SPILL CONTINGENCY PLAN

FOR THE

North Warning System

Contract # W8485-100224/001/NX

SOW Ref: 16.F.3.b

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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 When the revised document is issued, the previous issue is automatically superseded.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	Author	Pages Changed	Reason for Change
-	10-Dec-2014	W. Wyman	All	Initial Submission (“Rev –” is Rev 1)
2	01-Apr-2015	W. Wyman	All	Updates throughout
3	01-Apr-2016	W. Wyman	ii	NWS Program Manager Changed.
			22	Updated contact list
4	01-Apr-2017	W. Wyman	ii	Updated NWS Mission Assurance Manager
			1	Updated s. 3.0 - Scope
5	29-Mar-2018	W. Wyman	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
			7	s. 6.3.1.2 updated formatting, changed required timing of the report to match the NWS SOW

Revision	Date	Author	Pages Changed	Reason for Change
			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 coved 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
6	29-Mar-2019	W. Wyman	All	Updated formatting
			ii	Updated NWS Environmental Officer, NWS Environmental, Health, and Safety Manager
			24/25	Updated Contact Lists
			30	Updated NL Reporting Criteria
			34	Added Appendix 7: STS Regulations Plan Compliance
			38	Added Appendix 8: Jet A1 SDS
			50	Added Territorial / Provincial Plan Compliance

Revision	Date	Author	Pages Changed	Reason for Change
7	26-Mar-2020	W. Wyman	27	Updated contact list
8	5-Jan-2021	J. Berube	All	Updated contact list, changed Raytheon Canada Limited to Raytheon Canada, updated the Raytheon logo
9	7-Jun-2021	J. Berube / A. Leslie	9,20,38	Adjusted section 3.0 to reflect planned changes staffing levels. Added section 6.3.6 Added “Yukon's Special Waste Reportable Threshold” in Appendix 4 .
10	20-Jul-2021	A. Leslie	48	JET-A1 SDS updated with v2.1

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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 (ex. 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:

- provide clear procedures and instructions for responding, mitigating, and reporting fuel and HAZMAT spills;
- minimize the environmental impacts of fuel and HAZMAT spills by establishing pre-determined responses and plans of action;
- 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;
- provide a reporting structure for fuel and HAZMAT spills;

- ensure the environment is maintained in its natural state and conduct remediation activities as may be required;
- identify the roles and responsibilities of all parties involved in fuel and HAZMAT spill response activities; and
- identify resource requirements for the response to fuel and HAZMAT spills; and
- 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 Regulations) section 30.

3.0 SCOPE

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

- Short Range Radar (SRR) sites
  - SRR's operate unattended;
- Remote Long Range Radar (LRR) sites
  - Remote LRR's include BAR-2, PIN-M, CAM-3, FOX-3, DYE-M and BAF-3 which currently operate unattended with occasional staff visits;
  - Staffing levels at Remote LRRs are planned to increase beginning April 1st 2022 and gradually increase to year-round attendance.
- 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.
  - CAM-M, the LSS located in Cambridge Bay, Nunavut and is co-located with a LRR.
  - FOX-M, the LSS located in Sanirajak, Nunavut and is co-located with a LRR.
  - 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 to 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.
  - Spill reporting and response will be actioned by the Base to conform to 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 to 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 (RC) Environmental Protection Plan (EPP) applicable documents:

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

5.0 RESPONSIBILITY AND AUTHORITY

RC 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

RC is responsible for:

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

When a fuel or HAZMAT spill is reported at an NWS site, RC 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.

RC 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:

- other NWS sites;
- the Department of National Defence (DND);
- the Canadian Coast Guard;
- Parks Canada;
- Environment and Climate Change Canada;
- Department of Fisheries and Oceans;
- Government of Yukon;
- Government of Northwest Territories;
- Government of Nunavut;

- Government of Newfoundland; and/or
- Local fire departments.

Additional assistance may also be hired from:

- Northern residents;
- Local communities; and/or
- 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:

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

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

5.3 Division of Responsibility during Re-Supply

RC 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.

- If a fuel spill occurs between the sealift re-supply pipeline beachhead 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.
- 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.
- In all other instances, the RC Fuel and 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.
- 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.
- 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, RC will provide assistance, as requested by the sealift or airlift contractor, in implementing their Spill Contingency Plan.

6.0 PROCEDURE

RC 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

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

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

6.2 Spill Detection

Methods employed for detection of spills include:

- Visual and odour detection. This method is usually conducted in the summer months when there is limited or no snow cover.
- 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
- 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.

RC'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 *Spills Database (and info for 16.C.2.g).*

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 or Identification

Identify the spill in association with the LSS Manager whenever possible. Make an immediate verbal report to NWSCC (i.e. try calling the LSS 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, and photos, 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;
- 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 North Warning System Control Centre

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 Logistics Support Site Manager

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

☐ Raise Work Order for spill response and clean up.

☐ Assist with the 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

RC'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:
  - names of both the owner and the operator of the storage tank system
  - the identification number of the storage tank system
  - the date on which any release in liquid form in the environment occurred;
  - the type of petroleum product that is the subject of the report;
  - the quantity , or an estimate of, the spill quantity;
  - a description of the circumstances of any release in liquid form in the environment and any mitigating measures taken; and
  - 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

