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Raytheon
Canada Limited

SPILL CONTINGENCY PLAN

FOR THE

North Warning System

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CHANGE HISTORY

This sheet is a record of each issue of this document. When the revised document is issued, the previous issue is automatically superseded.

Revision	Date	Configuration Management	Pages Changed	Reason for Change
-	10-Dec-2014	-	All	Initial Submission ("Rev -" is Rev 1)
2	01-Apr-2015	-	All	Updates throughout
3	01-Apr-2016	-	ii	NWS Program Manager Changed.
			22	Updated contact list
4	01-Apr-2017	-	ii	Updated NWS Mission Assurance Manager
			1	Updated s. 3.0 - Scope
5	29-Mar-2018	-	ii	Updated NWS Program Manager, added NWS Program Contracts Manager
			1	Added "If there is a spill, contact your zone manager. If you cannot reach your zone manager report the spill directly to the NWSCC by dialing 88-3400 or 88-3500 on any NWS Site." before the introduction to the plan
			1	Moved the Spill definition into the Introduction
			3	Moved the "General" section to page 14 and retitled it "Background"
			3	Renumbered headings
			4	s. 5.3 re-worded section to more clearly define the division of responsibility during site re-supply
			5	s. 6.1 combined inspections into one statement. Added API 653 tank inspections and CAP program
			6	s. 6.2 removed statement about why remote monitoring is not practiced on the NWS
			6	s. 6.3 removed unnecessary statement "Details of RCL's spill response procedures are provided below. "
			6	s. 6.3.1 updated appendix reference
			6	s. 6.3.1.1 reworded to refer to appendix for information required on initial incident report and to include incidents reported by Canadian Rangers or third parties

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Revision	Date	Configuration Management	Pages Changed	Reason for Change
			7	s. 6.3.1.2 updated formatting, changed required timing of the report to match the NWS SOW
			7	s. 6.3.1.3 updated formatting
			7	s. 6.3.1.4 updated formatting, added info required for spills from STSs over 100 L, changed AANDC to INAC, added Nunatsiavut Government reporting requirement, updated flowchart (Figure 1)
			10	s. 6.3.1.5 Section re-titled to match current RCL Organization, changed the reference from root cause analysis to Incident Investigation Report (which includes a root cause analysis)
			10	s. 6.3.2 section re-titled to match Figure 1
			10	s. 6.3.3 section re-titled to match Figure 1, removed statement re: third parties as it is already covered in this plan, renumbered Figure 3 as Figure 2
			13	s. 6.3.8 removed requirement for post-spill review
			13	s.6.4 added road transport
			14	s. 7.0 added document numbers for forms
			14	s. 8.0 Moved former "General" section and combined it with the former Appendix 1 (Risk analysis), updated the probability in the risk analysis table
			20	Appendix 1 added ECCC spill line number for NL, added Nunatsiavut Government Contact info, Replace NWS contact list with reference to NWSCC document
			22	Appendix 2, added document number, updated form FM-EHS-40
			23	Appendix 3, added document number, updated form FM-EHS-41
			24	Appendix 4 changed AANDC to INAC
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If there is a spill, contact your zone manager. If you cannot reach your zone manager report the spill directly to the NWSCC by dialing 88-3400 or 88-3500 on any NWS Site.

1.0 INTRODUCTION

This plan provides instructions for spill prevention control and countermeasure plans for bulk fuel and other hazardous materials (HAZMAT) which are present at the North Warning System (NWS) facilities.

1.1 SPILL DEFINITION

In this plan the following definitions apply:

- Spill – the accidental and/or uncontrolled discharge of any volume of fuel or HAZMAT from its storage container or structure, vehicle, pipe or other container:
 - into the natural environment; or
 - within a building.
- Fuel – At NWS sites, power generation and mobile support equipment (e.g. trucks, bull dozers, etc.) use Jet A1. See 8.3 Bulk Fuel Storage and Distribution System for details.
- HAZMAT – Hazardous materials, including but not limited to:
 - polychlorinated biphenyls (e.g. PCB-containing oil or paint);
 - chlorinated and non-chlorinated solvents (e.g. cleaner-degreasers);
 - flammable gases (e.g. acetylene);
 - waste petroleum products (e.g. used engine oil);
 - corrosives (e.g. battery acid);
 - glycol (e.g. antifreeze);
 - asbestos (e.g. pipe insulation); and/or
 - halocarbons (e.g. CFC-12, FM-200).

Discharges of any quantity or physical state (solid, liquid, gas) are included in this definition. There may be circumstances where the discharge of a substance not on the above list may be considered hazardous by personnel discovering the spill, e.g. large volumes of spilled wastewater. When in doubt, report the spill to the LSS Manager, who in turn can seek guidance from the Environmental Services Officer. Reporting procedures for Halocarbon releases are within the Halocarbon Management Plan.

2.0 PURPOSE

The purpose of this plan is to:

- a. provide clear procedures and instructions for responding, mitigating, and reporting fuel & HAZMAT spills;

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- b. minimize the environmental impacts of fuel and HAZMAT spills by establishing pre-determined responses and plans of action;
- c. ensure the health and safety of employees, contractors, subcontractors, and local communities is not compromised due to fuel and/or Hazmat activities to the extent possible;
- d. provide a reporting structure for fuel and HAZMAT spills;
- e. ensure the environment is maintained in its natural state and conduct remediation activities as may be required;
- f. identify the roles and responsibilities of all parties involved in fuel and HAZMAT spill response activities; and
- g. identify resource requirements for the response to fuel and HAZMAT spills; and
- h. perform annual review and update of plan in conjunction with EPP or more frequently as circumstances warrant.

This plan combined with site descriptions from EPP section 25 meets the requirements of an Emergency Plan under the federal Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations (STS Regs) section 30.

3.0 SCOPE

This plan applies to all activities and facilities pertaining to NWS sites. This includes:

- Short Range Radar (SRR) sites which operate unattended;
- Long Range Radar (LRR) sites which operate unattended with occasional staff visits; and
- Logistics Support Sites (LSS) which are staffed to support SRR and LRR operations.
- LSS-I, the LSS located at the Forward Operating Location (FOL) in Inuvik, Northwest Territories.
- LSS-Q, the LSS located at the FOL in Iqaluit, Nunavut.
- LSS-G, the LSS located at 5 Wing CFB Goose Bay, Labrador
 - This site will report spills to the Base Fire Hall.
 - Spill reporting and response will be actioned by the Base to conform with 1 Canadian Air Division Head Quarters (CAD HQ) Uniform Spill Reporting Protocol and the 5 Wing Emergency Response Plan.
 - The site will report spills to the NWSCC and CMO, NWSCC will notify NWSO of the spill and NWSO will liaise with the Wing Environment Officer, as required.
- The NWSCC, located at 22 Wing CFB North Bay, Ontario
 - This site will report spills to the 22 Wing Environment Officer.
 - Spill reporting and response will be actioned by the Base to conform with 1 CAD HQ Uniform Spill Reporting Protocol.
 - Spill response action will be taken by the local community emergency response service.
 - The site will report spills to the NWSCC and CMO, NWSCC will notify NWSO of the spill and NWSO will liaise with the Wing Environment Officer, as required.
- North Warning System Support Centre (NWSSC), located at 22 Wing CFB North Bay, Ontario
 - This site will report spills to the 22 Wing Environment Officer.

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- Spill reporting and response will be actioned by the Base to conform with 1 CAD HQ Uniform Spill Reporting Protocol.
 - Spill response action will be taken by the local community emergency response service.
 - The site will report spills to the NWSCC and CMO, NWSCC will notify NWSO of the spill and NWSO will liaise with the Wing Environment Officer, as required.
- The Short Range Development Site (SRD), located at 22 Wing CFB North Bay, Ontario
 - This site will report spills to the 22 Wing Environment Officer.
 - Spill reporting and response will be actioned by the Base to conform with 1 CAD HQ Uniform Spill Reporting Protocol.
 - Spill response action will be taken by the local community emergency response service.
 - The site will report spills to the NWSCC and CMO, NWSCC will notify NWSO of the spill and NWSO will liaise with the Wing Environment Officer, as required.

