complete when the Superintendent ER is informed and advised of the recommended course of action that will consider the following (see flow chart):

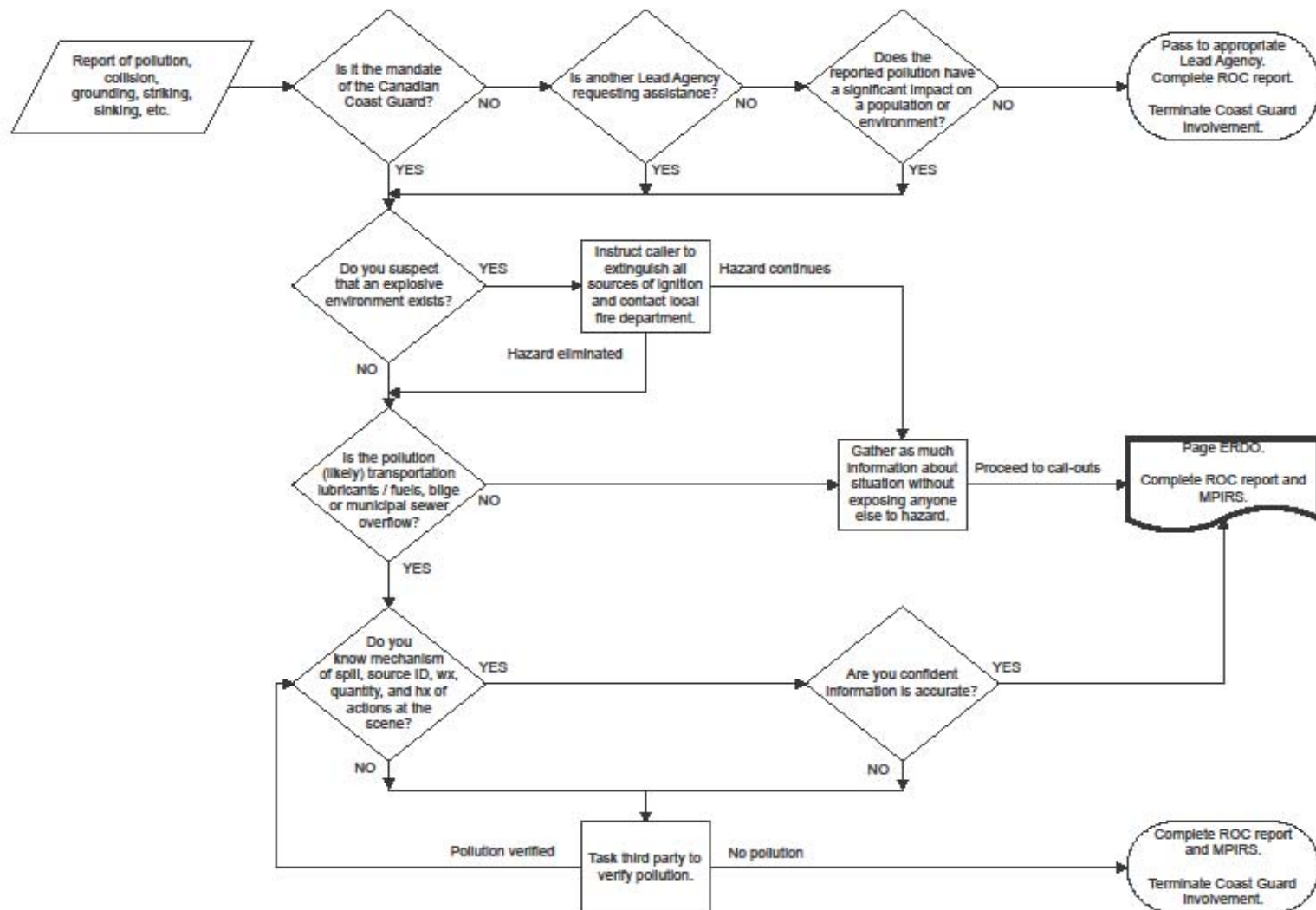
- polluter's actions and intentions (if applicable);
- safety concerns, tactical, logistical, and environmental feasibility of any response.

** The ER Duty Officer does not need to notify the Superintendent of any incidents that require "no activation" of CCG resources (assets/personnel) in monitoring/clean-up activity.

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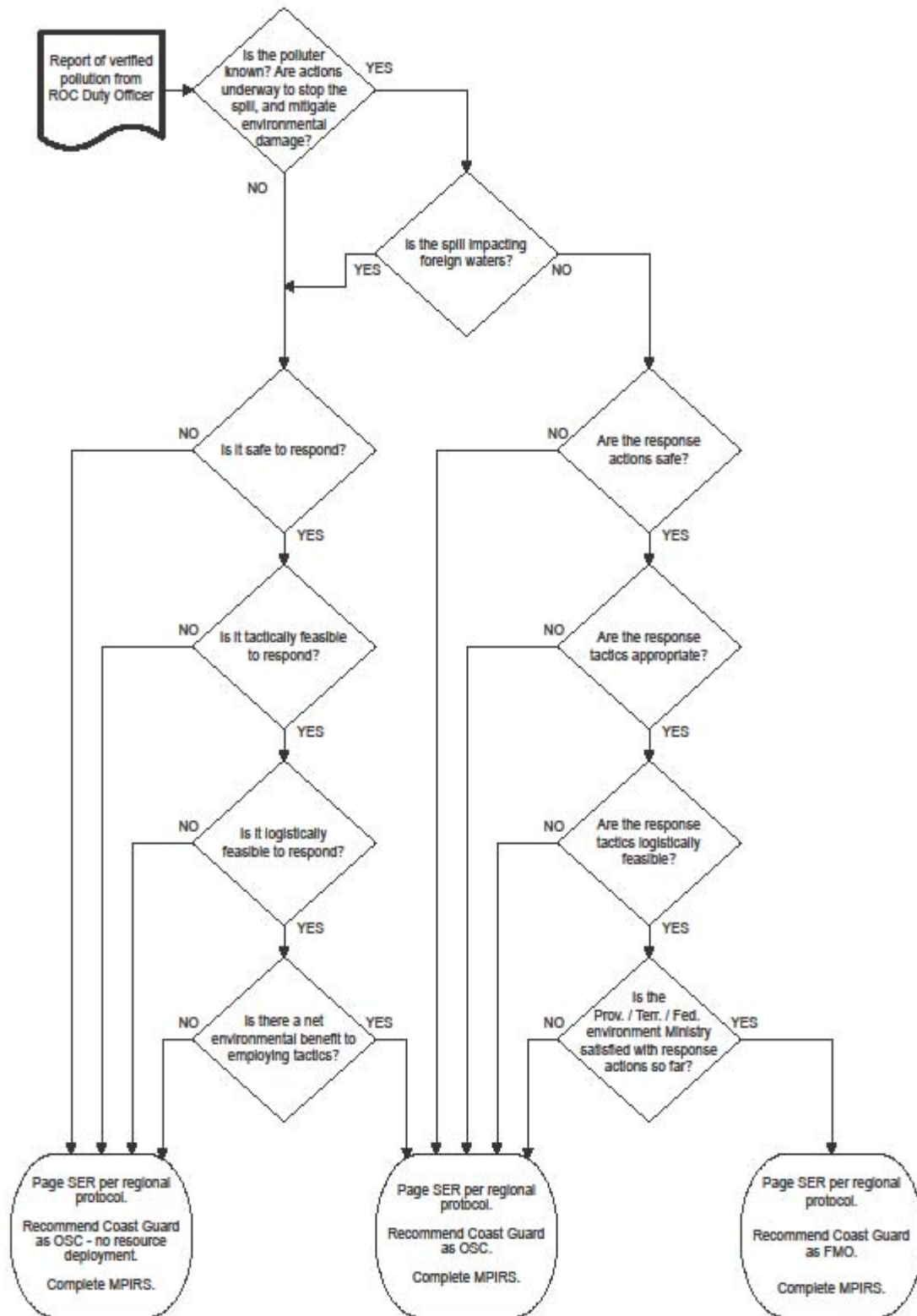
Spill assessment: *pollution verification process*



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Spill assessment: response analysis process



5.6 Activation of Canadian Coast Guard Response Resources

In the event of small (0-150 T) to medium size (150-1000 T) spill incidents, the Superintendent, Environmental Response, acting upon the assessment provided by the Duty Officer, initiates/activates the appropriate response. This entails, but is not limited to, the following activities:

- Identification of overall health and safety risks to response personnel.
- Establishing the propriety of the recommended response posture. This includes the verification of international issues in border areas.
- Verification of Canadian Coast Guard capability to respond, impact on normal regional operations and, if necessary, the potential requirement for the notification and activation of the National Response Team.
- Assignment of the designated On-Scene Commander (OSC) or Federal Monitoring Officer (FMO). SROs are typically assigned as FMO/OSC for incidents occurring within their geographic area.
- Obtaining the necessary Order-in-Council, for spills in Arctic Waters
- Obtaining the financial project code, and forwarding it to the OSC/FMO.
- Signing a contract with the Response Organization (RO) in accordance with PWGSC contracting rules.
- Creation and dissemination of initial situation report to Regional and National management in accordance with the *Safety and Environmental Response Systems (SERS) – Incident Notification Guidelines*.
- Completion of MPIRS to document above activities.