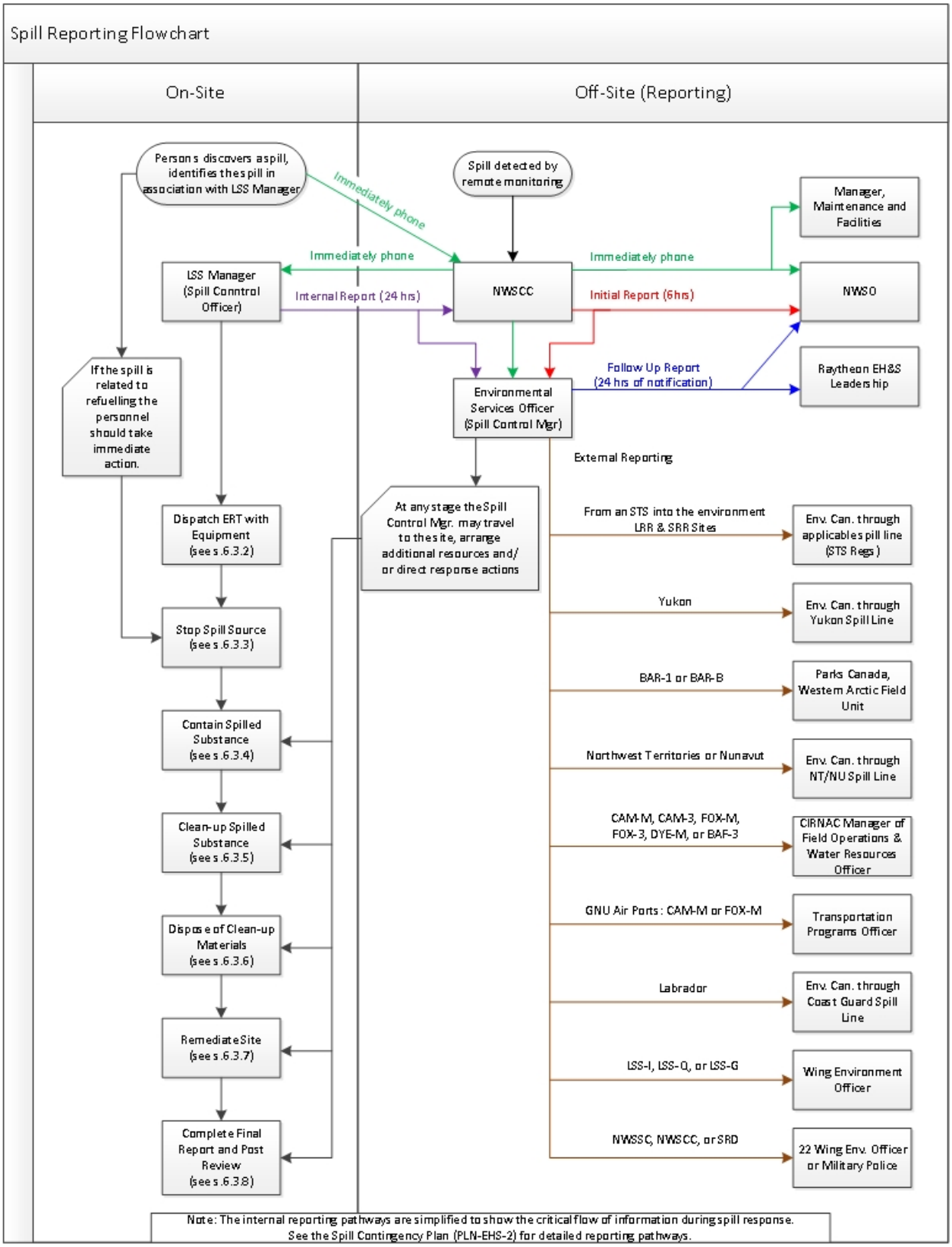

Figure 6.3-1: Spill Response Flowchart

6.3.1.4.1 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).

6.3.1.5 Communication with Public

The measures to notify members of the public who may be adversely affected by an emergency that may cause harm to the environment or danger to human life or health are:

- The identification of the incident, initial reporting, and updates will be done in accordance with the NWS Environmental Incident Reporting Standard Procedure (SP-EHS-1).
- The North Warning System Control Centre Manager, will notify NWSO if members of the public may be adversely affected by an emergency that may cause harm to the environment or danger to human life or health.
- NWSO will notify DND Public Affairs who will then notify members of the public in accordance with DND protocols such as Defence Administrative Orders and Directives (DAOD) 2008-3 Issue and Crisis Management which includes any event that threatens public safety. The DAOD identifies significant incidents which include the accidental release of hazardous material that may threaten public safety. It identifies the process to be followed and assigns responsibilities.

6.3.2 Dispatch of Emergency Response Team

RC'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.

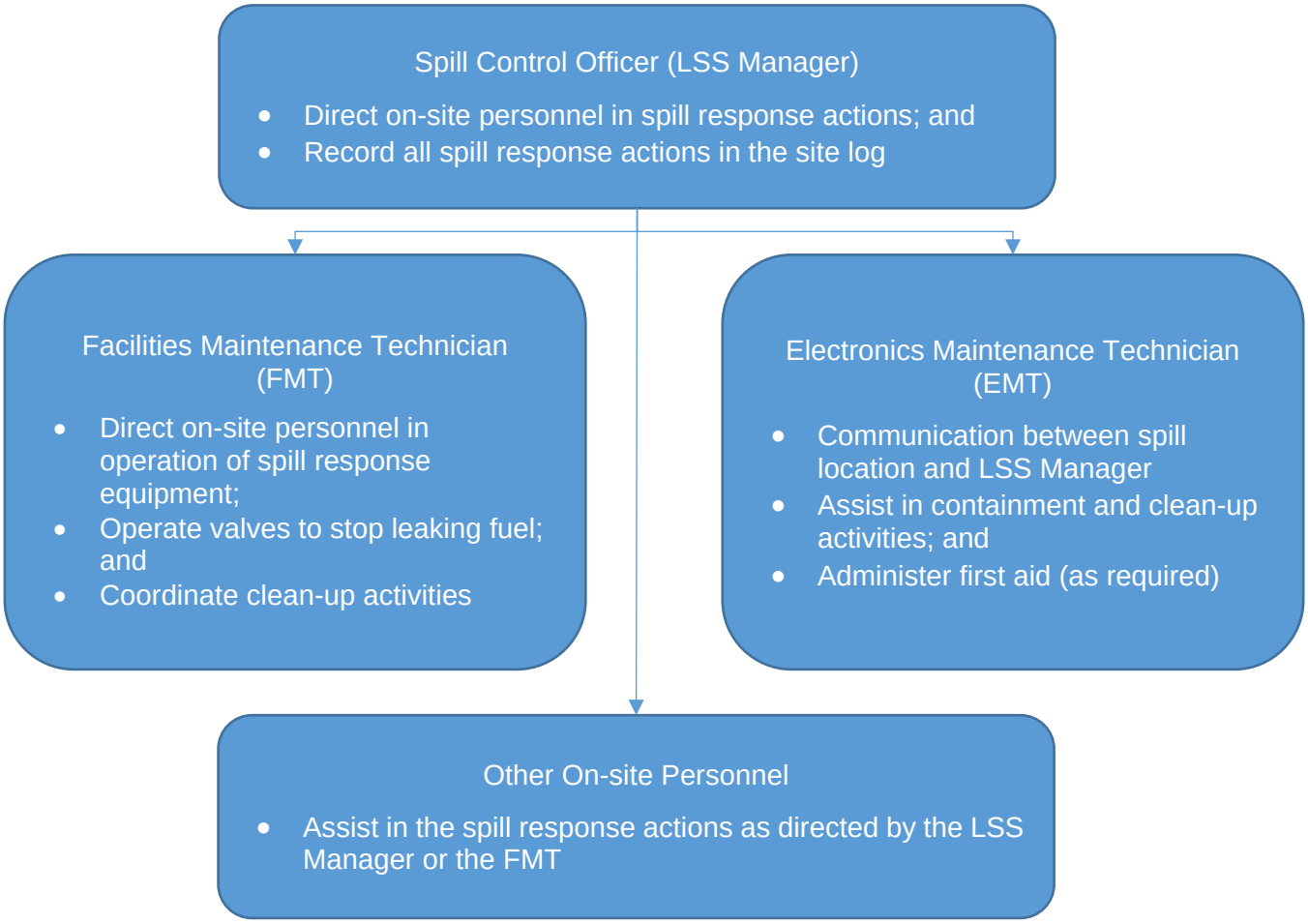

Figure 6.3-2: ERT Responsibilities

6.3.4 Spill Containment

The ERT will deploy materials from the on-site spill kit and use on-site equipment available to contain the spill, possibly including the construction of temporary containment berms. In cases where the spill exceeds the capabilities of on-site resources, the Spill Control Manager will arrange for additional personnel, equipment, and materials from additional resources.