4.0 APPLICABLE DOCUMENTS

Raytheon Canada Limited (RCL) Environmental Protection Plan (EPP) applicable documents:

- a. RCL's EPP for the O&M of the NWS;
- b. NWS O&M Contract SOW; and
- c. RCL's Environmental Incident Reporting SOP (SP-EHS-1).

5.0 RESPONSIBILITY AND AUTHORITY

RCL employees, contractors, subcontractors, and anyone attending NWS sites are responsible for fuel and/or HAZMAT spill prevention, detection, and response actions during NWS O&M activities.

5.1 RAYTHEON CANADA LIMITED

RCL is responsible for:

- a. Maintaining an up-to-date Spill Contingency Plan (this document);
- b. Abiding by all fuel and HAZMAT handling and maintenance instructions;
- c. Providing competent individuals to perform fuel and HAZMAT associated tasks;
- d. Identifying the requirements of sub-contractors involved in NWS O&M activities; and
- e. Responding appropriately to fuel and HAZMAT spills.

When a fuel or HAZMAT spill is reported at an NWS site, RCL will mobilize personnel, materials and equipment to respond immediately upon receipt of the spill report or as soon as practicable. Considerations will be taken for weather, temperature, season, and transportation availability.

RCL spill response personnel will manage most releases unless the circumstances of the spill are deemed, by the Environmental Services Officer, to require external resources.

When required, additional assistance will be requested from the following organizations, including but not limited to:

- a. other NWS sites;

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- b. the Department of National Defence (DND);
- c. the Canadian Coast Guard;
- d. Parks Canada;
- e. Environment Canada;
- f. Department of Fisheries and Oceans;
- g. Government of Yukon;
- h. Government of Northwest Territories;
- i. Government of Nunavut;
- j. Government of Newfoundland and/or
- k. Local fire departments.

Additional assistance may also be hired from:

- a. Northern residents;
- a. Local communities; and/or
- b. Commercial spill response firms.

5.2 FUEL RE-SUPPLY CONTRACTORS AND SUB-CONTRACTORS

Responsibilities of contractors and sub-contractors engaged in fuel resupply activities at NWS sites include:

- a. Provision of a Spill Response Plan which describes:
 - i. spill response action plans for initial response;
 - ii. containment, clean-up, disposal and site remediation of spills;
 - iii. chain of command and responsibilities of personnel;
 - iv. materials and equipment available for deployment; and
 - v. post spill lessons learned meetings and revisions of spill plan as required.
- b. Maintain sufficient personnel, materials and equipment for adequate response to any spills which may occur during fuel resupply operations.

In the event that a spill occurs during fuel resupply operations, RCL employees will assist in spill response activities to the fullest extent, when and where possible.

5.3 DIVISION OF RESPONSIBILITY DURING RE-SUPPLY

RCL takes responsibility for any spills from the fuel system between the sealift/airlift connection point and the bulk fuel storage system. The sealift/airlift contractors have responsibility for any spills up to the connection point to the storage tank system.

- a. If a fuel spill occurs between the sealift re-supply pipeline beach head and the ship or barge, the sealift contractor's Spill Contingency Plan is implemented. The sealift contractor assumes the role of Spill Control Manager and reports the spill to the required authorities.
- a. Similarly, if the spill occurs between the airlift de-fueling head and the aircraft tank or bladder, the airlift contractor assumes the role of Spill Control Manager and reports the spill to the required authorities.

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- b. In all other instances, the RCL Fuel & HAZMAT Spill Contingency Plan is implemented. The LSS Manager becomes the Spill Control Officer, and the CMO Environmental Services Officer becomes the Spill Control Manager and reports the spill.
- c. In all instances, the individual discovering the spill must take steps to ensure that personnel on the ship, barge, airplane or helicopter are contacted to stop the pumps and close the isolation valves, if applicable.
- d. In all instances, the NWSCC must be informed even if the spill has occurred within the contractor's area of responsibility in order to inform the LSS Manager, CMO and NWSO. In cases where the responsibility resides with the contractor, RCL will provide assistance, as requested by the sealift or airlift contractor, in implementing their Spill Contingency Plan.

6.0 PROCEDURE

RCL manages the risks of spills by ensuring there are effective spill prevention programs and controls, maintaining and testing spill detection systems, and providing competent spill response resources.

6.1 SPILL PREVENTION

RCL uses comprehensive controls and standardized practices/procedures for reducing the likelihood of spills. These include but are not limited to:

- a. Establishment of secure storage areas for HAZMAT;
- b. Inventory management of all stored fuel/Hazmat chemicals;
- c. Labelling of HAZMAT in accordance with Workplace Hazardous Material Information System (WHMIS) legislation;
- d. Transportation of HAZMAT in accordance with the Transportation of Dangerous Goods (TDG) Regulations;
- e. Training of personnel in correct handling, use, and storage of hazardous materials;
- f. Inspections of the bulk fuel infrastructure including:
 - i. Inspecting tanks using inspectors certified to inspect tanks to American Petroleum Institut (API) 653;
 - ii. Completing a Corrosion Analysis Program (CAP) with inspections validated by a NACE certified corrosion expert;
 - iii. Performing facility conditions surveys on every NWS site within two years to identify items of risk (e.g. bent pipes, damaged pipe supports, rust);
 - iv. Completing Preventive Maintenance Inspections (PMIs) of bulk fuel system components (e.g. pumps, valves), to include integrity testing where necessary;
- g. Regular maintenance of bulk fuel storage tank systems;
- h. Training of bulk fuel technicians in standard operating procedures (e.g. fuel transfers, fuel resupply);
- i. Safeguards for bulk fuel systems at unattended sites (e.g. "Time-Outs" for fuel pumps during transfer operations);
- j. Security; and

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- k. Administration of program effectiveness, managing associated risks, spill supplies and monitoring systems.

6.2 SPILL DETECTION

Methods employed for detection of spills include:

- a. *Visual & odour detection.* This method is usually conducted in the summer months when there is limited or no snow cover.
- b. *Inventory reconciliation.* Inventory reconciliation is completed by dipping the bulk fuel tanks. This method of measurement provides data comparing actual with estimated consumption figures, which may indicate a spill occurrence. Loss of inventory may also not be spill related (e.g. theft of product), to validate an inspection should take place; and
- c. *Remote monitoring.* Alarms are triggered at the NWSCC when fuel levels of indoor day tanks vary by more than the expected amount or fuel pumps operate with greater than expected frequency at unattended sites.

6.3 SPILL RESPONSE

6.3.1 SPILL REPORTING

All outdoor and indoor spills are to be reported to the LSS manager or the NWSCC, regardless of the volume. RCL's Environmental Services Officer, or designate, will report details of all spills to the NWSO TA by 31 January and 31 July each year. Information for the report is tracked in the spreadsheet *I6.C.2.g - Semi-annual Environmental Status Report*.

The responsibilities of the different levels of reporting hierarchies are outlined in subsections 6.3.1.2 to 6.3.1.5. Telephone numbers for key individuals are provided in the Emergency Contact List in Appendix 1.

6.3.1.1 Spill Discovery/Identification

Identify the spill, in association with the LSS Manager whenever possible. Make immediate verbal report to NWSCC (i.e. try calling the zone manager first, then if you can't contact them, call the NWSCC).

The verbal report must contain the information required to complete the Environmental Initial Incident Report (FM-EHS-40), shown in Appendix 2. A sample form is included to ensure that all of the required information is captured.

Additional information (e.g. site conditions, mitigation measures in place, etc.) can be included as required. Provide a hand drawing of the area locating the spill and associated details, to the LSS Manager. If communications are not possible, deliver the map and associated paperwork to the LSS Manager immediately upon return to base.