For significantly larger spill incidents (1000T and above) the Superintendent, Environmental Response shall immediately assume the OSC/FMO role, notify Regional and National management of the situation and initiate the Response Management System (RMS) (and activation of the National Response Team, if necessary) in addition to the above activities. Upon stabilization of the immediate emergency, the Assistant Commissioner, Canadian Coast Guard, Central and Arctic Region and/or Director General, Canadian Coast Guard shall assess the requirement for assigning a new OSC/FMO.

5.7 Response Implementation

As stated previously (Section 4 - Preparedness), the Canadian Coast Guard will employ the Response Management System (RMS) as its primary management and operational tool. At the heart of this system is the development of clear obtainable objectives and the implementation of the supporting tactical deployment. This is achieved through the creation of incident action plans spanning specified operational time periods. For small spills these plans can be rather informal. As spill size and impacts increase, so to will the complexity of

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operational assignments and hence a need for greater formalization of the Incident Action Plan.

All operations shall be carried out in accordance with the Guiding Principles set out in *Section 1.3* of the *National Response Plan* and the *Oil Spill Response Field Guide* (ISBN 0-660-16112-5).

Central and Arctic Region covers an extremely large geographical and culturally diverse portion of Canada. There are, in essence, two zones of operation which are entrenched in the *Canada Shipping Act*.

These are the:

- Arctic zone, or all areas of Canadian jurisdiction north of 60° N Latitude;
- Central zone, dominated in a marine transportation sense by the Great Lakes, but which include the southern portions of Hudson, James and Ungava Bay, along with the major waterways and watersheds of Lake Winnipeg, Winnipegosis, Lake of the Woods, and Lake Athabasca.

Arctic zone – first response

The highest risk of pollution in the arctic is during a ship fuel transfer to facilities in Canada's northern communities. Should pollution occur, the vessel and oil handling facility have responsibilities to implement their Oil Pollution Emergency Plans (OPEP) that deal with source control. The next step would be for the community to respond using its response plan, protecting the identified priority area(s) and employing the response equipment in an Arctic Community Pack, if so equipped.

Arctic zone – escalation

If the pollution is beyond the ship, facility, and community response then the Rapid Air Transportable (RAT)150T will be the first line Canadian Coast Guard ER response (Arctic icebreakers or Special River Nav-aid Tenders may have been on-scene first). Upon activation of the RAT150T, standing offers with aviation contractors will be called up. Closest ER personnel will be dispatched to the community to assess, plan, assemble (and train) responders, while preparing to stage the in-coming equipment. The Hay River base personnel will transport the pallets to the airport where they will be loaded into the awaiting airframe. Upon arrival the pallets will be unloaded and a trailer tongue and wheels affixed to the pallet to facilitate movement (by ATV if necessary) to a forward staging area and ultimately to a beach site. The timeframe for full forward staged capacity with personnel at any community with suitable runways is under 48 hours.

The hospitality industry of Arctic communities can be rapidly overwhelmed with the influx of as little as 10 people. Experience has shown that these communities could only support 10-15 additional personnel and only offer 10-15 community responders. Consequently, the RAT was designed considering the amount and type of equipment that is most easily handled by a combination of trained

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Canadian Coast Guard personnel and community responders. The RAT150T response is predicated on an in-community response with the following positions identified in the table below:

Table 5-2 *Anticipated personnel usage for the RAT150T in an Arctic community*

Position	Canadian Coast Guard responder	Community responder
OSC	X	
OSC support		X
Chief Ops & Planning	X	
Logs – services	X	X
Logs – support	X	X
Ops skimming (A)	X	X
Ops skimming (B)	X	X
Ops shoreline (A)	X	X X X X
Ops shoreline (B)	X	X X X X
Ops booming vessel (A)	X	X
Ops booming vessel (B)	X	X
Transfer / disposal	X	X
Totals	11	16

Upon escalating beyond a RAT150T response, the Δ1000T will be stood up. Standing offers / arrangements with local contractors will be activated to move the containers / seatrucks to a location where they can be transferred to a ship / barge. If required, closest Canadian Coast Guard base personnel will be dispatched to the depot to assist. The closest suitable marine transportation asset will also be contracted to move the equipment to the spill site. The timeframe for full forward staged capacity with personnel is estimated at one week.

As the 150T response is predicated on an in-community response a larger spill would have to be supported by a Canadian Coast Guard icebreaker, rented camp barge, or flown in from surrounding communities.

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Table 5-3 Anticipated personnel usage for the 1000T in an Arctic community.

Position	Canadian Coast Guard ER responder	CCG Fleet or professional contractor	Community responder
OSC	X		
OSC support		X	X
Chief of Planning	X		
Plan – response	X		
Plan – demobilization	X		
Chief of Logs	X		
Logs – services		X	X
Logs – support	X X	X X X	
Chief of Ops	X		
Air Ops		X	
Ops on-water	X X	X X X X	
Ops shoreline	X X		X X X X X X X X X X
Ops booming	X X	X X X X	
Transfer / disposal	X	X	X
Totals	14	13	13

Central Zone – first response

The highest risk of pollution occurring in the region is found in the Great Lakes. Statistically the areas in the Great Lakes of highest risk are the connecting channels due to volumes, numbers of transits, and convergence factors (existing VTS / navigational aid systems recognize this). Areas with traditionally high pleasure craft and small commercial craft traffic experience frequent (though low in volume) pollution incidents.

If the pollution is in the local vicinity of a Canadian Coast Guard Search and Rescue (SAR) station or facility with operational staff, a First Response Unit (FRU) may be deployed as an initial attempt at containment. If more equipment sweeps systems or recovery units are required then the Rapid Road Transportable (RRT) 2500T will be activated.

Transfer of Lead Agency

Transfer of Lead from CCG

Should an incident initially appear to fall within the jurisdiction of the Canadian Coast Guard yet later is determined to be another government agency's

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responsibility, the CCG-appointed OSC or FMO will verbally acknowledge the transfer of Lead Agency responsibility followed by written confirmation on the terms of the transfer (this may require time for termination of a response contract with CCG and the establishment of a response contract with the appropriate Lead Agency.) When the Lead is transferred from CCG to another Lead Agency, CCG will submit an invoice of its response costs to the Lead Agency for response activities undertaken up to the time of transfer recognition.

Should the Lead Agency wish to retain CCG as a Resource Agency, the criteria in Section 7 of the *National Response Plan* of the *CCG National Marine Spills Response Plan* will apply.

Transfer of Lead to CCG

When the Lead is transferred to Canadian Coast Guard from another agency, the Canadian Coast Guard will incorporate the appropriate costs borne by the other agency in the initial stages of the spill into its claim to the Polluter or to the Ship Source Oil Pollution Fund, (SOPF) as the case may be.

Safety Procedures and Considerations

All petroleum cargoes are considered hazardous substances. Canadian Coast Guard command, clean-up, monitoring and verification personnel have protective equipment and training available to them up to Level “D”. All Environmental Response branch staff have been issued with a variety of personal protective equipment (PPE) and are expected to deploy to a spill site (includes exercises and training) with all appropriate gear. Safety glasses and rain suits with rubber boots and gloves are appropriate for Canadian Coast Guard's traditional verification of and response to oil pollution.

Bulk chemical carriers, rail cars, road trailers, sour (H₂S) petroleum products or BTX (benzene, toluene, xylene) carried on oil tankers are all sources of substances for which Canadian Coast Guard personnel are not readily equipped for. In most cases where the pollutant reported is suspected to be from one of these sources Canadian Coast Guard assets should not be tasked to verify. If it falls within Canadian Coast Guard mandate the ER program personnel will get directly involved in the verification, likely looking to other government departments or contractors to continue with the assessment and response.

When the pollution is reported to the ROC by a member of the public, or by a credible professional as a mystery spill, closer examination of the circumstances or probable cause of the pollution will occur as part of spill verification. During the conversation with the individual reporting the incident the ROC Duty Officer will want to find out what it is that they observed. These are:

- Colour [typical petroleum silvery to rainbow to dark purple / brown or is it frothy, green organic matter, rusty, etc.]
- Odour [does it smell like gas, diesel, rotten eggs, no odour]
- Proximity to any likely source [vessel, industrial outfall, municipal outfall, midlake, mid channel, washed up industrial storage drum]

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- Volumes [football field sized, shopping mall parking lot big, or a thin ribbon]
- Other factors [heavy rainfall in last 12 hours; seasonal conditions / times / areas known for algae blooms; fish or animal kills].

By picking up on any "flags" during an assessment it can be reasonably determined whether the pollution should not/should be classified as a hazardous substance (for which CCG personnel are unable to respond to). The ER duty officer will consult with experts in Environment Canada (EC), Spills Action Centre (SAC), and CANUTEC, as appropriate to determine the safety for personnel.

Alternative countermeasures

Alternative countermeasures are those non-mechanical techniques utilized in oil spill response operations such as in-situ burning, dispersant application, and shoreline cleaner application.