Spill kits vary depending on site type as follows.

Table 6.3-1: SRR/LSS Fuel Spill Kit

Maximo Item No.	QTY.	ITEM	PART NUMBER
1070540	**C/W**	**POL SPILL CLEANUP KIT No. 2**	**CL-098**
1021477	12 Bags	Loose oil absorbent.	A/101
1021664	1 Case	200 Absorbent sheets	OB-100
1008697	1 Box	Heavy duty garbage bags	35-50-3B
1009276	1 Roll	600 feet of Polypropylene Rope	MIL-R-24049
1013919	20 Pairs	Lined rubber gloves	GL4513 (M)
1061292	2	Safety goggles	6367

Maximo Item No.	QTY.	ITEM	PART NUMBER
1062475	2	Round mouth shovel	GGG-S-326
1003058	2	85 Gallon Salvage Drums	PS-26368

Table 6.3-2: LRR Fuel Spill Kit

Maximo Item No.	QTY.	ITEM	PART NUMBER
1067553	**C/W**	**POL SPILL CLEANUP KIT No. 1**	**CL006**
1021477	20 BG	ABSORBENT, MATERIAL 50 QT. BAG	48210
1021572	10 RL	ABSORBENT, MATERIAL 3/8" X 36" X 144 FT	OB150
1044124	150 BG	ABSORBENT, MATERIAL 50 QT. BAG	48230
1021664	1 CS	ABSORBENT, SHEET 200 SH/CS 17"X19"X3/8"THK	OB100
1059485	8 EA	BOOM, OIL 40 FT. TOTAL LG.	48225
1062419	2 EA	PITCHFORK	R41645
1018094	1 BX	PLASTIC BAG 100 BAGS/BOX	35-50-3B
1008712	4 RL	PLASTIC POLY 6 MIL, 1000 SQ.METERS	VISQUEENCLEAR
1021141	3 EA	HALF MASK, DISPOSABLE TYPE	GT-9999-3005-7
1009276	1 RL	ROPE, POLYPROPYLENE 600 FT.	MIL-R-24049
1013919	20 PR	RUBBER GLOVES, LINED	GL4513 (M)
1061292	2 PR	SAFETY GOGGLES	6367
1062475	2 EA	SHOVEL, ROUND MOUTH	GGG-S-326
1022135	1 EA	SLIPTANK, PORTABLE 100 GAL.	TANK100
1003058	2 EA	SALVAGE DRUMS 85 GAL.	PS-26368

Table 6.3-3: LRR Chemical Spill Kit

Maximo Item No.	QTY.	ITEM	PART NUMBER
1067552	**C/W**	**CHEMICAL SPILL KIT**	**CL007**
1023947	4 PR	COVERALLS, W/ HOOD & BOOT COVERS	SEA PA5228
1012151	4 PR	GLOVES, CHEMICAL RESISTANT	111E220
1063898	1 BX	RAGS, COTTON, 50 LB.	31-25
1062334	4	SIGN, HAZARDOUS CHEMICAL	70852
1022625	4	RESPIRATOR, HALF-FACE	655X013
1022622	12	CARTRIDGE FILTERS, VAPOUR	655F155

Table 6.3-4: Asbestos Response Spill Kit Contents

Maximo Item No.	QTY.	ITEM	PART NUMBER
1067551	**C/W**	**ASBESTOS RESPONSE KIT**	**CL008**
1023947	8 PR	COVERALLS, W/ HOOD & BOOT COVERS	SEA PA5228
1063146	2 BG	GLOVEBAG. HORIZONTAL, ZIP-LOCK	10HZ
1050629	1 PG	GLOVEBAG. TEE, ZIP-LOCK	10TZ
1049979	1 PG	GLOVEBAG. HORIZ. W/VALVE ZIP-LOCK	10VLZ
1060069	1 PG	GLOVEBAG. VERTICAL, ZIP-LOCK	10VZ
1063031	1 BG	ADHESIVE, BAKELITE	120-18
1063032	1	CANVAS SHEET 5 FT. X 6 FT.	00
1022622	12	CARTRIDGE FILTERS, VAPOUR	655F155
1060534	2	CAUTION LABELS (BRADY)	85383
1011756	14 RL	DUCT TAPE	290
1057731	2	EXPANSION STRIP 6" X 54 "	0654EX
1012151	10 PR	GLOVES, CHEMICAL RESISTANT	111E220
1013228	1 BX	GLOVES, SURGICAL 100/BOX	431104
1011596	3	PLASTIC PAIL	L-P-65
1008712	2 RL	SHEET, PLASTIC 144" W X 1200" LG.	VISQUEENCLEAR
1066387	1	PRESSURE SPRAYER, 1 GAL	60071
1063898	1	RAG, COTTON	31-25
1022625	4	RESPIRATOR, HALF-FACE	655X013
1009663	1	SHEARS, METAL TIN SNIPS	270-10
1063027	1 SE	SHOULDER STRAP, 30" LG	30SS
1063040	1 SE	SHOULDER STRAP, 60" LG	60SS
1063637	1	DISINFECTANT, 1 GAL	EMP425-1
1019931	3	UTILITY KNIFE	U-3-C
1061205	4	WARNING SIGN (BRADY)	92288
1061986	1	WIRE, FLEXSAW	20FS
1018252	1 PL	WETTING AGENT, SURFACTANT 5 GAL.	CP-225
1062413	6 EA	BAG, PLASTIC. YELLOW	ASBA003
1064301	4	BRUSH, PAINT 4 IN. WIDE	310-100

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 less than 205 L will be cleaned up in less than 3 days, and 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 *Spill Sampling and Assessment Procedure* (SP-EHS-2) to confirm that the CCME standards and guidelines are met.