The NWSCC operators will advise the appropriate LSS Manager, and issue an Initial Environmental Incident Report if they:

- Suspect a spill as a result of Supervisory Control and Data Acquisition (SCADA) inputs;

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- Are notified of a spill by the Canadian Rangers; or
- Are notified of a spill by a third party.

If the spill is discovered at the NWSSC or the SRD, the person discovering the spill must notify the NWSCC.

6.3.1.2 NWSCC

Upon being notified the NWSCC shift technician must:

- ☐ Ensure the LSS Manager is informed as soon as possible.
- ☐ Phone initial contact persons within 30 minutes, i.e. phone one person for each group of the Environmental Incident reporting group (Environmental Services, NWSO, etc.)
- ☐ Prepare an Environmental Initial Incident Report (FM-EHS-40) (Appendix 2). E-mail the report within 6 hours of notification to the designated addressee groups.

6.3.1.3 LSS Manager

Upon being notified, the LSS Manager must proceed with the reporting procedures as follows:

- ☐ Raise Work Order for spill response and clean-up.
- ☐ Prepare an Environmental Follow Up Incident Report (FM-EHS-41) (Appendix 3).
- ☐ E-mail report to designated groups within when additional information becomes available hours of the telephone notification to NWSCC.
- ☐ If required, send a sketch site plan showing the contaminated locations(s) to the designated groups.

See **Figure 1** for communication/task flow chart.

6.3.1.4 Environmental Services Officer

RCL's Environmental Services Officer will assume the position of Spill Control Manager with authority over all spill response activities.

Upon notification of a spill, the Environmental Services Officer will perform the following:

- ☐ Prepare the Environmental Follow Up Incident Report (Appendix 3) based on the information provided by the LSS Manager's report. E-mail the report to the designated groups.
- ☐ Maintain contact with NWSO and keep them apprised of any changes to the spill status.
- ☐ Notify Environment and Climate Change Canada of spills 100 L or more from a Storage Tank System. Include:
 - a. names of both the owner and the operator of the storage tank system

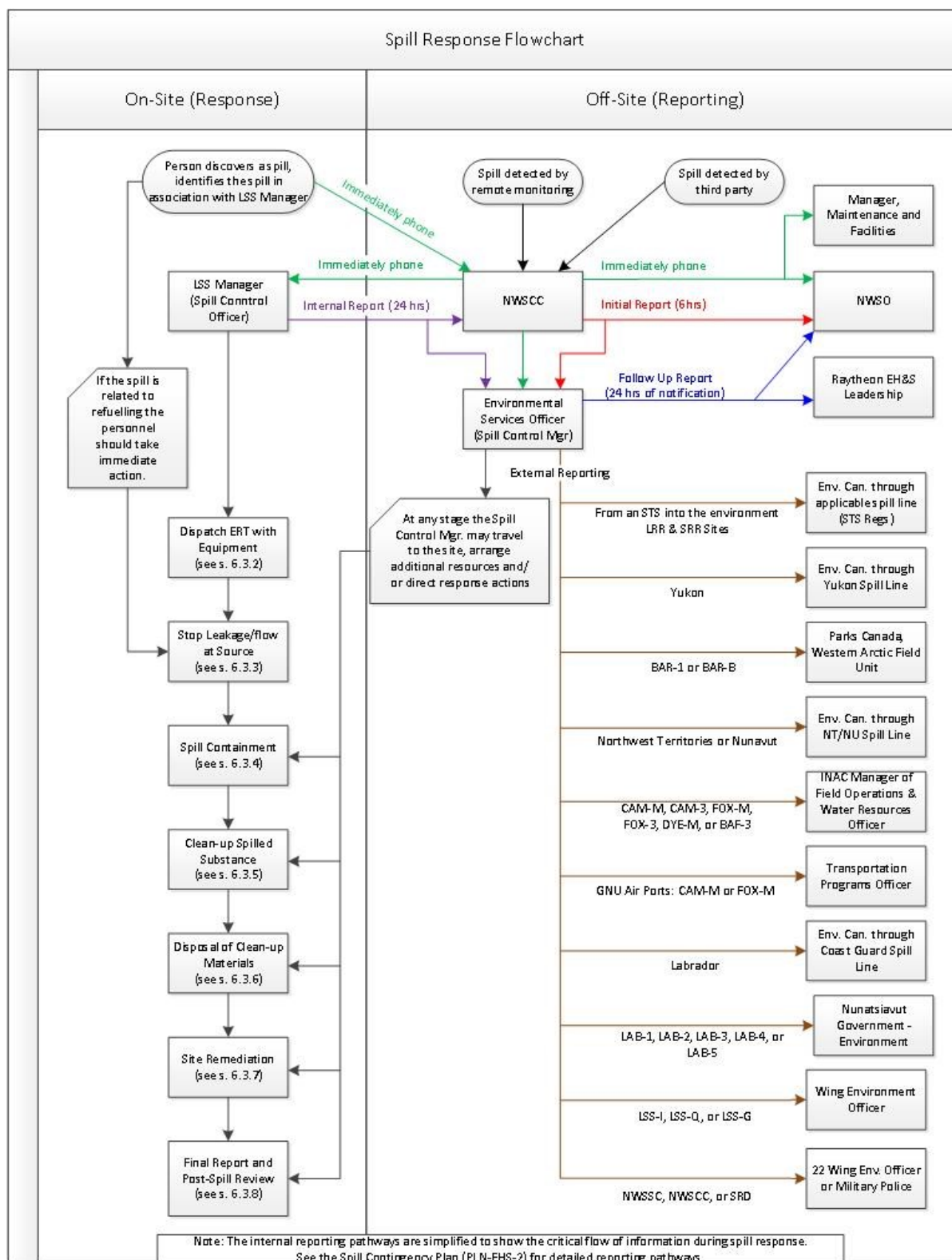
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- b. the identification number of the storage tank system
 - c. the date on which any release in liquid form in the environment occurred;
 - d. the type of petroleum product that is the subject of the report;
 - e. the quantity, or an estimate of, the spill quantity;
 - f. a description of the circumstances of any release in liquid form in the environment and any mitigating measures taken; and
 - g. a description of the measures taken following any release in liquid form in the environment to prevent a subsequent occurrence.
- ☐ Notify the Manager of Resource Conservation of Parks Canada's Western Arctic Field Office for spills at BAR-B or BAR-1 (Ivvavik National Park).
- ☐ Notify the appropriate Spill Line as required (Appendix 4). For spills in Nunavut or the Northwest Territories, an NT-NU Spill Report will be submitted (Appendix 5).
- ☐ Notify the Transportation Programs Officer for spills on airport property at Hall Beach or Cambridge Bay.
- ☐ Notify INAC Manager of Field Operations and Water Resources Inspector for spills at: CAM-M, CAM-3, FOX-M, FOX-3, DYE-M, and BAF-3.
- ☐ Within 30 days, submit a written report to the INAC Water Resource Officer/Inspectors that includes: amount and type of spilled product, GPS coordinates of location of spill, and measures taken to contain and clean up the spill site for spills at: CAM-M, CAM-3, FOX-M, FOX-3, DYE-M, and BAF-3.
- ☐ Notify the Nunatsiavut Government of spills at LAB-1 to LAB-5

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Figure 1: Spill Response Flowchart

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6.3.1.5 Mission Assurance Manager

The Mission Assurance Manager, with input from the Environmental Services Officer, will determine what spills require an Incident Investigation Report (IIR), including a Root Cause Analysis (RCA).

6.3.2 DISPATCH OF EMERGENCY RESPONSE TEAM

RCL's Environmental Services Officer will assume the position of Spill Control Manager. The LSS Manager will assume the position of Spill Control Officer and have authority over the Emergency Response Team (ERT). The LSS Manager will raise the appropriate Work Order(s) to identify and track the necessary repairs, clean-up activities, and disposal actions. Communications will be maintained between the ERT and the LSS Manager throughout the duration of any spill response. The typical responsibilities and composition of an ERT is presented in Figure 2.