Central Zone

The likelihood of approval of in-situ burning operations on the Great Lakes or in connecting channels or inland lakes is minimal. The use of dispersants in the Great Lakes, connecting channels or in inland waterways will not be considered. Shoreline cleaner agents approved by Environment Canada may be considered.

Arctic Zone

In view of the difficulties associated with mounting an effective response in the Arctic, the CCG has recommended that further research be done in the areas of in-situ burning, the use of dispersants (reference Quebec paper) and other oil in ice recovery methods. This research should be operational R&D and assume that the product spilled is Arctic diesel and that the spill occurs during the Arctic shipping season.

5.8 Summary Report and Post Incident Review

It is regional policy to provide a Summary Report and/or conduct a formal Post Incident Review for incidents deemed noteworthy or valuable by the OSC/FMO or Assistant Commissioner, Canadian Coast Guard.

Summary Report

The summary report shall contain at minimum the following, but can include any information deemed relevant by the OSC/FMO.

Summary Incident Report Format

- (a) Overview of Crisis Event

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- spill source (not cause), initial environmental conditions and assessment of situation
- (b) Spill chronology
 - spill response activities and climate/wind /sea condition data
 - key response objectives (success and failures in implementation), major shifts in tactics, other agencies involvement
- (c) Costs and cost recovery issues
 - total estimated cost summary
 - identification of Cost Recovery requirements and options
- (d) References
 - Situation Reports

Post Incident Review

The main objective of a Post Incident Review is the evaluation of the incident to ultimately improve Canadian Coast Guard's effectiveness at spill response. To that end, this requirement is essentially similar to the principles of exercise evaluation. Therefore, when required, the review shall be conducted in accordance with the principles contained in the *National Exercise Program – Evaluation guidelines, Chapter 11*.

This entails six distinct tasks:

- 1) Brief the Evaluation Team
- 2) Brief the Response Team
- 3) Evaluate the Incident
- 4) Prepare a Preliminary Summary of Key Observations
- 5) Hold an Incident Debriefing Session
- 6) Prepare an Official Post Incident Evaluation Report

Post Incident Evaluation Report Format

- (a) Executive Summary -Summarizes overall findings and observations
- (b) Overview of Incident Objectives -Briefly describes the key objectives, environmental conditions and initial situation assessment
- (c) Evaluation Techniques and Criteria - Describes the technique(s) (i.e. self, peer or independent evaluation) and the major evaluation criteria used
- (d) Assessment of Key Incident Objectives - This provides a critical appraisal of the incident objectives or major shifts in tactics. Each key objective assessment will include the following:
 - Findings* – A summary statement describing key positive and negative findings.
 - Specific Observations* - Observed decisions and tasks noted during the incident by responders, management and interested parties.
 - Conclusions* - Assessment of the impact of the finding on overall achievement of the incident objective(s)

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Recommendations – A description of potential corrective or follow-up action required to implement the findings to improve overall marine spill response preparedness.

(e) Appendices or Attachments - May or may not be required

Section 6 – CLAIMS & COST RECOVERY

6.1 Purpose

The purpose of this section of the *Regional Response Plan* is to outline the requirements and regional processes to assist in the creation of a claim to the relevant fund or directly to a polluter.

The ability of Canadian Coast Guard to recover or pursue recovery of response expenses or costs associated with monitoring activities is set out in the *Marine Liability Act, Part 6, “Liability and Compensation for Pollution”*. This ability to recover costs is seen as the embodiment of the polluter-pay-principle set out in the *National Response Plan, Guiding Principles, Section 1.3*.

Note: That at this time there is no mechanism to recover monitoring costs from an oil handling facility.

In addition to the above and recognizing the potential financial risks and impacts to Canada, Canadian legislation also provides for the creation and maintenance of a Ship-Source Oil Pollution Fund, (SOPF). This fund, in addition to the International Oil Pollution Compensation Fund (IOPCF) and the Protection & Indemnity (P&I) Clubs, provides for the assessment of claims/loss against member ships and/or shipping companies. Neither of these funds hinder nor otherwise limit Canadian Coast Guard’s ability to lay claims directly against a Polluter. However, the Polluter is only required to reimburse a claim up to its Limit of Liability. This limit is calculated using the guidelines established in the *Convention on Limitation of Liability for Maritime Claims (LLMC), 1976*.

6.2 Policy Guidelines

The following points serve as regional guidelines for pursuing cost recovery activities:

- The decision to seek cost recovery should be made based on common sense and in consultation with other operational and finance team members.

- Cost recovery should be avoided in situations where the administrative costs of recovery action exceed the dollars expected to be recovered.

- Cost recovery embodies the “Polluter Pays” principle.

- Costs incurred while acting as a resource agency must be recovered from the lead agency.

- Costs incurred while acting as OSC/FMO are recoverable from either the polluter, its P&I Club, the Ship-Source Oil Pollution Fund or from the International Oil Pollution Compensation Fund.

6.3 Responsibilities

On-Scene Commander/Federal Monitoring Officer (OSC/FMO)

The OSC/FMO is responsible for ensuring that complete and accurate documentation is provided for a timely and effective cost recovery process. The OSC/FMO is responsible for preparing all documentation necessary to initiate cost recovery.

Regional Finance Staff

Response, monitoring and administrative costs must be calculated in accordance with national financial accounting and recording practices. Senior administrative officers within Maritime Services may be called upon to provide expert advice as required. It is recommended that a regional finance representative be on-scene as soon as possible to help establish procedures, to safeguard documentation, and to ensure the integrity of the costing process.

Environmental Response Headquarters

The Environmental Response Senior Advisor for Cost Recovery and Claims will submit those claims that are intended for the Ship-Source Oil Pollution Fund and to International Fund Conventions in accordance with the guidelines specified by each. The Advisor will also issue equipment charge-out rates periodically for use by all regions.

6.4 Process

The Response Management System (RMS) documentation (field notes, Incident Action Plans, Minutes and meeting records, time sheets and any and all expense records, invoices/requisitions etc.) shall form the basis of data for the Cost Recovery action.

The Region will initiate cost recovery actions against the Polluter. Should the Polluter be unable or unwilling to pay the costs, the Region will forward the claim to HQ Senior Advisor for Cost Recovery and Claims for submission to the Ship-Source Oil Pollution Fund. Should the costs of the response exceed the Limit of Liability of the Polluter, reimbursement of costs will be through the SOPF and then through the IOPCF. Claims associated with mystery spills will be submitted directly to HQ for a claim against the SOPF.

6.5 Documentation

Proper documentation alleviates the need to reconstruct the incident after the fact, reduces the volume of questions, and adds credence to the claim. The key source of information that enables various parties to determine the degree of reasonableness of the actions taken and the costs claimed is the part of the cost recovery summary known as a “narrative”. That justification is considered to be a critical component to successful and timely claims.

Central & Arctic Regional Response Plan

Section 6 — Claims & Cost Recovery

The regional guideline for producing cost summaries and documentation handling is as follows:

Incidents of minimum complexity and limited expenditures (under \$15K)

- Expenditures may be summarized within the body of the Final Report, including any description of “calculated” values (i.e. administration costs)
- Original invoices shall be kept on the dedicated spill file.

Incidents of medium complexity and moderate expenditures (up to \$50K)

- Expenditures will be summarized in a single table by Cost Element within the body of the Final Report.
- A supporting cost summary document or appendix shall be created to provide a detailed cost summary by date. Copies of the expenditure documentation will be included.
- Original invoices shall be kept on the dedicated spill file organized by date.

Incidents of high complexity and significant expenditures (\$50K plus)

- Expenditures will be summarized in a single table by Cost Element within the body of the Final Report. (similar to medium complexity incidents)
- A supporting cost summary document will be created summarizing the daily expenditures by individual cost element, followed by a cumulative summary of each cost element (spreadsheet of all daily summaries). The sum total of all cost elements will then be summarized for use in the final report.
- Due to the volume of transactions, copies of the expenditure documents will not be provided in the supporting cost summary document.
- Original invoices will be kept in their original state, filed by date and archived when feasible to a dedicated file.

Table 6.1 Sample Cost Element Table

Cost Element	Description
Personnel	Includes hourly regular and overtime costs associated with CCG Staff (includes EBP)
Equipment	Includes cost of all CCG assets, based upon established charge out rates
Purchases/Expendables	Includes expendables such as office supplies and PPE
Travel	Includes meals and accommodation costs incurred by CCG staff accordance with TB travel directive.
Contractors	Includes the costs of all private sector contractor/goods and services.
Administration	Includes the cost of CCG administration.
Total Estimated Cost	

6.6 References

- CCG Ship Source and Marine Pollution Response Costing Principles and Documentation Standards DFO2004-6332
- Cost Recovery of Ship Source and Marine Pollution Response Directive # D-4010-2001-01
- Cost Recovery Related Policies, Memorandum dated October 26, 1998, File AWE 1001-5-2-1 (AWEA)

6.7 Third Party Claims

While monitoring or responding to an incident, Canadian Coast Guard will refer all inquiries regarding third party claims to the Polluter. In the case of a mystery spill, the Canadian Coast Guard will encourage claimants to submit a claim directly to the Ship Source Oil Pollution Fund.