6.3.6 Substance Specific Clean Up/Disposal Procedures of Common Materials on the North Warning System

Item Description	Clean Up/Disposal Procedure
Waste JET-A1	Fuel spills are dealt with on a case by case basis. To contain a small fuel spill: • Isolate the leaking component if possible (close valves, if from a drum rotate so the puncture is facing upward); • Put a bucket or drip tray under the leak; • Place sorbent pads to the tank/piping (for a slow leak only); • Put a "Temporarily Out Of Service" sign on the fill point; To contain a large fuel spill: • Isolate the leaking component if possible (close valves); • Place sorbent booms to limit spill migration; • Form a berm/dike down-gradient of the spill. • Put a "Temporarily Out Of Service" sign on the fill point; Clean up: • Shovel any contaminated snow/ice/gravel into drums for disposal; • If the spill is into a secondary containment, clean up the spill with sorbents; • Place any used sorbents into a drums for disposal; • Properly mark and label all waste drums; and • Always make effort to protect any water ways. Contact Environmental Services for a clean up of a large spill. Larger spills may require treatment of impacted water and removal of large quantities of impacted soil.
Waste Paint	To contain a spill of paint: • Contain the spilled paint with sorbents or rags; Clean up: • Shovel any contaminated snow/ice/gravel into drums for disposal; • Place any used sorbents into a drums for disposal; and • Properly mark and label all waste drums.

Item Description	Clean Up/Disposal Procedure
Waste Oil/Oil Filters	To contain an oil spill: • Clean up the spilled oil with sorbents or rags; Clean up: • Shovel any contaminated snow/ice/gravel into drums for disposal; • Place any used sorbents into a drums for disposal; and • Properly mark and label all waste drums. Used oil filters are to be placed in a salvage drum for disposal.
Contaminated Soil	To contain a contaminated soil spill: • Eliminate the source; • Place sorbent booms to contain any contaminant migration / runoff (if necessary). Clean up: • Contaminated soil should be picked up with shovels and placed into a salvage drum for disposal. • Properly mark and label all waste drums.
Waste Battery	To contain a spill of battery acid: • Neutralize the acid with baking soda; • Contain the spill using booms or sorbent pads; • Keep the acid from reaching the environment using sorbents; Clean up: • If the spill is outdoors, shovel up the neutralized acid/snow/soil; • Place the rags/sorbents in a drum for disposal; and • Properly mark and label all waste drums.
Waste Glycol	To contain a spill of glycol: • Use a plastic sheeting/drip tray to catch any leaking glycol; • Soak up the glycol with rags or universal sorbents; Clean up: • Shovel any contaminated snow/soil into drums; • Place any used sorbents into a drum for disposal; and • Properly mark and label all waste drums. Glycol is not TDG regulated; do not place a TDG hazard label on the container.

Item Description	Clean Up/Disposal Procedure
Waste Tank Cleaning Effluent	Waste tank cleaning effluent may contain hydrocarbons. To contain a spill of tank effluent: • If from a drum: position the drum so the puncture is facing upward; • Put a bucket or drip tray under the leak; • Place sorbent pads on the tank/piping (for a slow leak only). Clean up: • Shovel any contaminated snow/ice/gravel into drums for disposal; • If the spill is into a secondary containment, clean up the spill with sorbents; • Place any used sorbents into a drums for disposal; • Properly mark and label all waste drums; and • Always make effort to protect any waterways. Larger spills may require treatment of impacted water and removal of large quantities of impacted soil
Waste PCB containing material	To contain a spill of PCB-containing material: • Contain the spill with sorbent booms; Clean up: • Shovel any contaminated snow/ice/gravel into drums for disposal; • If the spill is into a secondary containment, clean up the spill with sorbents; • Place any used sorbents into a drums for disposal; • Properly mark and label all waste drums; and • Always make effort to protect any waterways. Contact Environmental Services to confirm clean up requirements as additional cleaning may be necessary if on to a hard surface.
Waste Acids	To contain a spill of acid: • Neutralize the acid with baking soda; • Contain the spill using booms or sorbent pads; • Keep the acid from reaching the environment using sorbents; Clean up: • If the spill is outdoors, shovel up the neutralized acid/snow/soil; • Place the rags/sorbents in a drum for disposal; and • Properly mark and label all waste drums.
Waste Hydraulic Fluid	To contain a spill of Hydraulic Fluid: • Contain the spill using booms or sorbent pads; • Keep the hydraulic fluid from reaching the environment using sorbents; Clean up: • If the spill is outdoors, shovel up the snow/soil; • Place the rags/sorbents in a drum for disposal; and • Properly mark and label all waste drums.

Item Description	Clean Up/Disposal Procedure
Waste Asbestos	Each Long Range Radar Site is equipped with an Asbestos Response Kit. To contain a release of waste asbestos: • For small releases: Mist the material with water to minimize release of asbestos fibres and contain the material in yellow bags (provided in the response kit); • For Large releases: cordon off the area with poly sheeting and signage (provided in the response kit). Contact Environmental Services for further direction. Clean up: • Use a vacuum with a HEPA filter to clean up any remaining fibres; • Wipe area with wet rags, place rags in yellow bags; • Place yellow bags in a drum; • Properly mark and label all waste drums.
Waste Refrigerant Gas	To contain a release of refrigerant gas: • Cordon off the area; • Stop leak if it is safe to do so, and ensure area is ventilated; • Prevent gas from entering confined areas. Clean up: • Isolate area until gas has dispersed. Note: A person who installs, services, leak tests or charges a refrigeration system, an air-conditioning system or a fire-extinguishing system, or who does any other work on any of those systems that may result in the release of a halocarbon, shall recover, into a container designed and manufactured to be refilled and to contain that specific type of halocarbon, any halocarbon that would otherwise be released during those procedures.
Waste Propane	To contain a spill of waste propane: • Cordon off the area; • Stop leak if it is safe to do so, and ensure area is ventilated; • Prevent gas from entering confined areas. Clean up: • Isolate area until gas has dispersed. Empty propane canisters and send to a licensed disposal facility.
Waste thermometers	Older waste thermometers contain mercury and are TDG regulated. To contain a spill of waste thermometers: • Cordon off the area and ensure it is well ventilated; • Contain the spill using booms or sorbent pads; • Keep the spilled material from reaching the environment using sorbents; and Clean up: • If the spill is outdoors, shovel up the snow/soil; • Place the rags/sorbents in a drum for disposal; • Place the thermometer in a drum for disposal; and • Properly mark and label all waste drums.

Item Description	Clean Up/Disposal Procedure
Waste cleaner/degreaser	To contain a spill of waste cleaner/degreaser: • Contain the spill using booms or sorbent pads; • Keep the spilled material from reaching the environment using sorbents; Clean up: • If the spill is outdoors, shovel up the snow/soil; • Place the rags/sorbents in a drum for disposal; and • Properly mark and label all waste drums.
Waste aerosols	To contain a spill of waste aerosols: • Stop leak if it is safe to do so; • Prevent gas from entering confined areas. Clean up: • Isolate area until gas has dispersed.
Waste lightbulbs	To contain a spill of a mercury-containing lightbulb (e.g. broken fluorescent lamp): • Cordon off the area and ensure it is well ventilated; Clean up: • Sweep lightbulb into a Ziploc bag using a wet rag, pickup any remaining dust with the sticky side of a piece of duct tape; • Place rags and duct tape into Ziploc bag; • Once all visible debris is picked up, use a vacuum with a HEPA filter to pick up any non-visible dust. • Place the Ziploc into a waste drum; • Properly mark and label all waste drums.