6.3.3 STOP LEAKAGE/FLOW AT SOURCE

If the spill is still taking place (e.g. flowing, leaking, dripping) the ERT will take measures to stop the spill. This would include shutting off pumps, closing isolation valves, applying chemical cold patches to tanks, transferring fuel to another tank, attaching a dresser coupling to the pipe or valve, attaching a blind flange or pipe cap, or other appropriate actions, as determined by the Spill Control Officer.

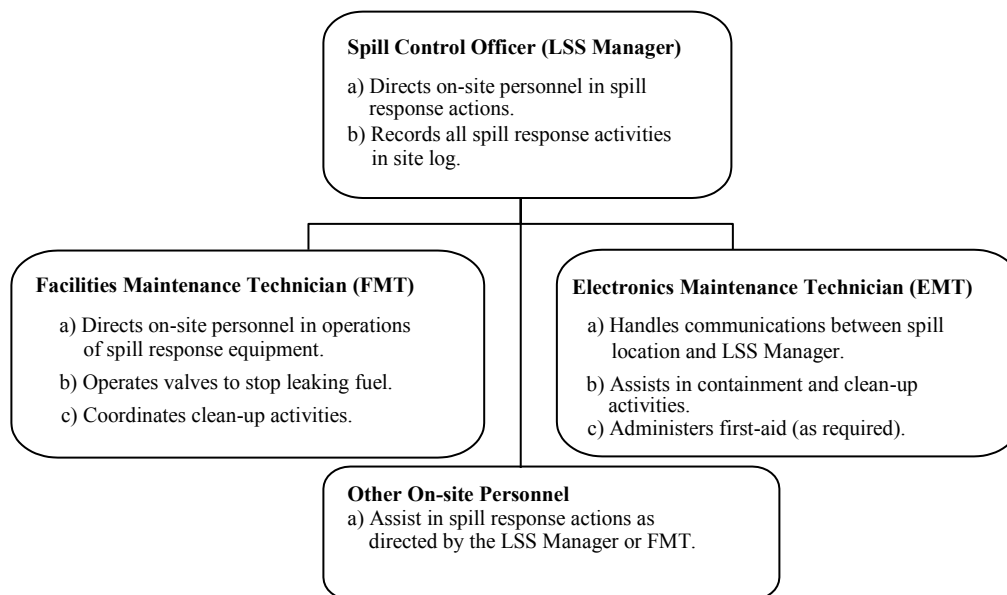


Figure 2: ERT Responsibilities

6.3.4 SPILL CONTAINMENT

The ERT will deploy materials from the on-site spill control kit and use on-site equipment available to contain the spill, possibly including the construction of temporary containment berms. See *EPP Section 25 – Site Descriptions* for a list of what is contained in the spill kit(s) at each site. In cases where the spill exceeds the

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capabilities of on-site resources, the Spill Control Manager will make arrangements for additional personnel, equipment, and materials from additional resources.

6.3.5 CLEAN-UP OF SPILLED MATERIAL

If possible without putting personnel at risk, the ERT will commence cleanup with the equipment available once containment of the spill has been achieved (i.e. absorbent material, salvage drums, etc.). Additional resources may be dispatched to the spill site by the Spill Control Manager in cases where the spill clean-up exceeds the capabilities of the on-site resources.

Clean-up actions are identified and tracked through the spill's Work Order. A spill clean-up Work Order cannot be closed until all actions are completed or the remaining requirements transferred to a separate Work Order.

Weather permitting spills will be cleaned up in the following time frame:

- a. Spills less than 205 L will be cleaned up in less than 3 days; and
- b. Spills less than 1000 L will be cleaned up in less than 15 days.

Clean up will meet the Canadian Council of Ministers of the Environment (CCME) *Canada Wide Standards for Petroleum Hydrocarbons in Soil* and *CCME Soil Quality Guidelines*. Samples will be taken as per *EPP Section 22 – Spill Sampling Procedure* to confirm that the CCME standards and guidelines are met.

6.3.6 DISPOSAL OF CLEAN UP MATERIALS

Waste generated from spill response activities will be disposed of according to the procedures outlined in subsections 6.3.6.1 to 6.3.6.5.

6.3.6.1 Used Sorbent Materials

Used sorbent materials will be placed in drums and sent to a licenced hazardous waste disposal facility as per *EPP Section 17 - Hazardous Material Retrograde*.

6.3.6.2 Fuel/Water Mixture

Fuel/water mixtures may be dealt with on-site during the clean-up phase, and/or collected and drummed for treatment/disposal off-site (e.g. using a oil/water separator, filter bank, etc.). Drummed fuel/water mixtures will be sent to a licenced hazardous waste disposal facility as per *EPP Section 17 - Hazardous Material Retrograde*.

The decision to recover fuel for reuse will be made on a case by case basis. Some factors that could impact the decision includes:

- a. The quantity of fuel recovered; and
- b. The quality of the fuel recovered (i.e. the fuel / water ratio, results of fuel quality tests, etc.).

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6.3.6.3 Contaminated Snow

Small volumes of contaminated snow are to be shoveled into an open head drum, along with a hydrophobic sorbent mat, pillow or sock. Each drum is to be marked as to its contents with permanent marker or spray paint as follows: "Snow with <substance>, <site>, <date>." Drums may be stored in a level area outside to await spring thaw, or moved indoors to speed melting. The melted snow is to be treated as fuel/water mixture, as discussed in the preceding section. Large areas of contaminated snow may be removed/isolated and surrounded with hydrophobic absorbent booms to gradually filter meltwater. Decisions in such a situation will be at the discretion of the Spill Control Manager.

Drummed contaminated snow will be sent to a licenced hazardous waste disposal facility as per *EPP Section 17 - Hazardous Material Retrograde*.

6.3.6.4 Contaminated Soil

Decisions regarding remediation of contaminated soil must be made by the Spill Control Manager on a case-by-case basis. Should contaminated soil need to be excavated and contained, the following points are to be noted:

- a. Do not mix soil with other spill wastes.
- b. Do not overfill open head drums; they will need to be moved without the aid of heavy equipment at SRRs.
- c. Each drum is to be marked as to its contents with permanent marker or spray paint as follows: "Soil with <substance>, <site>, <date>".

Drummed contaminated soil will be sent to a licenced hazardous waste disposal facility as per *EPP Section 17 - Hazardous Material Retrograde*.

6.3.6.5 Reporting Disposal Actions

The LSS Manager is to advise the Spill Control Manager of disposal actions taken by the ERT, through e-mail or Internal Spill Report updates. Drums of waste left at an SRR must be transported to the LSS or LRR within 4 months of the spill response.

Spill clean-up Work Orders are to include the removal and disposal actions for spill wastes, the number of drums involved and their contents. A spill clean-up Work Order cannot be closed until the disposal actions are completed or the remaining requirements are transferred to a separate waste disposal Work Order.

6.3.7 SITE REMEDIATION

All remediation efforts will be coordinated through RCL. Site remediation will be undertaken by trained NWS personnel or by experienced commercial spill response firms.

6.3.8 FINAL REPORT AND POST-SPILL REVIEW

A final report will be created and contain the following:

- a. Initial report information;

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- b. Confirmation of spill volume;
- c. Actions taken;
- d. Future remediation/monitoring requirements;
- e. Sketch map and/or photographs of spill area;
- f. Lessons learned.

A joint review of all spill response activities and involved parties will be held by RCL and NWSO in order to:

- a. Document all events from the initial spill report through to site remediation;
- b. Analyze spill response actions taken and their effectiveness in order to:
 - a. Revise action plans as required;
 - b. Amend spill response procedures as required; and
 - c. Amend the spill response training program.