Section 7 - PLAN MAINTENANCE AND CUSTODIANS

7.1 *Maintenance Process*

Responsibility

The *Regional Response Plan* of the *Canadian Coast Guard Marine Spills Response Plan* for Central & Arctic Region is the responsibility of:

Assistant Commissioner, Canadian Coast Guard
Central & Arctic Region
520 Exmouth Street
Sarnia, Ontario
N7T 8B1
fax (519) 383-1991

Revision Requests

All requests or suggestions for revision to this plan should be forwarded, in writing, to the above noted address and should include the following information:

- Originator (including return address and telephone number)
- Date
- Subject (i.e. request for revision)
- Suggested change (including section and page number references)
- Reason for revision

All formally received requests will be acknowledged in writing and assessed for inclusion into the plan. Upon approval the revision will be distributed accordingly.

Revision Record

Upon receiving a revision transmittal, recipients are requested to ensure that its number is next in sequence to the previous issue, process the amendments according to the transmittal instructions and complete the revision record in this section.

Should there be any discrepancies or questions, the recipient should contact the Canadian Coast Guard, Assistant Commissioner, Central & Arctic Region at the above address.

The onus is on the plan holder to maintain a current plan.

7.2 *Canadian Coast Guard Custodians*

This document is structured to reflect the fundamental phases of Environmental Response (ER) activities and hence reflects the co-operative nature of each

Central & Arctic Regional Response Plan

Section 7 — Plan Maintenance and Custodians

aspect of the Central and Arctic Region Environmental Response organization. In conjunction with this, each component has been assigned to a specific section within the branch (e.g. training is the responsibility of the Training Officer). The Assistant Commissioner – Canadian Coast Guard, Central and Arctic Region retains the overall responsibility for the document's implementation. The Emergency Plan Development Officer (EPDO) facilitates the physical management and co-ordination of this document.

These custodial relationships herein are designed to facilitate the annual review and maintenance of the *Regional Response Plan*.

Letter of Promulgation	Emergency Plan Development Officer
Record of Revision	Plan Holders
Section 1 – Introduction	Emergency Plan Development Officer
Section 2 - Agreements & Memoranda of Understanding	Emergency Plan Development Officer
Section 3 – Organization	Emergency Plan Development Officer
Section 4 – Preparedness	
4.2 RMS	Regional Training Officer
4.3 Planning	Emergency Plan Development Officer
4.4 Training	Regional Training Officer
4.5 Exercising	Regional Exercise Officer
4.6 Inventory Maintenance & Management	Regional Emergency Operations Officer
Section 5 – Response Operations	Regional Emergency Operations Officer
Section 6 – Claims & Cost Recovery	TBD
Section 7 - Plan Maintenance & Custodians	Emergency Plan Development Officer
Section 8 – Contacts	Emergency Plan Development Officer
Section 9 – References & Annexes	Responsibility for each annex is assigned in each Annex.

All unassigned sections shall be considered the responsibility of the Emergency Plan Development Officer unless otherwise indicated.

7.3 Plan Distribution

The *Regional Response Plan* shall be distributed to all holders of the *Canadian Coast Guard Marine Spills Response Plan*, in accordance with the Area of Responsibility set in Section 1 - Introduction. This includes the relevant Federal and Provincial Lead Agencies as described in the National Response Plan Section 1, sub-section 1.5; all Canadian Coast Guard Management; Facilities and Vessels; all Oil Handling Facilities and relevant certified Response Organizations by request and in accordance with Transport Canada-Marine

Central & Arctic Regional Response Plan
Section 7 — Plan Maintenance and Custodians

Safety, Compliance and Enforcement division. All subsequent revisions will be automatically distributed to these plan holders.

Any member of the general public wishing to obtain a copy may do so through the Fisheries and Oceans, Canadian Coast Guard, National Headquarters. These plan holders will not be advised of revisions.

Section 8 – CONTACTS

8.1 Pollution Reports for Canadian Coast Guard, Central & Arctic Region

To report a pollution emergency anywhere within Central & Arctic Region telephone the Canadian Coast Guard, Regional Operations Centre (ROC) toll free at:

1-800-265-0237

or report via

Marine Radio on VHF, Channel 16.

8.2 Other Lead Agencies that Maintain Spill Report Lines

- Ontario Ministry of the Environment - Spills Action Centre: 1-800-268-6060
- Territorial Spills Line – Arctic Alarm: 1-867-920-8130
- Manitoba Conservation: 1-204-944-4888
- Saskatchewan Environment - Saskatchewan Spill Centre: 1-800-667-7525
- Alberta Environment: 1-800-222-6514

8.3 Canadian Coast Guard, Environmental Response Branch (CCG/ER) Phone List – Regular Office Hours

Regional Office, Canadian Coast Guard 520 Exmouth Street Sarnia, ON N7T 8B1	
Title	Telephone
Superintendent, Environmental Response	519-383-1954
Emergency Plan Development Officer	519-464-5126
Assistant Contingency Planning Officer	519-383-1953
Regional Exercise Officer	519-383-1978
Regional Emergency Operations Officer	519-383-1956
Environmental Training Officer	519-383-1957
Administrative Assistant	519-383-1951

Central & Arctic Regional Response Plan
Section 8 — Contacts

Canadian Coast Guard Base 42037 McKenzie Highway Hay River, NT X0E 0R9	
Title	Telephone
Senior Response Officer	867-874-5557
Response Specialist	867-874-5558
Response Specialist	867-874-5559

Canadian Coast Guard Base PO Box 1000, 401 King Street Prescott, ON K0E 1T0	
Title	Telephone
Senior Response Officer	613-925-2865 x 157
Response Specialist (2)	613-925-2865 x 262
Logistics and Statistics Officer	613-925-2865 x 126

Canadian Coast Guard Base 28 Waubeek Street Parry Sound, ON P2A 1B9	
Title	Telephone
Senior Response Officer	705-746-2196 x 228
Response Specialist	705-746-2196 x 270
Response Specialist	705-746-2196 x 201

Section 9 – REFERENCES & ANNEXES

9.1 References

The following list includes those documents which supplement the Regional Response Plan.

Supplement	Custodian
Environmental Response Manual – Standard Operating Procedures and Directives	Canadian Coast Guard, Environmental Response, Headquarters
Response Management System User's Guide, version 3.0 (May 2006)	Canadian Coast Guard, Environmental Response, Headquarters
Environmental Response Superintendent's Manual	Superintendent, Environmental Response, Regional Office
Environmental Response Regional Health & Safety Plan	Environmental Response, Regional Emergency Operations Officer
National Exercise Program (NEP) Manual	Canadian Coast Guard, Environmental Response Headquarters
Inventory Control and Response Management System – TMA database	Regional Logistics and Statistics Officer, Environmental Response
DFO Crisis Communications Plan	DFO Corporate Services, Communications Branch

9.2 Annexes

The following Area Plans make up the Annexes to the Regional Chapter:

- 1) St. Lawrence River and Lake Francis
- 2) Lake Ontario
- 3) Lake Erie
- 4) St. Clair and Detroit River
- 5) Lake Huron, Georgian Bay and North Channel
- 6) St. Mary's River
- 7) Lake Superior
- 8) Lake of the Woods
- 9) Inland waters (South of 60°N Latitude)
- 10) Hudson and James Bay
- 11) Baffin Region
- 12) Keewatin Region
- 13) Kitikmeot Region
- 14) Great Slave Lake Region
- 15) Mackenzie River and Delta
- 16) Beaufort Sea and Amundsen Gulf

APPENDIX G – Agnico Internal Spill Report Form



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 NUMBER _____
	B OCCURRENCE DATE: MONTH – DAY – YEAR		B OCCURRENCE TIME			
C	LAND USE PERMIT NUMBER (IF APPLICABLE)			WATER LICENCE NUMBER (IF APPLICABLE)		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION				REGION	
					<input type="checkbox"/> NWT <input type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN	
E	LATITUDE			LONGITUDE		
	DEGREES	MINUTES	SECONDS	DEGREES	MINUTES	SECONDS
F	RESPONSIBLE PARTY OR VESSEL NAME		RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION			
G	ANY CONTRACTOR INVOLVED		CONTRACTOR ADDRESS OR OFFICE LOCATION			
H	PRODUCT SPILLED		QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES		U.N. NUMBER	
	SECOND PRODUCT SPILLED (IF APPLICABLE)		QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES		U.N. NUMBER	
I	SPILL SOURCE		SPILL CAUSE		AREA OF CONTAMINATION IN SQUARE METRES	
J	FACTORS AFFECTING SPILL OR RECOVERY		DESCRIBE ANY ASSISTANCE REQUIRED		HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT	
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS					
L	REPORTED TO SPILL LINE BY	POSITION	EMPLOYER	LOCATION CALLING FROM	TELEPHONE	
M	ANY ALTERNATE CONTACT	POSITION	EMPLOYER	ALTERNATE CONTACT LOCATION	ALTERNATE TELEPHONE	

REPORT LINE USE ONLY

N	RECEIVED AT SPILL LINE BY	POSITION	EMPLOYER	LOCATION CALLED	REPORT LINE NUMBER
		STATION OPERATOR		YELLOWKNIFE, NT	(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					