6.3.7 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.

6.3.7.1 Used Sorbent Materials

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

6.3.7.2 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 an oil/water separator, filter bank, etc.). Drummed fuel/water mixtures will be sent to a licensed 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 based on the quantity and quality (i.e., the results of the fuel testing)

6.3.7.3 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 to be containerized or treated as it melts. 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*.

6.3.7.4 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:

- Do not mix soil with other spill wastes.
- Do not overfill open head drums; they will need to be moved without the aid of heavy equipment at SRRs.
- 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*.

6.3.7.5 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.

6.3.8 Site Remediation

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

6.3.9 Final Report and Post-Spill Review

A final report will be created and contain the following:

- Initial report information;
- Confirmation of spill volume;
- Actions taken;
- Future remediation/monitoring requirements;
- Sketch map and/or photographs of spill area;
- Lessons learned.

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

- Document all events from the initial spill report through to site remediation;
- Analyze spill response actions taken and their effectiveness in order to:

- Revise action plans as required;
- Amend spill response procedures as required; and
- 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:

- Sealift (e.g. vessel or barge);
- Airlift (e.g. rotary wing or fixed wing aircraft); and
- 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 RC, 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:

- Test spill contingency response procedures;
- Ensure staff preparedness; and
- 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:

- The number of participants;
- Location;
- Date;
- Exercise detail;
- Successes/failures; and
- 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:

a. Lectures;
b. Audio – visual presentations; and
c. 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

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

- Limiting the quantity of HAZMAT at site and ensuring only required minimal volumes are present;
- 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
- Identification of spill potential risk and evaluation of potential impact (e.g. Jet A1 fuel).

Table 8.1-1: Risk Analysis of Spills on NWS Sites

Scenario	Impact	Probability	Mitigation
Catastrophic tank failure	High • 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 • 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).

Scenario	Impact	Probability	Mitigation
Pipeline leak	Medium • 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 • 145 incidents from 2001 to 2018.	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 according 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 • Spill could result in a moderate amount of contaminated soil.	Low • 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 • Spill could result in a moderate amount of contaminated soil. • Relatively low quantity of product in a drum.	Low • 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).
Spill of greater than 600 L	High • 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 • 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 according with the Corrosion Analysis Protection (CAP) Program.
Spill of 100 L to 600 L	Medium • Spill could result in a moderate amount of contaminated soil. • Spill could contaminate water and result in Fisheries Act infractions.	Low • 25 incidents from 2001 to 2018.	Preventive maintenance is completed on tanks and piping. Non-destructive testing of the pipelines are

Scenario	Impact	Probability	Mitigation
Spill of 20 L to 100 L	Medium • Spill could result in a moderate amount of contaminated soil	Medium • 58 incidents from 2001 to 2018.	completed at every site on a 5 year schedule in accordance with the Corrosion Analysis Protection (CAP) Program.
Spills of less than 20 L	Low • Spill could result in a small amount of contaminated soil	High • 287 incidents from 2001 to 2018.	

Notes:

1. Spills from tanks at beach locations present a higher risk resulting in Fisheries Act infractions than tanks at summit locations.
2. Bulk fuel storage tank systems near roads are generally protected with bollards.
3. Definition of impacts:
    a. High impact – Significant impact to land, water, and likely receptors;
    b. Medium impact – Moderate impact to land, water, and likely receptors; and
    c. 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.

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.

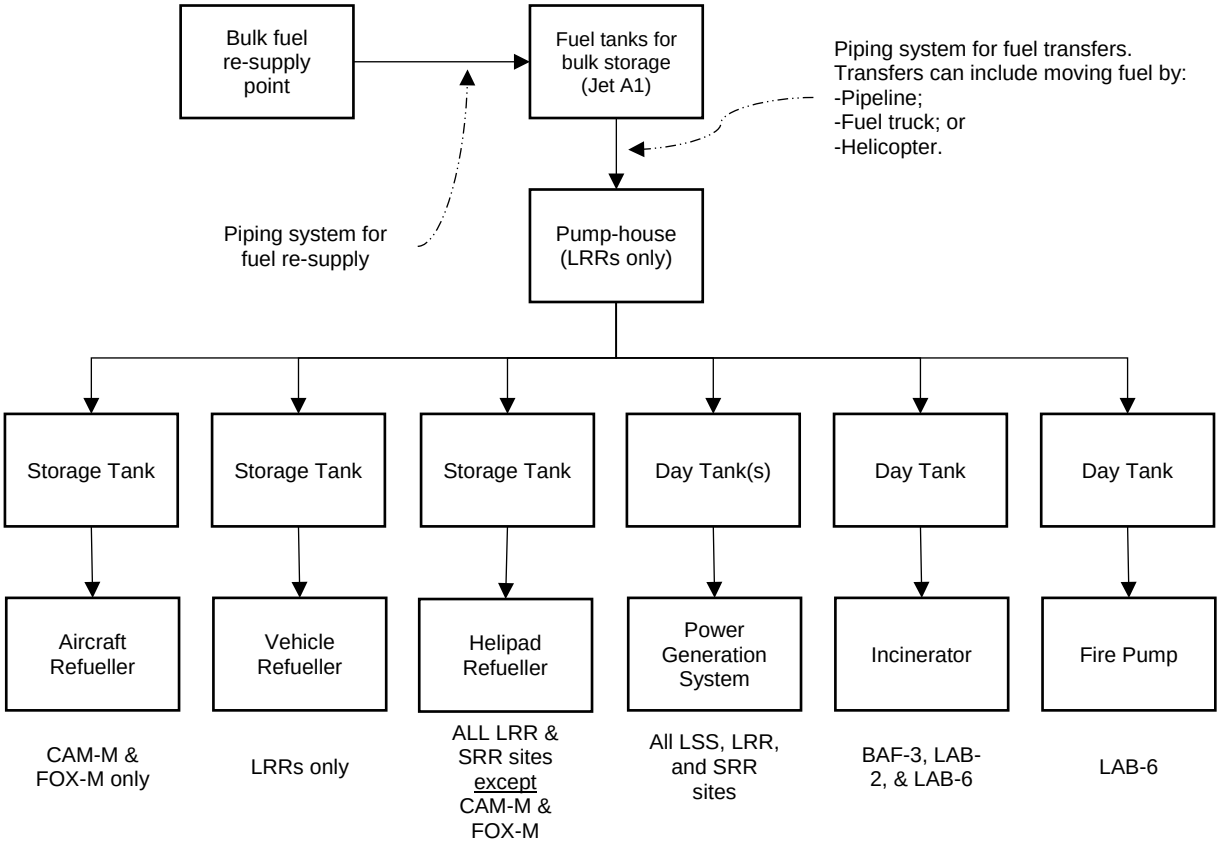

Figure 8.3-1: Bulk Fuel Storage and Distribution System

The bulk fuel systems vary from site to site. Review the site descriptions in the EPP for specific details. All fuel tanks are Aboveground Storage Tanks (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
- Horizontal tank with integral 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:

- operation of the power generating system;
- aircraft re-fuelling;
- vehicles;
- furnaces and boilers; and

- Fire pumps and incinerator at BAF-3, LAB-2, and LAB-6.