6.4 SPILL RESPONSE - FUEL RE-SUPPLY ACTIVITIES

The *Hazardous Materials General Management Plan* (PLN-EHS-3), Section 14 of the EPP, describes the bulk fuel re-supply process for NWS sites. Fuel re-supply is conducted by:

- a. Sealift (e.g. vessel or barge);
- b. Airlift (e.g. rotary wing or fixed wing aircraft); and
- c. Road Transport (e.g. LAB-6 and CAM-CB)

Transport of the bulk fuel is performed by contractors and subcontractors who must each possess their own spill contingency plan. The re-supply contractor will be responsible for spill response when the spill originates from the contractor's equipment, i.e. occurs between the vessel and the junction with NWS piping. Response to a spill originating from NWS piping or facilities during resupply will be the responsibility of RCL, and will be reported and responded to as per this Plan.

6.5 SPILL SIMULATION EXERCISE

One spill response simulation exercise will be conducted annually. The scenario will be developed by Environmental Services and will be based on a spill of a size and location which poses a direct threat to fish habitat. The spill response simulation exercise will:

- a. Test spill contingency response procedures;
- b. Ensure staff preparedness; and
- c. Identify any areas requiring improvement.

Results of the spill response simulation exercise will be recorded and reported to the NWSO TA. The report will include:

- a. The number of participants;
- b. Location;
- c. Date;
- d. Exercise detail;
- e. Successes/failures; and

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f. Lessons learned.

Spill reporting exercises shall be conducted on a periodic basis to assist with identifying deficiencies. Sites selected are at the discretion of Environmental Services.

Note: External reporting to spill lines and/or other contacts is not a component of the spill exercise, and all associated verbal or written communications must clearly announce: 'Exercise. Exercise. Exercise.'

6.6 SPILL RESPONSE TRAINING PROGRAM

Spill response training is provided to all NWS LSS staff and Bulk Fuel Technicians. The training will include:

- Types and causes of spills on NWS sites;
- Spill reporting procedures;
- Spill kit familiarization;
- Spill response actions for a variety of scenarios;
- Post-spill site assessment;
- Post-spill review; and
- Health and safety.

The training methods will include:

- Lectures;
- Audio – visual presentations; and
- Field simulations exercises.

Training will be regenerative on a 2 year cycle.

7.0 FORMS

- FM-EHS-40: Environmental Initial Incident Report (see Appendix 2)
- FM-EHS-41: Environmental Follow Up Incident Report (see Appendix 3)
- NT-NU Spill Report Form (see Appendix 5)

8.0 BACKGROUND

8.1 SPILL RISK

RCL has established policies and procedures to reduce the risk and mitigate the impact of fuel or HAZMAT spills. Controls include:

- a. Limiting the quantity of HAZMAT at site and ensuring only required minimal volumes are present;
- b. Ensuring storage requirements of materials are followed. Store materials indoors when possible (e.g. the Nunavut Water Board Licences for CAM-M, CAM-3, FOX-M, FOX-3, DYE-M, and BAF-3 require that HAZMAT is stored in secondary containment); and
- c. Identification of spill potential risk and evaluation of potential impact (e.g. Jet A1 fuel).

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Table 8-1: Risk Analysis of Spills on NWS Sites

Scenario	Impact	Probability	Mitigations
Catastrophic tank failure	High <ul style="list-style-type: none">Spill could result in a large amount of contaminated soil.Spill could contaminate water and result in Fisheries Act infractions.Spill could impact the prime mission of the NWS by loss of data and communications.	Low <ul style="list-style-type: none">Two incidents from 2001 to 2018.	Tanks are visually inspected annually during Preventive Maintenance Inspections (PMIs) and before fuel is transferred into a tank, if the tank is visible (i.e. not covered by snow). The tanks are dipped to confirm the volume of fuel in the tanks (inventory reconciliation).
Pipeline leak	Medium <ul style="list-style-type: none">Leak is difficult to detect during winter conditions.Spill could result in a moderate amount of contaminated soil.Spill could contaminate water and result in Fisheries Act infractions.Spill could impact the prime mission of the NWS by loss of data and communications.	High <ul style="list-style-type: none">133 incidents from 2001 to 2014.	Piping is visually inspected during PMIs and is monitored / inspected during fuel transfers. Non-destructive testing of the pipelines are completed at every site on a 5 year schedule in accordance with the Corrosion Analysis Protection (CAP) Program. Wherever practical, pipelines are drained when not in use.
Spill from fuel truck while transferring fuel (i.e. connecting and disconnecting hoses, etc.)	Low <ul style="list-style-type: none">Spill could result in a moderate amount of contaminated soil.	Low <ul style="list-style-type: none">There are no incidents from 2001 to 2018.	Portable secondary containment is used during fuel transfers. All fuel transfers from fuel trucks are monitored.
Catastrophic fuel drum (205 L) failure (i.e. entire contents of drum spilled)	Medium <ul style="list-style-type: none">Spill could result in a moderate amount of contaminated soil.Relatively low quantity of product in a drum.	Low <ul style="list-style-type: none">No incidents from 2001 to 2018.	Drums are stored as per the Hazardous Materials General Management Plan (PLN-EHS-3) or the Storage and Tracking of Waste HAZMAT Plan (PLN-EHS-4).

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Scenario	Impact	Probability	Mitigations
Spill of greater than 600 L	High <ul style="list-style-type: none">Spill could result in a large amount of contaminated soil.Spill could contaminate water and result in Fisheries Act infractions.Spill could impact the prime mission of the NWS by loss of data and communications.	Low <ul style="list-style-type: none">14 incidents from 2001 to 2018.	Preventive maintenance is completed on tanks and piping. Non-destructive testing of the pipelines are completed at every site on a 5 year schedule in accordance with the Corrosion Analysis Protection (CAP) Program.
Spill of 100 L to 600 L	Medium <ul style="list-style-type: none">Spill could result in a moderate amount of contaminated soil.Spill could contaminate water and result in Fisheries Act infractions.	Low <ul style="list-style-type: none">25 incidents from 2001 to 2018.	Preventive maintenance is completed on tanks and piping. Non-destructive testing of the pipelines are completed at every site on a 5 year schedule in accordance with the Corrosion Analysis Protection (CAP) Program.
Spill of 20 L to 100 L	Medium <ul style="list-style-type: none">Spill could result in a moderate amount of contaminated soil	Medium <ul style="list-style-type: none">58 incidents from 2001 to 2018.	Drums are stored as per the Hazardous Materials General Management Plan (PLN-EHS-3) or the Storage and Tracking of Waste HAZMAT Plan (PLN-EHS-4).
Spills of less than 20 L	Low <ul style="list-style-type: none">Spill could result in a small amount of contaminated soil	High <ul style="list-style-type: none">287 incidents from 2001 to 2018.	

Notes:

- Spills from tanks at beach locations present a higher risk resulting in Fisheries Act infractions than tanks at summit locations.
- Bulk fuel storage tank systems near roads are generally protected with bollards.
- Definition of impacts:
 - High impact – Significant impact to land, water, and likely receptors;
 - Medium impact – Moderate impact to land, water, and likely receptors; and
 - Low impact – slight to no impact to land, water, and likely receptors.

8.2 BULK FUEL DESCRIPTION AND CHARACTERISTICS

The fuel used for all purposes on the NWS sites is Jet A1 (3A), Arctic Grade, Aviation turbine fuel, Kerosene type. This fuel type is flammable with a flash point of 38°C. It contains paraffin, olefin, naphthalene, and aromatics. The aromatics and naphthalene in Jet A1 evaporate easily and are highly toxic.

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The Jet A1 characteristics allow it to easily be absorbed by soil and to be dispersed as a sheen on top of water surfaces. Land spills of Jet A1 cause contamination of soil. Water spills of Jet A1 may cause alteration of fish habitat. The federal Fisheries Act (s.36) prohibits the deposit of any deleterious substance to water bodies.

The only NWS site not using Jet A1 for fuel is the SRR CAM-CB, in Gjoa Haven, Nunavut, which is powered by diesel fuel. Diesel is flammable with a flash point of 38°C and shares the other characteristics and potential impacts of Jet A1 shown above. This plan will reference Jet A1 as the bulk fuel on NWS sites because the use of diesel is limited to one site and the characteristics of Jet A1 and diesel are similar.