APPENDIX H – NT-NU Spill Report

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND
OTHER HAZARDOUS MATERIALS



Canada



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:	MM	DD	YY	Report Time:	<input type="checkbox"/> Original Spill Report OR <input type="checkbox"/> Update # _____ to the Original Spill Report	Report Number:
	Occurrence Date:	MM	DD	YY	Occurrence Time:		
C	Land Use Permit Number (if applicable):				Water Licence Number (if applicable):		
D	Geographic Place Name or Distance and Direction from the Named Location:					Region: <input type="checkbox"/> NT <input 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:				Responsible Party Address or Office Location:		
G	Any Contractor Involved:				Contractor Address or Office Location:		
H	Product Spilled: <input type="checkbox"/> Potential Spill		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 Environment:		
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:	Employer:	Location Called:	Report Line Number:	
Lead Agency: <input type="checkbox"/> EC <input type="checkbox"/> CCG/TCMSS <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> AANDC <input type="checkbox"/> NEB <input type="checkbox"/> Other: _____					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:							

APPENDIX I – 2019 Mock Spill Scenario

Mock Spill Itivia 2019



AEM, Meliadine project

2019/07/15

Authored by Daphne Morin

Reviewed by Bethany Hodgins & Terry Ternes

INTRODUCTION

On July 12, 2019 the Agnico Eagle Environment Department conducted a mock spill event at the Itivia refueling station and tank farm as per regulation. A representative of Agnico Eagle emergency response (ERT), Agnico Eagle warehouse staff, Agnico Eagle environment staff, Petro-Nav Inc. ships captain, Intertek personnel, Sarliaq operators and the Rankin Inlet Fire Chief and crew attended the event.

The mock spill verbal scenario involved a compromised expansion joint. The broken expansion joint is exterior to the fuel tank containment berm. The fuel leaked 10 liters per minute for 50 minutes, for a total of 500 L of diesel spilled. Without spill intervention, this volume of diesel would be a hazard to Melvin Bay. Generally, expansion joints are identified as one of the weakest points on a welded fuel line. There is high potential that a small leak, such as this scenario, would not be detected as a pressure drop at the ship. Intertek completes hourly inspections of the fuel line; it is feasible that a spill of this caliber could go undetected for 50 minutes.



Figure 1 - Discussion of the Contents in the Emergency Sea Cans

PRESENTATION OF MATERIAL AND RECOMMENDATIONS PRIOR TO VERBAL SCENARIO

11:15 The Environment Department reviewed the contents of the sea cans and it was found that the First Aid Kit and one sledgehammer were missing. These items have since been replaced.

15:20 All attendees were welcomed and the event was initiated.

15:26 The Environment General Supervisor explained all the equipment available in the sea cans. The following items were reviewed with attendees:

- Floating Hydrocarbon Booms
- Hydrocarbon Rolls
- Hydrocarbon Pads
- Lined Quatrex Bags
- Empty 205 L TDG drums
- Spill Trays
- Personal Protective Equipment
- Oil Skimmer
- Containment Booms
- Hand Tools



Figure 2 - Review of Items in the Emergency Sea Cans

15:39 Intertek proposed to leave the seacans open during fuel transfer and asked for the sea cans to be closer to potential spill origins. They also requested the sea cans to be turned towards the shore, this would ensure a fast response if needed. Agnico Eagle will leave the sea cans open during the fuel offloading and will evaluate alternate locations for the sea cans.

15:40 Intertek requested to pump out the water from the berm situated under the main valve to prevent overflowing. This was completed and a rain cover is to be installed.

15:42 The Environment General Supervisor asked for Intertek and ship personnel to have radios programed with Meliadine channels. This will ensure rapid communication when needed. This action item has been communicated to the Energy and Infrastructure Department (E&I). E&I will supply a radio to Intertek but not to the boat, as Intertek and the boat will have their own internal radio communication.

16:00 Intertek suggested to revisit the position of the marine boom sea can. They would prefer the sea can is closer to shore. This will help responders deploy the marine boom efficiently.

16:03 The Environment Coordinator informed the group the marine boom sea can was placed using a crane and may need to be moved in winter when the ground is frozen. This request has been communicated to E&I, who are assessing the feasibility of relocating the sea can.

MOCK DRILL VERBAL SCENARIO

16:07 Spill occurs (500 L of leaking fuel on the road). An Intertek personnel spotted the incident.

16:08 Intertek personnel called the ship's captain and requested an emergency stop of fuel transfer. Intertek called "CODE 1" to Rankin Inlet dispatch and requested environmental personnel to contact ERT on the radio for assistance. ERT indicated that it would be a minimum

of 1 hour to mobilize the Meliadine ERT to Melvin Bay. Due to the sensitive time frame, calls would be made to the contractors in Rankin Inlet to secure additional help.

16:12 Intertek stated they would attempt to dig a trench to contain the spill in the area contaminated, to avoid fuel flowing into the bay. It was noted the ground was very hard and manual digging may not be possible. It would be beneficial to have a pallet of full sand bags to create a berm when needed. Agnico Eagle will evaluate this option.

16:20 Intertek called warehouse for equipment to assist with spill containment such as an excavator. It was brought to the group's attention that wires or pipes may be installed under the road. It would be valuable to have an as-built plan of the area. No trenching is to occur if there is a chance of hitting a buried line. It was noted that a loader is in close proximity to Itivia, loose material from the area could be collected and a berm constructed that would minimize any fuel movement.

16:25 Mark Wyatt Rankin Inlet Fire Chief informed the group the fire department is available at all times for assistance. They can be reached at 867-645-2525. Local contractors can be called to assist with equipment and labor if required.

16:26 Richard Connolly from Sarliaq informed the group there is a Sarliaq security individual present at Itivia beach 24/7 during the summer. They are located in the blue gatehouse and are available to help with spill response. Sarliaq could potentially supply some equipment and labor on short notice.

16:30 The verbal scenario was concluded, it was determined all group members had a sufficient understanding of the roles responsibilities of all spill responders.

16:33 Terry Ternes reviewed the environmental ship to shore procedure with the group.

ACTIONS ITEMS

- Sea cans to be moved closer to potential spill origins and turned towards the shore. This is to be evaluated by Agnico Eagle; the best location for sea cans will be determined.
- Pump out the water under the main valve containment berm, this action item has been completed.
- Radios to be program with Meliadine channels for Intertek and ship. It was decided that only Intertek needs a radio as Intertek communicates to the boat on different channels. E&I to supply radio to Intertek.
- Marine boom sea can to be moved closer to shore if possible. This will allow better access for the marine booms to be attached to a boat and pulled into the Melvin Bay. This will be evaluated by Agnico Eagle.
- Add a pallet of full sand bags to emergency spill sea cans. This will be evaluated by Agnico Eagle.
- Have an as-built plan of Itivia Area area available. This will be evaluated by Agnico Eagle.
- Respond to Intertek questions;
 - Have the expansion valves and pressure been tested? If they have been tested was a pig put in the line to check if they are in working condition? Intertek noted the lines sounded empty, but they believe it should be full. These items will be discussed by E&I and Intertek.
 - How is the maximum capacity of a tank monitoring during fuel transfer?
 - Who is going to manipulate the valves? Intertek will manipulate the valves according to their contract.
- Follow up with Sarliaq if Agnico Eagle would like to rent stand lights for fuel transfers. Logistics indicated that there are light towers at the Itivia Yard that can be used if there is a spill.



Figure 3 – Marine Boom Use Review



Figure 4 – Discussion of Mock Spill




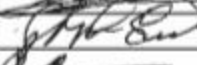



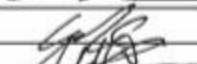


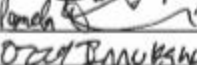
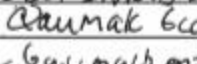
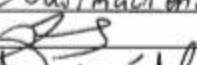
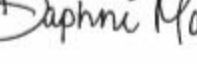







Figure 5 – Demonstration of Quatrex Bag Set-Up

Mock Spill Training Event

LOCATION: Itivua

DATE: July 12 2019

MEETING (DETAILS):


NAMES (PRINT)	SIGNATURE	NAMES (PRINT)	SIGNATURE
Bethany Hodgins			
Van Gortzen			
STEVE EASTERBY			
Richard Nalain			
Kianna Carroll			
Darren Wilcox			
Tom Mackay			
Simeon Dion			
Chris Gravelly			
Leo Kaludjak			
MARVIN DION			
CHRISTIAN DAVIGN			
Mario Bonenfant			
MARK WYATT			
PATRILAKAPSI			
OZZY INNIKSHUK			
DANAK ECCLES			
SAVIN MACKENZIE			
Terry Tenn			

Daphne Morin  Page 1 of 1

Emergency Contact Numbers

Last update: Jan 15, 2017 Version D

Radio: Channel 1; call “**CODE 1, CODE 1, CODE 1**”



Agnico-Eagle Mines (AEM) Meliadine Project
25 km north-north-west of Rankin Inlet
 63.027400 (N), - 92.171700 (W) (Helipad)

Meliadine Site Telephone Number: **819-759-3555**
 Rankin Office: (Ext:3199) 867-645-2920