Uses of fuel at LSSs and SRR sites include:

- operation of the power generating system;
- aircraft re-fuelling; and
- 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
CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada
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
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

Acronym	Definition
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
RC	Raytheon Canada
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

APPENDIX 1: EMERGENCY CONTACT LIST

Table A1-8.4-1: On-site Contact List

Contact	Contact Number
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

Table A1-8.4-2: NWSO and RC Contact List[1]

Title	Contact	Contact Number
NWS Operations Officer	Captain Daniel Thompson	(819) 939-4978
NWSO Environment Officer	Master Warrant Officer Stephane Proulx	(819) 939-4969
Operations Manager	Doug Tucker	(613) 787-3641 ext. 2864
Environmental Officer	Don Beattie	(613) 298-1764

Table A1-8.4-3: 24 Hour Spill Lines

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

[1] These contacts will be updated annually as required. The living “O&M Contractor and NWSO Incident Contact List” is maintained by staff at the NWSCC.

Table A1-8.4-4: Other Important Contacts

Organization	Contact	Contact Number
Inuvialuit Land Administration		(867) 977-7100
Inuvik Fire Department		(867) 777-2222
Iqaluit Fire Department		(867) 979-4422
North Bay Fire Department		(705) 474-5662
Parks Canada - Western Arctic Field Unit	Manager of Resource Conservation	(867) 777-8800
CIRNAC	Regional Office – Iqaluit	(867) 975-4500
CIRNAC	Manager of Field Operations	(867) 975-4553
CIRNAC	Water Resources Officer, Kitikmeot Region - Kugluktuk (CAM-M, CAM-3)	(867) 982-4308
CIRNAC	Water Resources Officer, Qikiqtani Region - Iqaluit (FOX-M, FOX-3, DYE-M, BAF-3)	(867) 975-4289
GNU, Department of Economic Development and Transportation	David Roberts, Transportations Programs Officer (North)	(867) 899-7340 Email: droberts@gov.nu.ca
Nunatsiavut Government, Department of Lands and Natural Resources	Ernie Ford, Environmental Enforcement Officer	(708) 922-2942 ext.234 Email: ernie_ford@nunatsiavut.com

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 ☐	Cambridge Bay ☐	Hall Beach ☐	Iqaluit ☐	Goose Bay ☐
SITE:				

NWSSC ☐	NWSCC ☐	CMO ☐

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:	W:	
REPORTED BY (SCADA/PERSON):			
SUBSTANCE SPILLED:			
ACTION TAKEN:			
LEAK STATUS:	Contained ☐	Ongoing ☐	
MEDIA INVOLVED (IF KNOWN)	Yes ☐	No ☐	Unk ☐
OTHER PERTINENT INFORMATION			
NWSCC TECH INITIALS			
SM SECTION:			
WORK ORDER NUMBER:			

SOW Ref: 16.F.3.b

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: **Time of Occurrence:**	Occurrence Date Hour : Minute. Zulu ☐ Unknown, see Comments below	**Date of Discovery:** **Time of Discovery:**	Discovery Date Hour : Minute. Zulu
Date Spill Stopped: **Time Spill Stopped:**	Spill Stopped Date Hour : Minute. Zulu	**Date Spill Cleaned:** **Time Spill Cleaned:**	Spill Cleaned up Date 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:**			
Action Taken to Mitigate Environ/Human Health Effects:				
Weather Conditions:	**Rain** ☐		**Wind** ☐	**Snow/Ice** ☐
	Temperature:	°C	**Wind Speed:**	km/hr
	Wind Direction:		**Direction of Drift:**	
Distance from Surface Water:		**Distance from Property Boundary:**		
Work Order #:			**Spill Closure Date:**	Spill Closed Date
Remediation Action Taken:				
Comments:				

ENVIRONMENTAL SERVICES						
Report Submitted to NWSO By:			**Date:**	Date	**Report No:**	
Notified Federal Government:	**Date:**	Date	**Time:**	Hour : Minute. Zulu	**Contact:**	
Notified Provincial Government:	**Date:**	Date	**Time:**	Hour : Minute. Zulu	**Contact:**	
Notification Comments (e.g. Spill Line Report #, Spill Line tel #, co-ordinates of person(s) contacted: name, tel. #, position, gov't dept, city):						

APPENDIX 4: REPORTING CRITERIA FOR SPILL LINES

A4.1 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 Canada[2].

A4.2 Yukon

Table A4.2-1: Minimum reportable volumes for HAZMAT spills in Yukon[3]

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 (*Special Waste Regulations*)	As specified in Sect. 3(1)(b)
18	None	Pesticides (*Environment Act*)	5 L or 5 Kg
19	None	Pesticides & fertilizers (*Pesticide Regulations*)	Any amount
20	None	Ozone depleting substances and halocarbons	10 Kg

[2] From: *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*, SOR/2008-197, Section 41, under the Canadian Environmental Protection Act, 1999.
[3] 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*

Under *Yukon's Special Waste Regulations*, the following substances are special wastes:

1) Waste oil – this is oil that has become unsuitable for its intended purpose due to the presence of impurities or the loss of original properties. Any mixture containing waste oil in excess of 3% by weight is considered waste oil.

2) Biomedical waste – this includes human anatomical waste, animal waste, microbiology laboratory waste, human blood and body fluid waste, and waste sharps typically generated from human or animal health care facilities, medical or veterinary research and teaching establishments, and clinical and research laboratories. This does not include healthy and chemical-free animal slaughter wastes.

3) Dangerous goods no longer used for their original purpose – these are dangerous goods as defined in the federal Transportation of Dangerous Goods Regulations (TDGR) that are not used for their originally-intended purpose, as well as some hazardous wastes as defined in the Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations (EIHWHRMR).

Under *Yukon's Special Waste Regulations*, a permit is required to generate, dispose, collect, transport or otherwise handle special waste if greater than or equal to the quantities listed in table A4.2-2 are handled over the course of 30 days or stored onsite at any one time.

Table A4.2-2: Yukon's Special Waste Reportable Threshold

Item no.	Description of contaminant	Minimum Reportable Volume
1	Waste Oil	20L
2	Other Liquid Special Waste	5L
3	Solid Special Waste	5kg
4	Mixed solid and liquid Special Waste	5kg or 5L

A4.3 Northwest Territories / Nunavut

Table A4.3-1: Minimum reportable volumes for HAZMAT spills in Nunavut / Northwest Territories[4]

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

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

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

A4.3.1 Nunavut Water Board 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 CIRNAC Manager of Field Operations, and the CIRNAC Water Resources Officer/Inspector.