8.3 BULK FUEL STORAGE AND DISTRIBUTION SYSTEM

Each LRR, SRR, and LSS has fuel storage tanks and piping systems for fuel distribution. The main components of the bulk fuel storage and distribution system are shown in Figure 3. In Figure 3, “Fuel resupply” is the delivery of fuel to site; “fuel transfer” is the pumping of fuel from primary to secondary tanks.

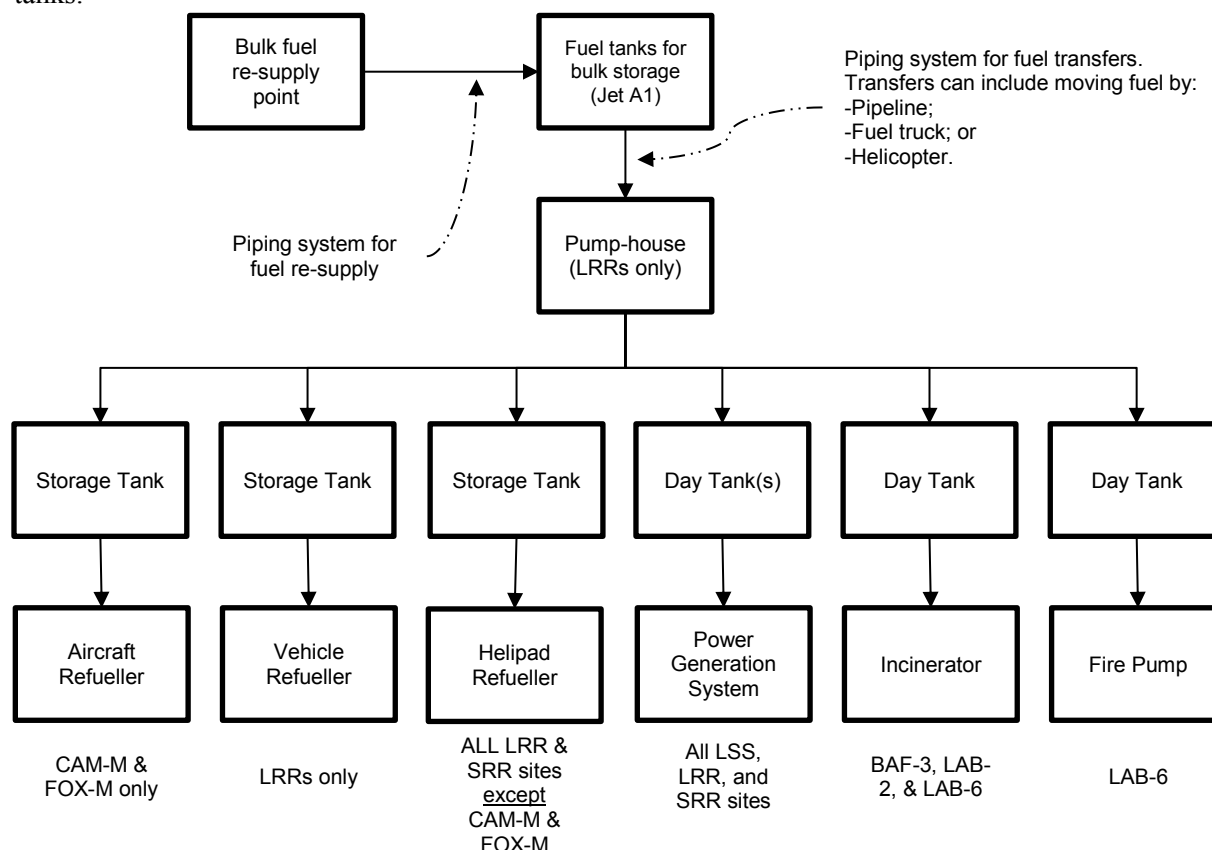


Figure 3: Bulk Fuel Storage and Distribution System

The bulk fuel systems vary from site to site. Review the site descriptions in the EPP for specific details. All fuel tanks are located above ground (AST) and range in size from 200 litre capacity to 946,300 litre capacity. Bulk storage tanks are:

- Single-walled vertical or horizontal tank in a berm, an earthen dykes lined with a geotextile membrane; or

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- b. Horizontal tank with intergral secondary containment.

Oils and lubricants, used in the operation of power generating systems (PGS) and vehicles, are stored in site specific storage areas and in dedicated storage sheds. Waste products are stored in dedicated areas prior to disposal by retrograde activity.

8.4 FUEL RE-SUPPLY AND USE

Bulk fuel re-supply of all LRR and all SRR sites takes place during the summer season every year, or every two years. Bulk fuel is transported to most LRRs and SRRs by sealift (barges or ships). The FOX-3 LRR site and some SRR sites are re-supplied by airlift. Contractors and sub-contractors engaged in fuel resupply operations must have their own Spill Contingency Plans to cover their area of responsibility.

Uses of fuel at LRR sites include:

- a. operation of the power generating system;
- b. aircraft re-fuelling;
- c. vehicles;
- d. furnaces and boilers; and
- e. Fire pumps and incinerator at BAF-3, LAB-2, and LAB-6.

Uses of fuel at LSSs and SRR sites include:

- a. operation of the power generating system;
- b. aircraft re-fuelling; and
- c. furnaces.

9.0 ACRONYMS

Acronym	Definition
API	American Petroleum Institute
AST	Above ground Storage Tank
CAD HQ	Canadian Air Division Head Quarters
CAP	Corrosion Analysis Program
CAR	Corrective Action Review
CCME	Canadian Council of Ministers of the Environment
CFB	Canadian Forces Base
CMO	Contractor Management Office
CSN	Canadian Switch Network
DND	Department of National Defence
EHS	Environment, Health, and Safety
EMT	Electronics Maintenance Technician
EPP	Environmental Protection Plan

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Acronym	Definition
ERT	Emergency Response Team
FMT	Facilities Maintenance Technician
FOL	Forward Operating Location
HAZMAT	Hazardous Materials
IIR	Incident Investigation Report
LHCN	Long-Haul Communication Network
LRR	Long Range Radar
LSS	Logistics Support Site
NACE	National Association of Corrosion Engineers
NL	Newfoundland and Labrador
NT	Northwest Territories
NU	Nunavut
NWS	North Warning System
NWSCC	North Warning System Control Centre
NWSSC	North Warning System Support Centre
NWSO	North Warning System Office
NWSO TA	North Warning System Office Technical Authority
O&M	Operation and Maintenance
PCBs	Polychlorinated biphenyls
PGS	Power Generating System
PMI	Preventive Maintenance Inspection
RCA	Root Cause Analysis
RCL	Raytheon Canada Limited
SCADA	Supervisory Control and Data Acquisition
SDS	Safety Data Sheets
SOP	Standard Operating Procedure
SOW	NWS O&M Contract Statement of Work
SRD	Short Range Radar Development Site
SRR	Short Range Radar
TDG	Transportation of Dangerous Goods
TSB	Technical Services Building
WHMIS	Workplace Hazardous Materials Information System

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APPENDIX 1: EMERGENCY CONTACTS LIST

RCL Emergency Contact List

NWSCC Long Haul Communications Network (LHCN)	(705) 494-2011 ext. 3500 (on-site dial 88-3500)
NWSCC Facilities Group	(705) 494-2011 ext. 3500 (on-site dial 88-3500)
NWSCC Radar	(705) 494-2011 ext. 3104

RCL and NWSO contacts as per the O&M Contractor and NWSO Incident Contact List.