Onsite Health Care Professional: 3911

Medical Emergency		
Rankin Inlet Health Center	Monday - Friday 8h30 to 17h00	(867) 645-6300
Head Nurse: Gracy Dounha	AFTER HOURS EMERGENCY	(867) 645-6700
Rankin Inlet Ambulance Service (Fire Dept.)	Emergency	(867) 645-2525
Rankin Inlet Search and Rescue		(867) 645-3300
3 Poison Control Centre	Emergencies	(867) 979-7350
(Qikiqtani General Hospital, Iqaluit)	General inquiries	(867) 979-7300
Law Enforcement, Rescue, Wildlife		
RCMP in Rankin Inlet (Death on camp or for Search & Rescue)		(867) 645-1111
(0123 = General Information, 1111 for emergency, 24H)		(867) 645-0123
Workers' Safety and Compensation Commission (WSCC)		(800) 661-0792 Hot Line
Mine Inspector: Lex Lovatt		(867) 920-3849
Coroner		(867) 975-7292
Conservation & Wildlife officer in Rankin Inlet		(867) 975-1063 cell
Officer Johanne Coutut Autut		(867) 645-8084
		(867) 645-8085
Hazmat & Spills		
CANUTEC		(613) 996-6666
Spills Hotline	Phone	(867) 920-8130
Agnico-Eagle Mines (AEM)		
Program Manager: Martin Plante martin.plante@agnico-eagle.com	Office	(819) 759-3555
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Channel 2 – CONSTRUCTION		Rx & Tx: 163.32000
Channel 3 – EXPLORATION		Rx: 163.57500 Tx: 166.70500
Channel 8 – ROAD Meliadine		Rx: 162.54000 Tx: 165.57000
Channel 9 – ROAD Rankin		Rx: 162.69000 Tx: 167.64000
Channel 10 – UG OPERATION		
Channel 11 – UG Spare		

APPENDIX J – Product Transfer Area Assessment



Meliadine Gold Project

Product Transfer Area Assessment – Rankin Inlet Itivia
Oil Handling Facility

January 6th 2019

Prepared for:

Environment and Climate Change Canada

Prepared by:

Agnico Eagle Mines Limited – Meliadine Division

Document Control

Version	Date	Tank/EC number	Section	Revision	Author
1	January 2019	EC# 00044507		Implementation of the Product Transfer Area Assessment – Rankin Inlet Itivia Oil Handling Facility for the ERP	Dan Gorton Env. Coordinator
2					

1. Introduction

The purpose of this document is to satisfy the requirement of section 15 of the Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations made pursuant to Canadian Environmental Protection Act, 1999 which states

15 (1) The owner or operator of a storage tank system must ensure that petroleum product and allied petroleum product transfer areas are designed to contain any releases in liquid form in the environment that occur during the transfer process. In accordance to the STSPPR a “transfer area” means the area around the connection point between a delivery truck, railcar, aircraft or vessel and a storage tank system in which the tanks have an aggregate capacity of more than 2 500 L. Furthermore, Subparagraph 2.1(2) of the STSPPR states a person must not release or permit or cause any release of a petroleum product or allied petroleum product, in liquid form in the environment, during the transfer of the product to or from a storage tank system if, in the case of a system that has a transfer area, the release during transfer reaches outside the transfer area.

2. Summary

Location: 62°48'16.66" N, 92°05'5.32" W. Itivia Road, Rankin Inlet.

Tank System ID: EC# 00044507



Figure 1 and 2: Agnico Eagle Ltd.'s Itivia Site Fuel Storage Area



Figure 3 and 4: Agnico Eagle Ltd.'s Itivia Site Fuel Storage Containment

The diesel (13.5ML and 20ML) storage tank system owned by Agnico Eagle Mines (AEM), located at Rankin Inlet was evaluated in accordance with Environment and Climate Change Canada's (ECCC) approach to transfer area protection. A number of potential incidents, risk and related receiving environments were identified for this product transfer area. The risk evaluation identified two risks requiring action. The risks were mitigated by designing secondary containment for the two product transfer areas.

At the marine line connection point, a 400L concrete spill basin was installed to catch small quantities of product in the event of a pinhole leak at the connection point, or during disengagement of the coupling. At the vehicle refueling station, a secondary containment area was designed to accommodate a fuel tanker during refueling. This containment area is designed to capture small spills that may result during disengagement of the dry quick connect coupling.

In addition, there were several procedures related mitigation measures developed for this site to address the identified risks (see Section 5 - SOP).

3. Background

The oil handling facility contains two steel tanks of 13.5ML (tank 1) and 20ML (tank 2) capacity. The tank system is owned and operated by Agnico Eagle Mines Limited. Tank 1 was installed in 2017 and Tank 2 was installed in 2018. Both tanks are operational 12 months of the year. The tanks are refilled annually (July to October). There have been no previous failures where product reached the environment with this storage tank system.

Refueling station to truck transfer area

There is one loading arm with dry quick connect coupling for tank truck filling operation, connected to an insulated pumping station (watertight 20' container). A single continuous 3m x 100mm hose transfers fuel from the loading arm to the fuel truck. The flow rate is a maximum of 800 L/min, or less, depending on the truck.

Transfer of fuel into trucks is performed in conformance with procedures outlined in:

- The National Fire Code of Canada (NFCC);
- The American Petroleum Institute (API) Standard: 2610-94: *"Design, Construction, Operation, Maintenance and Inspection of Terminal and Tank Facilities"*
- The Canadian Petroleum Products Institute (CPPI, 1992): *"Professional Driver's Manual"*.
- Canadian Council of Ministers of Environment (CCME) – Code of Practice (COP) 2003.
- Agnico Eagle fuel transfer procedure.

Ship to shore transfer area

The ship to shore PTA consists of a marine line connection with flange connection and check valve. A 400L concrete spill basin is present beneath the connection point. Product is transferred via a 120m x

100mm hose at a rate of 250m³/h. The ship's pumping system is fitted with an emergency shut off system which is activated when pumping pressure is lost.

Transfer of from ship to shore is performed in conformance with procedures outlined in:

- The National Fire Code of Canada (NFCC);
- The American Petroleum Institute (API) Standard: 2610-94: *"Design, Construction, Operation, Maintenance and Inspection of Terminal and Tank Facilities"*
- The Canadian Petroleum Products Institute (CPPI, 1992): *"Professional Driver's Manual"*.
- Canadian Council of Ministers of Environment (CCME) – Code of Practice (COP) 2003.

The risks identified under the following table (Section 3) as needing action have been addressed.

4. Analysis of Product Transfer Area Risks

The table below lists potential incidents, outcomes, description of PTA and receiving environments that have been identified for the storage tank system on site. The table also provides an evaluation of identified risks and an assessment on whether further action is required, and a list of mitigation measures.

Table 1: Product Transfer Risk Assessment - refueling station to fuel truck

Potential Incident	Outcome	PTA and Receiving Environment	Spill Consequence	Probability	Potential Impact	Evaluation	Mitigation Measures
Overfill during loading of fuel truck	Approximately 132.27L product is captured in secondary containment	Secondary containment Adjacent soil/gravel area within ~10m Melvin Bay	Low: the product is confined secondary containment. Moderate: the product reaches bare ground. High: the product reaches a water body.	Moderate	Low	No Action Required	Secondary containment with 40000L capacity at tanker connection point Scully fitted with optic overfill prevention system Permanent indoor structure with visual display for operator in cold weather
Overfill device fails	Product flows into 40000L secondary containment			Moderate	Low	No Action Required	Shut off button and tanker overfill pipe
Coupling/equipment fails at pump station-hose connection.	Broken piping/hose releases ~1000L of fuel to adjacent gravel area.			Moderate	Moderate	No Action Required	Shut off button, drainage to low point on roadside. Emergency Response Plan and Spill Contingency Plan Trained spill response staff and equipment for large spills on site.
Absence of inspection (pre-op, checklist)	Faulty component or leak is not detected resulting in slow release of ~1L of product			Moderate	Moderate	No Action Required	Pre-op inspection (daily by M&T and AEM) Standard Operating Procedure (SOP)
Public access	Member of the public attempts to take or release fuel			Low	Low	No Action Required	Signage and surveillance cameras Fuel system security coded Community awareness conducted by AEM
Vehicle contact with building/equipment	Broken piping releases ~1000L of fuel to adjacent gravel area.			Low	Moderate	No Action Required	Secondary containment structure protects fuel station from collision by forming a barrier. Fuel lines connected to tank farm can only release contents of the line.

Table 2: Product Transfer Risk Assessment – refueling station to fuel truck cont.