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

A4.4 Newfoundland and Labrador

Table A4.4-1: Minimum reportable volumes for Newfoundland & Labrador

Substance	Minimum Reportable Volume	Limit Source
Oil	70 L	*Storage and Handling of Gasoline and Associated Products Regulations,* 2003, NL Regulation 58/03, s. 2(cc)
Gasoline or associated product	70 L	
Halocarbon	10 kg	*Halocarbon Regulations,* NL Regulation 41/05, s.6(1)
Glycol	70 L	*Used Oil and Used Glycol Control Regulations,* NL Regulation 100/18, s. 2(r)

APPENDIX 5: SAMPLE NT-NU SPILL REPORT FORM AND GUIDE

Northwest Territories | Nunavut | 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	☐ ORIGINAL SPILL REPORT, OR ☐ UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT NUMBER _____-_____
B	OCCURRENCE DATE: MONTH – DAY – YEAR	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 ☐ NWT ☐ NUNAVUT ☐ 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 ☐ EC ☐ CCG ☐ GNWT ☐ GN ☐ ILA ☐ INAC ☐ NEB ☐ TC | SIGNIFICANCE ☐ MINOR ☐ MAJOR ☐ UNKNOWN | FILE STATUS ☐ OPEN ☐ CLOSED

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

PAGE 1 OF _____

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**.

APPENDIX 6: STS REGULATIONS COMPLIANCE

A6.1 Introduction

This emergency plan is required under the Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations (STS Regulations), s. 30 to 32. The plan applies to storage tank systems at North Warning System (NWS) sites under the care, custody, and control of Raytheon Canada (RC) is the "operator" of the systems. The "owner" is the North Warning System Office (NWSO), Department of National Defence (DND), Government of Canada.

Table A6-2 provides a compliance assessment to the requirements of the STS Regulations, sections 30 to 32, to the location of the information in this emergency plan.

A6.2 Purpose

This plan is intended to be paired with the site descriptions from the NWS Environmental Protection Plan (EPP) (PLN-EHS-1) to meet the requirements of the STS Regulations, s. 30. Appendix 8 includes the Material Safety Data Sheet (MSDS) for Jet A1. MSDSs for WHMIS controlled products are available at the sites.

A6.3 Location of the Plans and Notification of the Minister

The NWS consists of radar sites across the arctic. The sites are divided into five zones. In each zone, there is one attended (staffed) site called a Logistics Support Site (LSS). The other sites in a zone are unattended except for quarterly preventive maintenance work, corrective maintenance trips, and one-time projects. Since the LSS is the "place of work" for a zone, the emergency plans for the sites in a zone are kept at the LSS. This meets the requirements of the STS Regulations, s. 31(1).

In 2010, NWSO (the owner) notified the Minister of the civic addresses, and the latitude and longitude, of the LSSs where the plans are kept to allow the owner, in turn, to notify as per the STS Regulations, s. 31(2). The LSS information that was communicated is shown below.

Table A6-1: Location of Plans

Zone	LSS	Address	Coordinates
1	LSS Inuvik	PO Box 2980 Inuvik NT X0E 0T0	68º 18' 41" N, 133º 28' 30" W
2	LSS Cambridge Bay	PO Box 1239 Cambridge Bay NU X0B 0C0	69º 06' 52" N, 105º 07' 14" W
3	LSS Sanirajak (Hall Beach)	PO Box 46 Sanirajak NU X0A 0K0	68º 45' 35" N, 81º 11' 41" W
4	LSS Iqaluit	PO Box 1229 Iqaluit NU X0A 0H0	63º 44' 32" N, 68º 32' 57" W
5	LSS Goose Bay	PO Box 428, Station "C" Happy Valley-Goose Bay NL A0P 1C0	53º 18' 20" N, 60º 23' 47" W

Table A6-2: STS Regulations, s. 30 to 32, Compliance Assessment

STS Regulations reference	Information required	Location of information in this 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) part 1	the properties and characteristics of each petroleum product (i.e. Jet A1) or allied petroleum product stored in each tank of the system and	s. 8.3 Bulk Fuel Description and Characteristics Appendix 7 – Jet A1 SDS
s. 30(1)(a) part 2	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	Site Description of each site, section entitled "POL Storage and Distribution"
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 of each site, sections entitled "Location and Topography", "Land Use/Status", and "Wildlife" supplemented by site drawings and, where available, photos.
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;	This plan in its entirety and specifically: s. 6.1 Spill Prevention; s. 6.2 Spill Detection; s. 6.3 Spill Response; s. 6.5 Spill Reporting Exercises; and s. 6.6 Spill Response Training Program.
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;	This plan in its entirety and specifically: s. 5.0 Responsibility & Authority (NWSO, RC as the O&M contractor, and fuel re-supply subcontractors); s. 6.3.1.1 Spill Discovery/Identification; s. 6.3.1.2 NWSCC; s. 6.3.1.3 LSS Manager; s. 6.3.1.4 Environmental Services Officer; s. 6.3.2 Dispatch of Emergency Response Team (ERT) with position-specific duties; and Figure 2. Spill Response Flow Chart.
s. 30(2)(d)	the identification of the training required for each of the individuals listed under s. 30(2)(c);	Spill Contingency Plan (PLN-EHS-2) in its entirety and specifically: s. 6.5 Spill Reporting Exercises; and s. 6.6 Spill Response Training Program.
s. 30(2)(e)	a list of the emergency response equipment included as part of the plan, and the equipment's location; and	For LRR sites, the Site Description includes a section entitled "Kits" lists the equipment and the location of the equipment

STS Regulations reference	Information required	Location of information in this plan
		For SRR sites the Site Description the equipment is listed in the "Fuel Spill Kit" table. The equipment is located in the sole building on-site, the Technical Services Building (TSB).
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)	Section 6.3.1.5 of this plan.
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 June 12, 2008, no later than two years after June 12, 2008; and	An Emergency Plan to meet the requirements of the STS Regulations for the NWS was initially prepared on 11 Jun 2010.
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.	Emergency Plan is in place for every site.
s. 31(1)	The owner or operator of a storage tank system must:	
	keep the emergency plan up-to-date and	Emergency Plan will be updated as needed
	keep a copy of it readily available for the individuals who are required to carry it out,	Table A6-1
	as well as a copy at the place where the storage tank system is located if that place is a place of work.	Table A6-1
s. 31(2)	The owner or operator must notify the Minister of the civic address of each location where the emergency plan is kept.	Table A6-1
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.	This plan uses: 1. This Spill Contingency Plan (PLN-EHS-2) containing required information not found in the other documents, including the SDS for Jet A1 in Appendix 7; and 2. NWS Site Descriptions (from the EPP).
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.	See the row above.