24 Hour Spill Lines

Northwest Territories/Nunavut	(867) 920-8130
Yukon	(867) 667-7244
Environment and Climate Change Spill Line (NL)	(866) 283-2333

Other Important Contacts

Inuvialuit Land Administration	(867) 977-7100
Inuvik Fire Department	(867) 777-2222
Iqaluit Fire Department	(867) 979-4422

Parks Canada - Western Arctic Field Unit

Manager of Resource Conservation	(867) 777-8800
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Government of Nunavut - Department of Environment

Manager of Pollution Control	(867) 975-7729
INAC Nunavut Regional Office, Iqaluit	(867) 975-4500
INAC Manager of Field Operations	(867) 975-4295

INAC Water Resources Officer/Inspector

Kitikmeot Region - Kugluktuk (CAM-M, CAM-3)	(867) 982-4308
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INAC Water Resources Officer/Inspector

Qikiqtani Region - Iqaluit (FOX-M, FOX-3, DYE-M, BAF-3)	(867) 975-4289
North Bay Fire Department	(705) 474-5662

Dep't of Economic Development and Transportation, GNU

David Roberts, Transportations Programs Officer (North), Email: droberts@gov.nu.ca	(867) 899-7340
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Nunatsiavut Government – Department of Lands and Natural Resources

Ernie Ford, Environmental Enforcement Officer Email: ernie_ford@nunatsiavut.com	(708) 922-2942 ext.234
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APPENDIX 2: SAMPLE ENVIRONMENTAL INITIAL INCIDENT REPORT, FM-EHS-40

ENVIRONMENTAL INITIAL INCIDENT REPORT

NOTE:

- ☐ Submit to NWSO within 6 hours
- ☐ SOW Reference: 16.F.3.a
- ☐ NWS Environmental Incident Follow Up Report to be submitted to NWSO as required until incident is fully investigated: (INCI-EHS-2 Environmental Follow-Up Incident Report)
- ☐ Send by e-mail as file attachment to: NWS Incident Reports – Environmental

REPORTING ZONE / LOCATION				
Inuvik <input type="checkbox"/>	Cambridge Bay <input type="checkbox"/>	Hall Beach <input type="checkbox"/>	Iqaluit <input type="checkbox"/>	Goose Bay <input type="checkbox"/>
SITE:				

NWSSC <input type="checkbox"/>	NWSCC <input type="checkbox"/>	CMO <input type="checkbox"/>
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REPORTED TO NWSCC BY			
NAME:		PHONE #:	
POSITION:			
REPORT DATE (DD/MMM/YY):	Enter date.	REPORT TIME (ZULU):	

INCIDENT DETAILS			
DESCRIPTION OF INCIDENT:			
DATE:	Incident Date	TIME (ZULU):	
CAUSE, IF KNOWN:			
APPROXIMATE QUANTITY			
LOCATION OF INCIDENT:			
COORDINATES OF INCIDENT	N: <input type="text"/>	W: <input type="text"/>	
REPORTED BY (SCADA/PERSON):			
SUBSTANCE SPILLED:			
ACTION TAKEN:			
LEAK STATUS:	Contained <input type="checkbox"/>	Ongoing <input type="checkbox"/>	
MEDIA INVOLVED (IF KNOWN)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Unk <input type="checkbox"/>
OTHER PERTINENT INFORMATION			
NWSCC TECH INITIALS			
SM SECTION:			
WORK ORDER NUMBER:			

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APPENDIX 3: SAMPLE ENVIRONMENTAL FOLLOW UP INCIDENT REPORT, FM-EMS-41

ENVIRONMENTAL FOLLOW-UP INCIDENT REPORT

NOTE:

Zone Manager (or delegate):

- ☐ Complete form to the extent possible
- ☐ Save file with the format title "# of times report type issued, Environmental Internal Follow-Up Incident Report, Site, Date" (e.g. 0127 Environmental Internal Follow-Up Incident Report, PIN-M, 15Apr2017)
- ☐ Send by e-mail as file attachment to: IIS NWS Incident Report Internal

Environmental Services:

- ☐ Save file with the format title "# of times report type issued, Environmental Follow-Up Incident Report, Site, Date" (e.g. 0127 Environmental Follow-Up Incident Report, PIN-M, 15Apr2017)
- ☐ CMO Environmental Services (ES) to submit report to NWSO as required until the incident is fully investigated.
- ☐ Send by e-mail as file attachment to: NWS Incident Reports - Environmental

DATE AND TIME			
Date of Occurrence:	Occurrence Date	Date of Discovery:	Discovery Date
Time of Occurrence:	Hour : Minute. Zulu <input type="checkbox"/> Unknown, see Comments below	Time of Discovery:	Hour : Minute. Zulu
Date Spill Stopped:	Spill Stopped Date	Date Spill Cleaned:	Spill Cleaned up Date
Time Spill Stopped:	Hour : Minute. Zulu	Time Spill Cleaned:	Hour : Minute. Zulu
SPILL INFORMATION			
Material Spilled			
Quantity Spilled:			
Quantity Recovered:			
Zone	Zone	Site	Site
On-site location of spill			
Coordinates of Spill			
Cause of Spill:			
Status of Spill:			
Environmental Effects:			
Human Health Effects:	Personal Information Recorded on separate form: <input type="checkbox"/>		
Action Taken to Mitigate Environ/Human Health Effects:			
Weather Conditions:	Rain <input type="checkbox"/>	Wind <input type="checkbox"/>	Snow/Ice <input type="checkbox"/>
	Temperature: <input type="text"/> °C	Wind Speed: <input type="text"/> km/hr	
	Wind Direction: <input type="text"/>	Direction of Drift: <input type="text"/>	
Distance from Surface Water:	<input type="text"/>	Distance from Property Boundary:	<input type="text"/>
Work Order #:	<input type="text"/>	Spill Closure Date:	Spill Closed Date
Remediation Action Taken:			
Comments:			
ENVIRONMENTAL SERVICES			
Report Submitted to NWSO By:	<input type="text"/>	Date:	Date
Notified Federal Government:	Date: <input type="text"/>	Time: <input type="text"/>	Report No: <input type="text"/>
		Hour : Minute. Zulu	Contact: <input type="text"/>
Notified Provincial Government:	Date: <input type="text"/>	Time: <input type="text"/>	Contact: <input type="text"/>
		Hour : Minute. Zulu	
Notification Comments (e.g. Spill Line Report #, Spill Line tel #, co-ordinates of person(s) contacted: name, tel. #, position, gov't dept, city): <input type="text"/>			

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APPENDIX 4: REPORTING CRITERIA FOR SPILL LINES

Federal or Aboriginal Land in Canada

Any spill of fuel or waste oil must be reported to Environment Canada through territorial or provincial spill lines. Spills of greater than 100 L require a written report to Environment Canada¹.

Minimum reportable volumes for HAZMAT spills in Yukon²

Item No.	TDGA Class	Description of Contaminant	Minimum Reportable Volume
1	1	Explosives	Any amount
2	2.1	Flammable gases	Any amount of gas from containers with a capacity greater than 100 L or where the spill results from equipment failure, error or deliberate action or inaction
3	2.2	Non-flammable gases	Any amount of gas from containers with a capacity greater than 100 L or where the spill results from equipment failure, error or deliberate action or inaction
4	2.3	Poisonous gases	Any amount
5	2.4	Corrosive gases	Any amount
6	3	Flammable liquid	200 L
7	4	Flammable solid	25 Kg
8	5.1	Oxidizing substances	50 L or 50 Kg
9	5.2	Organic peroxides	1 L or 1 Kg
10	6.1	Poisonous substances	5 L or 5 Kg
11	6.2	Infectious substances	Any amount
12	7	Radioactive	Any amount
13	8	Corrosive substances	5 L or 5 Kg
14	9.1	Miscellaneous products or substances	50 L or 50 Kg
15	9.2	Miscellaneous products or substances	1 L or 1 kg
16	9.3	Dangerous wastes	5 L or 5 Kg
17	None	Special wastes (<i>Special Waste Regulations</i>)	As specified in Sect. 3(1)(b)
18	None	Pesticides (<i>Environment Act</i>)	5 L or 5 Kg
19	None	Pesticides & fertilizers (<i>Pesticide Regulations</i>)	Any amount
20	None	Ozone depleting substances and halocarbons	10 Kg

¹ From: *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*, SOR/2008-197, Section 41, under the Canadian Environmental Protection Act, 1999.