Potential Incident	Outcome	PTA and Receiving Environment	Spill Consequence	Probability	Potential Impact	Evaluation	Mitigation Measures
Inappropriate equipment for arctic conditions (arm/valve)	Valves and components fail in arctic conditions releasing ~100L of product			Moderate	Moderate	No Action Required	Valves and hoses suitable for arctic conditions installed. Pre-op inspection (daily by M&T and AEM)
Operator spills small amount of fuel while uncoupling hose	~100ml of fuel is captured in secondary containment			High	Low	No Action Required	Portable drip tray used within secondary containment

Table 3: Product Transfer Risk Assessment – Ship to shore

Potential Incident	Outcome	PTA and Receiving Environment	Spill Consequence	Probability	Potential Impact	Evaluation	Mitigation Measures
Leakage if fuel remains in line after off loading and leakage at all couplings in the line (by the boat and outside the connections)	Maximum of ~1500L of fuel is released to Melvin Bay	Secondary containment	Low: the product is confined secondary containment.	Moderate	High	No Action Required	Trained Intertek Personal oversee product transfer Line is cleared of fuel following transfer
Coupling/equipment fails at onshore coupling	Maximum of ~1500L of fuel is released to Melvin Bay	Adjacent soil/gravel area within ~10m Melvin Bay	Moderate: the product reaches bare ground. High: the product reaches a water body.	Moderate	High	No Action Required	Ships pumping system shuts off if hose pressure is lost. Trained Intertek Personal oversee product transfer Transfer point is up gradient of pumping point so line does not completely drain if uncoupled. Emergency Response Plan and Spill Contingency Plan Marine spill response equipment adjacent to transfer point.
Coupling/equipment fails at offshore coupling	Maximum of ~1500L of fuel is released to Melvin Bay			Moderate	High	No Action Required	Spill contained onboard at pumping area.
Public interference	Transfer hose is damaged by passing boat or transfer impacted by public protest			Low	High	No Action Required	Community awareness conducted by AEM Boat traffic monitored by Desgagnes and Intertek
Operator spills small amount of fuel while uncoupling hose	~100ml of fuel is captured in secondary containment			High	Low	No Action Required	Portable drip tray used within secondary containment

Table 4: Product Transfer Risk Assessment - Ship to shore cont.

Potential Incident	Outcome	PTA and Receiving Environment	Spill Consequence	Probability	Potential Impact	Evaluation	Mitigation Measures
Vehicle contact with piping between transfer point and tank	Broken piping releases ~5000L of fuel to adjacent gravel area, potentially reaching Melvin Bay.			Low	High	No Action Required	<p>Rock barrier protects pipeline from vehicles.</p> <p>Double walled piping installed beneath roadway.</p> <p>Fuel lines connected to tank farm can only release contents of the line.</p>

Please see Appendix A for the calculations relating to the product transfer areas. In summary, potential product spillage, volume has been calculated as follows:

Fueling station: a confirmed maximum delivery rate of 800 L/min and an emergency shut off time of 8 seconds would result in a product spillage volume of approximately 108.72L. Based on 10cm hose at 3m in length, a potential spill at the tank / hose connection would result in an additional volume of 23.55 L, for a total 132.27 L of fuel spilled.

Ship to shore: a confirmed maximum delivery rate of 4166.67 L/min and an emergency shut off time of 8 seconds would result in a product spillage volume of approximately 556 L. Based on 10 cm hose at 122 m in length, a potential spill at the tank / hose connection would result in an additional volume of 957 L, for a total 1512 L of fuel spilled.

5. Mitigation of Risks

Refueling station to truck transfer area

At the vehicle refueling station, a 40,000L secondary containment area was installed to accommodate a fuel tanker in the event of an accidental overfill or connection failure during fuel transfer. This area is a lined and bermed depression where the transfer station and the fuel truck are located during the fuel transfer process.

In the event of a spill three potential receiving environments have been identified for the refueling system: the gravel area surrounding the refueling station and extending a distance of approximately 10 meters, the adjacent soil/ground surface, and the adjacent body of water, Melvin Bay.

Any product amount of 1000L or less that spills onto the gravel area can be recovered using the spill kit and heavy equipment on site. For spills of over 1000L, the product will likely reach the adjacent soil/ground surface and/or the Melvin Bay directly via overland surface flow (depending on the season). The low point containing a double wall culvert would contain the product before reaching soil or Melvin Bay. During winter, the likely hood of product flowing to the shoreline increases; however, snow berms can be quickly installed. Mitigation measures include;

- 60 L secondary containment for hose storage
- 40000L secondary containment for refueling of fuel trucks
- Standard Operating Procedure
- Trained operators
- Spill kit at refueling area containing absorbent pads
- Personnel monitor transfer from viewing window in pump station
- Five wire optic transfer system to prevent overfill
- Containment designed to hold 110% of fuel truck load limit

Ship to shore transfer area

At the marine line connection point, a 400L concrete spill basin was installed to catch small quantities of product in the event of a pinhole leak at the connection point, or during disengagement of the coupling.

In the event of a spill three potential receiving environments have been identified for the fuel transfer system: the gravel area partially surrounding the secondary containment and extending a distance of approximately 5 meters, the adjacent soil/ground surface, and the adjacent body of water, Melvin Bay.

Any product amount of 100L or less that spills onto the gravel area can be recovered using the spill kit and shovels. For spills of over 100 L, the product will likely reach the adjacent soil/ground surface and/or Melvin Bay directly via overland surface flow (depending on the season). During winter, the likely hood of product flowing to the shoreline increases; however, snow berms can be quickly installed. Mitigation measures include;

- 400L secondary containment at onshore connection point
- Pump and 1000L portable containments on standby during transfer if concrete containment overfills
- Trained Intertek Personnel oversee product transfer
- Standard Operating Procedure

- Emergency Response Plan and Spill Contingency Plans on site
- Oil Pollution Prevention Plan on site
- Marine spill response equipment on site

6. Standard Operating Procedure (SOP)

Refueling station to truck transfer area

The AEM procedure for refueling fuel trucks is summarized as follows;

1. Perform an inspection of the vehicle.
2. Park the vehicle in the vicinity of the refueling tank and shut off your ignition.
3. Install wheel chocks on either side of the tanker tire.
4. Inspect the entire working area including the steps up to the HMI and the area in front of the loading arm and scully system; call your supervisor if there are problems.
5. Install the portable spill containment underneath the connection point.
6. Check the maximum capacity for the tanker being used. Ensure to only fill the tanker at 90% of the capacity to have room for fuel expansion at different temperatures, and a safe level for haulage. Verify the current tank level from the electronic gauge on the side of the tanker, fill the tank to 37800 L maximum (18.9 in each compartment).
7. At the valve control panel, lift all the levers up, and make sure the valves are open.
8. Remove the cap of the scully plug and push and twist it onto the receiving end on the truck. Make sure the green light is on before continuing.
9. Connect the loading arm to the tanker.
10. Below is a picture of the final arrangement. Make sure the valve are open on each side.
11. Open the valve on the building.
12. Enter the control room and begin to program the fuel loading on the HMI.
13. Enter the applicable Microload identification and load sequence.
14. Enter the volume measure with the pop-up keypad.
15. Select the tank from which to pump fuel.
16. Select the start button to activate the pump.
17. Once the fueling begins, the operator must monitor the situation diligently; this includes checking for leaks or monitoring any other unusual situations. The operator must be at the connection point at all times during fueling.
18. When finished pumping, close the valve on the building.
19. Disconnect the loading arm first, and then the truck level control.
20. Put the arm back and the truck level control in place. Close the valve.
21. Put the protection bag over the scully and the hose. Verify if the caps are put back on the truck.
22. Put back the portable spill containment, and unhook the overflow hose, install the cap and close the valve.
23. At the valve control panel, pull down all the lever to close valve, and make sure they are closed.
24. Complete the mechanical verification in the pump station, just beside the HMI trailer. Make sure they have no leaks on the equipment.
25. Before you leave, make sure the three doors are locked at the fuel station.
26. Remove the wheel chocks and fully inspect the vehicle before beginning to bring the fuel to the Meliadine Fuel Tank Farm.

27. If you encounter any emergency or a spill occurs, call your supervisor immediately and the supervisor of Agnico Eagle Mine Meliadine.

Ship to shore transfer area

The AEM procedure for refueling tanks is summarized as follows, however the fuel transfer is overseen by Intertek (contracted first responder);

1. The Oil Pollution Emergency Plan (OPEP) must be reviewed on an annual basis and updated prior to the first annual discharge. This will include but not limited to:
 - a) Reviewing the phone numbers for emergencies
 - b) Updating maps
 - c) Review and if necessary update equipment lists
 - d) Review roles and responsibilities
 - e) Update Declaration
2. Contact Canadian Coast Guard and Transport Canada Pollution Prevention and make them aware of plans for transferring of fuel into our Oil Handling Facility (OHF) for that season.
3. Complete *Inventory report for Spill Response Sea Can at AEM's Oil Handling Facility in Rankin Inlet*.
4. Ensure Shipping Company has provided Hose Testing Annual certification.
5. All personnel who will be a part of the fuel transfer (including Rankin Inlet Supervisor and third part contractor Intertek) must review the OPEP and be familiar with preventive measures to take and with the steps to take in the case of a spill event while fueling.
6. Install and monitor secondary containment underneath each connection of conduit on land.
7. Ensure there is two-way functional communications between the OHF and the off-loading vessel.
8. Ensure there is lighting in place at the transfer flange to provide illumination during any transfers taking place during the low to no light hours.
9. Prior to any discharge Agnico Eagle must receive a copy of the ship/shore checklist completed by the shipping company. Agnico Eagle should also verify this has been completed (as much as realistically possibly without boarding the ship).
10. Contact must be made with both the H&S, Environment, Warehouse and Community Relations Departments prior to the discharge of fuels.
11. The *Pre-discharge Checklist for AEM's Oil Handling Facility in Rankin Inlet* must be completed, signed and provided to the Environment Department prior to discharge.
12. Photos of the complete fuel transfer process should be taken, proving that all above procedures have been reached.
13. During the ship-to-shore transfer, Agnico Eagle will have competent personnel on location at all times to monitor the fuel transfer and maintain contact with the tanker's crew.
14. Monitor the fuel transfer at the beginning of each transfer and after that on an hourly basis checking the manifold, conduit, tank, and any connection points on land for spills and/or leaks. Communication between shore and ship should take place on an hourly basis.
15. Have a fuel spill scenario annually to cover both crews .