² From: *Spills Regulations*, Y.O.I.C. 1996/193, under the *Environment Act* and *Ozone Depleting Substances and Other Halocarbons Regulation*, Y.O.I.C. 2000/127, under the *Environment Act*



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Minimum reportable volumes for HAZMAT spills in Nunavut / Northwest Territories³

Item No.	TDGA Class	Description of Contaminant	Minimum Reportable Volume
1	1	Explosives	Any amount
2	2.1	Compressed gas (flammable)	Any amount of gas from containers with a capacity greater than 100 L
3	2.2	Compressed gas (non-corrosive, non-flammable)	Any amount of gas from containers with a capacity greater than 100 L
4	2.3	Compressed gas (toxic)	Any amount
5	2.4	Compressed gas (corrosive)	Any amount
6	3.1, 3.2, 3.3	Flammable liquid	100 L
7	4.1	Flammable solid	25 Kg
8	4.2	Spontaneously combustible solids	25 Kg
9	4.3	Water reactant solids	25 Kg
10	5.1	Oxidizing substances	50 L or 50 Kg
11	5.2	Organic peroxides	1 L or 1 Kg
12	6.1	Poisonous substances	5 L or 5 Kg
13	6.2	Infectious substances	Any amount
14	7	Radioactive	Any amount
15	8	Corrosive substances	5 L or 5 Kg
16	9.1 (in part)	Miscellaneous products or substances, excluding PCB mixtures	50 L or 50 Kg
17	9.2	Environmentally hazardous	1 L or 1 kg
18	9.3	Dangerous wastes	5 L or 5 Kg
19	9.1 (in part)	PCB mixtures of 5 or more parts per million	0.5 L or 0.5 Kg
20	none	Other contaminants	100 L or 100 Kg

Nunavut Water Board (NWB) Sites:

For the sites with NWB licences (CAM-M, CAM-3, FOX-M, FOX-3, DYE-M, and BAF-3), any unauthorized discharge or any foreseeable unauthorized discharge must be reported to the NT-NU Spill Line, the INAC Manager of Field Operations, and the INAC Water Resources Officer/Inspector.

A summary of the spills at NWB Sites will be included in the annual report for each site.

Minimum reportable volumes for Newfoundland & Labrador⁴

Oil	70 L
Flammable liquids	70 L
Halocarbons	10 Kg

³ From: Schedule B, *Spill Contingency Planning and Reporting Regulations*, N.W.T. Reg. 068-93, under the Environmental Protection Act.

⁴ From: *Storage and Handling of Gasoline and Associated Products Regulations*, 2003, NL Reg 58/03. And *Halocarbon Regulations*, NL Reg 41/05, under the Newfoundland Environmental Protection Act.

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APPENDIX 6: SAMPLE NT-NU SPILL REPORT FORM AND GUIDE



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 DEGREES MINUTES SECONDS			LONGITUDE DEGREES MINUTES SECONDS			
F	RESPONSIBLE PARTY OR VESSEL NAME		RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION				
G	ANY CONTRACTOR INVOLVED		CONTRACTOR ADDRESS OR OFFICE LOCATION				
H	PRODUCT SPILLED		QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES		U.N. NUMBER		
	SECOND PRODUCT SPILLED (IF APPLICABLE)		QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES		U.N. NUMBER		
I	SPILL SOURCE		SPILL CAUSE		AREA OF CONTAMINATION IN SQUARE METRES		
J	FACTORS AFFECTING SPILL OR RECOVERY		DESCRIBE ANY ASSISTANCE REQUIRED		HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT		
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS						
L	REPORTED TO SPILL LINE BY	POSITION	EMPLOYER	LOCATION CALLING FROM	TELEPHONE		
M	ANY ALTERNATE CONTACT	POSITION	EMPLOYER	ALTERNATE CONTACT LOCATION	ALTERNATE TELEPHONE		
REPORT LINE USE ONLY							
N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT	REPORT LINE NUMBER (867) 920-8130		
LEAD AGENCY <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							

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Raytheon
Canada Limited

SOW REF: 16.F.3.b

Instructions for Completing the NT-NU Spill Report Form

This form can be filled out electronically and faxed to the spill line at 867-873-6924. Commencing April 1, 2007, the form can also be e-mailed as an attachment to spills@gov.nt.ca. Until further notice, please verify receipt of e-mail transmissions with a follow-up telephone call. Spills can still be phoned in by calling collect at 867-920-8130.

A. Report Date/Time	The actual date and time that the spill was reported to the spill line. If the spill is phoned in, the Spill Line will fill this out. Please do not fill in the Report Number: the spill line will assign a number after the spill is reported.
B. Occurrence Date/Time	Indicate, to the best of your knowledge, the exact date and time that the spill occurred. Not to be confused with the report date and time (see above).
C. Land Use Permit Number /Water Licence Number	This only needs to be filled in if the activity has been licenced by the Nunavut Water Board and/or if a Land Use Permit has been issued. Applies primarily to mines and mineral exploration sites.
D. Geographic Place Name	In most cases, this will be the name of the city or town in which the spill occurred. For remote locations – outside of human habitations – identify the most prominent geographic feature, such as a lake or mountain and/or the distance and direction from the nearest population center. You must include the geographic coordinates (Refer to Section E).
E. Geographic Coordinates	This only needs to be filled out if the spill occurred outside of an established community such as a mine site. Please note that the location should be stated in degrees, minutes and seconds of Latitude and Longitude.
F. Responsible Party Or Vessel Name	This is the person who was in management/control/ownership of the substance at the time that it was spilled. In the case of a spill from a ship/vessel, include the name of the ship/vessel. Please include full address, telephone number and e-mail. Use box K if there is insufficient space. Please note that, the owner of the spilled substance is ultimately responsible for any spills of that substance, regardless of who may have actually caused the spill.
G. Contractor involved?	Were there any other parties/contractors involved? An example would be a construction company who is undertaking work on behalf of the owner of the spilled substance and who may have contributed to, or directly caused the spill and/or is responding to the spill.
H. Product Spilled	Identify the product spilled; most commonly, it is gasoline, diesel fuel or sewage. For other substances, avoid trade names. Wherever possible, use the chemical name of the substance and further, identify the product using the four digit UN number (eg: UN1203 for gasoline; UN1202 for diesel fuel; UN1863 for Jet A & B)
I. Spill Source	Identify the source of the spill: truck, ship, home heating fuel tank and, if known, the cause (eg: fuel tank overfill, leaking tank; ship ran aground; traffic accident, vandalism, storm, etc.). Provide an estimate of the extent of the contaminated/impacted area (eg: 10 m ²)
J. Factors Affecting Spill	Any factors which might make it difficult to clean up the spill: rough terrain, bad weather, remote location, lack of equipment. Do you require advice and/or assistance with the cleanup operation? Identify any hazards to persons, property or equipment: for example, a gasoline spill beside a daycare centre would pose a safety hazard to children. Use box K if there is insufficient space.
K. Additional Information	Provide any additional, pertinent details about the spill, such as any peculiar/unique hazards associated with the spilled material. State what action is being taken towards cleaning up the spill; disposal of spilled material; notification of affected parties. If necessary, append additional sheets to the spill report. Number the pages in the same format found in the lower right hand corner of the spill form: eg. "Page 1 of 2", "Page 2 of 2" etc. Please number the pages to ensure that recipients can be certain that they received all pertinent documents. If only the spill report form was filled out, number the form as "Page 1 of 1".
L. Reported to Spill Line by	Include your full name, employer, contact number and the location from which you are reporting the spill. Use box K if there is insufficient space.
M. Alternate Contact	Identify any alternate contacts. This information assists regulatory agencies to obtain additional information if they cannot reach the individual who reported the spill.
N. Report Line Use Only	Leave Blank. This box is for the Spill Line's use only.

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