7. Conclusion

The Itivia Fuel Tank Farm, owned by Agnico Eagle Mines and located in Rankin Inlet, NU, has recently undergone modifications to mitigate risks associated with transfers of fuel at the ship to shore transfer area, as well as the truck transfer station. A 400L concrete spill basin was installed at the ship to shore PTA, beneath the on-shore connection point from the ship. This ship to shore PTA was designed to contain spills that may occur in the event of a pinhole leak at the connection point, or during unexpected disengagement of the coupling. Additionally, a 40,000L secondary containment was constructed for the truck transfer area. Fuel transfer vehicles now park within a lined and bermed depression, designed to contain spills that may occur from an accidental overfill, coupling device failures, and other spill scenarios while transferring fuels.

In addition to the secondary containment areas noted above, emergency spill response equipment is located near the ship to shore transfer valve on shore. In the event of a spill reaching Melvin Bay, Marine containment booms, anchors, trench shovels, absorbant pads, pumps and a dedicated boat and ATV are accessible year-round, and regular spill response training is conducted with members of the Meliadine Emergency Response Team and Environment Department. Meliadine Environment Technicians also conduct regular inspections of the Itivia site in order to ensure proper spill prevention and containment equipment is available, and that proper fuel transfer protocols are followed. All of the measures noted above are in place in order to contain, mitigate and prevent spills during the process of transferring fuel.

Appendix A - Potential Spill Quantities

Fuel Station to Fuel Truck

Flow rate = 800L/min maximum rate

Scully arm and hose length: 300cm, 10cm diameter

1. Calculate Volume of Spill (from time it takes operator to shut off pumping)
 $800\text{L/min} = 800/60\text{s} = 13.34$
8s = time it takes for operator to turn off the pump should the tank start to overflow

$$\begin{aligned}\text{Volume} &= 13.34\text{L/s} * 8\text{s} \\ &= 108.72\end{aligned}$$

2. Calculate the Volume of the pipe:

$$\text{Radius} = (\text{diameter of the pipe} / 2)$$

$$\begin{aligned}\text{Radius} &= (10/2) \\ &= 5\end{aligned}$$

$$\text{Volume of a cylinder: } V = \pi r^2 h$$

$$\begin{aligned}\text{Volume} &= 3.14 * 5^2 * 300 \\ &= 23550\end{aligned}$$

3. 1 Litre = 1000cm³
Volume in Litres = (volume in cm³) * (1L/1000cm³)
Volume = (23550 / 1000 L)
= 23.55 L

$$\begin{aligned}\text{Total Potential Spill} &= 108.72 + 23.55 \\ &= 132.27 \text{ L}\end{aligned}$$

Therefore, the amount of a potential spill at the site would be 23.55L of fuel in the hose, plus 108.72L (using 8s before shut off) for a total of 132.27L.

Ship to shore:

Flow rate = 4166.67L/min maximum rate

Transfer hose length: 12192cm, 10cm diameter

1. Calculate Volume of Spill (from time it takes operator to shut off pumping)
 $4166.67\text{L/min} = 4166.67/60\text{s} = 69.45$
8s = time it takes for operator to turn off the pump should the tank start to overflow

$$\begin{aligned}\text{Volume} &= 69.45\text{L/s} * 8\text{s} \\ &= 555.6\text{L}\end{aligned}$$

2. Calculate the Volume of the pipe:

$$\text{Radius} = (\text{diameter of the pipe} / 2)$$

$$\begin{aligned}\text{Radius} &= (10/2) \\ &= 5\end{aligned}$$

$$\text{Volume of a cylinder: } V = \pi r^2 h$$

$$\begin{aligned}\text{Volume} &= 3.14 * 5^2 * 12192 \\ &= 957072\end{aligned}$$

3. 1 Litre = 1000cm³
Volume in Litres = (volume in cm³) * (1L/1000cm³)
Volume = (957072 / 1000 L)
= 957.07 L

$$\begin{aligned}\text{Total Potential Spill} &= 555.6 + 957.07 \\ &= 1512.67 \text{ L}\end{aligned}$$

Therefore, the amount of a potential spill at the site would be 957.07 L of fuel in the hose, plus 555.6 L (using 8s before shut off) for a total of 1512.67 L.

APPENDIX K – STR's Cross Reference Table

Table 1. Cross-reference of STS Regs, s. 30 to 32, to this emergency plan for P-50 Diesel Storage Tank System STS EC-00044507

STS Regs reference	Information required	Location of information in this emergency plan
s. 30(1)	The owner or operator of a storage tank system must prepare an emergency plan taking into consideration the following factors:	
s. 30(1)(a)	- the properties and characteristics of each petroleum product (i.e. Jet A1) or allied petroleum product stored in each tank of the system and	- MSDS for P-50 Diesel in Appendix D of the OPEP - Spill Contingency Plan and Hazardous Materials Management Plan, submitted with the annual report
s. 30(1)(a) continued	- the maximum expected quantity of the petroleum product or allied petroleum product to be stored in the system at any time during any calendar year; and	Can be find in section 4.1
s. 30(1)(b)	- the characteristics of the place where the system is located and of the surrounding area that may increase the risk of harm to the environment or of danger to human life or health.	- Site Description outline in section 4.1 and 4.3 of the OPEP
s. 30(2)	The emergency plan must include:	
s. 30(2)(a)	- a description of the factors considered under s. 30(1)	- See the rows above.
s. 30(2)(b)	- a description of the measures to be used to prevent, prepare for, respond to, and recover from any emergency that may cause harm to the environment or danger to human life or health;	- OPEP: s. 10 Spill Procedures s. 10.2 Spill Reporting s. 11 Spill Scenarios and Responses; s. 12 Spill Prevention; s. 12.1 Spill Training; .
s. 30(2)(c)	- a list of the individuals who are required to carry out the plan and a description of their roles and responsibilities;	- OPEP: s. 9 Roles and Responsibilities s. 9.1 First Responder s. 9.2 Emergency Control Group Figure 3. response Management System.

Table 1. Cross-reference of STS Regs, s. 30 to 32, to this emergency plan (continued)

STS Regs reference	Information required	Location of information in this emergency plan
s. 30(2)(d)	- identification of the training required for each of the individuals listed under s. 30(2)(c);	- OPEP s. 12.1 Training and Appendix I Mock scenario
s. 30(2)(e)	- a list of the emergency response equipment included as part of the plan, and	- OPEP s. 7 Equipment and PPE

	the equipment's location; and	
s. 30(2)(f)	- the measures to be taken to notify members of the public who may be adversely affected by the harm or danger referred to in s. 30(2)(b)	- OPEP s. 8.1.1 Communication with the Public
s. 30(3)	The owner or operator of a storage tank system must ensure that the emergency plan is ready to be implemented:	
s. 30(3)(a)	- in the case of a storage tank system that is installed before the coming into force of these Regs, no later than two years after the day on which these Regs come into force (i.e. by 12 Jun 2010); and	N/A
s. 30(3)(b)	- in any other case, before the day on which the first transfer of petroleum products or allied petroleum products into any tank of the storage tank system occurs.	- OPEP v.1.1 Sept 2017 - Spill Contingency Plan v6 March 2017
s. 31(1)	The owner or operator of a storage tank system must keep: - the emergency plan up-to-date and - keep a copy of it readily available for the individuals who are required to carry it out, - as well as a copy at the place where the storage tank system is located if that place is a place of work.	- OPEP is reviewed annually prior every shipping season and a hard copy is available at the Rankin Inlet Marshalling facility during transfer operations - Spill Contingency Plan is reviewed annually season and a hard copy is available at the Rankin Inlet Marshalling facility during transfer operations
s. 31(2)	The owner or operator must notify the Minister of the civic address of each location where the emergency plan is kept.	- No civic address, coordinates are at page ii of this document.

Table 1. Cross-reference of STS Regs, s. 30 to 32, to this emergency plan (continued)

STS Regs reference	Information required	Location of information in this emergency plan
s. 32(1)	If the owner or operator of a storage tank system has prepared an emergency plan with respect to the system on a voluntary basis or for another government or under an Act of Parliament and the plan meets the requirements of s. 30(1) and (2), they may use that plan for the purposes of meeting those requirements.	- OPEP and Spill Contingency Plan
s. 32(2)	If the plan does not meet all of the requirements of s. 30(1) and (2), the owner or operator may use the plan if they amend it so that it meets all of those requirements.	- OPEP and Spill Contingency Plan