SOW Ref: 16.F.3.b

APPENDIX 7 - JET A1 SDS

SAFETY DATA SHEET

JET A/A-1 AVIATION TURBINE FUEL

000003001081

Version 2.1 | Revision Date 2018/06/07 | Print Date 2018/06/07

SECTION 1. IDENTIFICATION

Product name	:	JET A/A-1 AVIATION TURBINE FUEL
Synonyms	:	Jet A-1; Jet A-1-DI; Aviation Turbine Kerosene (ATK); JP-8; NATO F-34; Jet F-34; Aviation Turbine Fuel, Kerosene Type (CAN/CGSB 3.23 & CAN/CGSB 3.24)
Product code	:	101851, 100123
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; Canutec Transportation: 1-888-226-8832 (toll-free) or 613-996-6666; Poison Control Centre: Consult local telephone directory for emergency number(s).

Recommended use of the chemical and restrictions on use

Recommended use	:	Used as aviation turbine fuel. May contain a fuel system icing inhibitor. In the arctic, Jet A-1 may also be used as diesel fuel (if it contains a lubricity additive) and heating oil.
Prepared by	:	Product Safety: +1 905-804-4752

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance	Clear liquid.
Colour	Clear and colourless
Odour	Kerosene-like.

GHS Classification

Flammable liquids	:	Category 3
Skin irritation	:	Category 2
Reproductive toxicity	:	Category 2
Specific target organ toxicity - single exposure	:	Category 3 (Central nervous system)
Aspiration hazard	:	Category 1

SAFETY DATA SHEET

JET A/A-1 AVIATION TURBINE FUEL

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GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : Flammable liquid and vapour.
May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause drowsiness or dizziness.
Suspected of damaging fertility or the unborn child.

Precautionary statements : **Prevention:**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground and bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting/ equipment.
Use non-sparking tools.
Take action to prevent static discharges.
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
IF SWALLOWED: Immediately call a POISON CENTER/doctor.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
IF exposed or concerned: Get medical advice/ attention.
Do NOT induce vomiting.
If skin irritation occurs: Get medical advice/ attention.
Take off contaminated clothing and wash it before reuse.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Storage:
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Potential Health Effects

Primary Routes of Entry : Eye contact
Ingestion

Inhalation
Skin contact

Inhalation : 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 : May irritate skin.

Eyes : May irritate eyes.

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.

Other hazards
None known.

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 Confirmed animal carcinogen with unknown relevance to humans

Kerosene 8008-20-6

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Concentration
kerosine (petroleum)	8008-20-6	90 - 100 %
2-(2-methoxyethoxy)ethanol	111-77-3	0 - 0.2 %

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 and effects, both acute and delayed	:	First aider needs to protect himself.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Dry chemical Carbon dioxide (CO2) 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, CO2), nitrogen oxides (NOx), sulphur oxides (SOx), 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)	8008-20-6	TWA	200 mg/m3 (total hydrocarbon vapor)	CA BC OEL
		TWA	200 mg/m3 (total hydrocarbon vapor)	CA AB OEL
		TWA	200 mg/m3 (total hydrocarbon vapor)	ACGIH

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

SAFETY DATA SHEET

JET A/A-1 AVIATION TURBINE FUEL

000003001081

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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	:	A NIOSH-approved air-purifying respirator with an 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	:	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	:	Clear liquid.
Colour	:	Clear and colourless
Odour	:	Kerosene-like.

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Odour Threshold	:	No data available
pH	:	No data available
Pour point	:	-51 °C (-60 °F)No data available
Boiling point/boiling range	:	140 - 300 °C (284 - 572 °F)
Flash point	:	> 38 °C (100 °F) Method: Tagliabue
Auto-Ignition Temperature	:	210 °C (410 °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. May accumulate in confined spaces.
Upper explosion limit	:	5 %(V)
Lower explosion limit	:	0.7 %(V)
Vapour pressure	:	5.25 mmHg (20 °C / 68 °F)
Relative vapour density	:	4.5
Relative density	:	0.775 - 0.84 (15 °C / 59 °F)
Solubility(ies)		
Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Viscosity		
Viscosity, kinematic	:	1.0 - 1.9 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. Containers may explode in heat of fire.

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, acids and alkalis.
Hazardous decomposition products	:	May release COx, NOx, SOx, aldehydes, acids, ketones, smoke and irritating vapours when heated to decomposition.

SECTION 11. TOXICOLOGICAL INFORMATION

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

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):

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,

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

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 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 Regulations

IATA-DGR

UN/ID No.	: UN 1863
Proper shipping name	: Fuel, aviation, turbine engine
Class	: 3
Packing group	: III
Labels	: Class 3 - Flammable Liquid
Packing instruction (cargo aircraft)	: 366

IMDG-Code

UN number	: UN 1863
Proper shipping name	: FUEL, AVIATION, TURBINE ENGINE
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

National Regulations

TDG

UN number	: UN 1863
Proper shipping name	: FUEL, AVIATION, TURBINE ENGINE
Class	: 3
Packing group	: III
Labels	: 3
ERG Code	: 128
Marine pollutant	: no

SECTION 15. REGULATORY INFORMATION

This product has been classified according to the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all of the information required by the HPR.

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

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SECTION 16. OTHER INFORMATION

For Copy of 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
Revision Date	:	2018/06/07

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 8: ENVIRONMENTAL EMERGENCY REGULATIONS, 2019

A8.1 Introduction

This emergency plan is required under the Environmental Emergency Regulations, 2019 (E2 Regulations), s. 4. Jet A1 is listed in the E2 regulations in Schedule 1 “List of Substances” as item 218.

This Appendix applies to FOX-M only as all other NWS sites are exempt from the E2 Regulations as per section 2(2)(c) of the regulations. The threshold for a site storing Jet A1 to be included in the E2 Regulations is 2500 tonnes, or 2,841,500 L

Table A8-1: Fuel Storage on NWS sites

Site	Total Nominal Tank capacity per site (L)	Total Max Fill Volume per site (L)	Total Usable Volume per site (L)
BAR-1	158,635	148,872	145,866
BAR-B	247,135	231,994	227,120
BAR-2	1,294,070	1,215,759	1,166,963
LSS-I	4,850	4,566	4,447
BAR-BA3	151,135	141,818	139,010
BAR-3	251,135	235,889	231,885
BAR-DA1	255,635	239,888	235,089
BAR-4	301,135	282,569	276,953
BAR-E	251,135	235,652	230,972
PIN-M	2,212,195	2,080,539	1,986,726
PIN-1BD	281,135	263,907	258,261
PIN-1BG	255,635	239,888	235,089
PIN-2A	258,635	242,706	237,828
PIN-CB	251,135	235,652	230,972
PIN-3	945,000	887,706	871,140
PIN-DA	281,135	263,907	258,261
PIN-EB	281,135	263,907	258,261
CAM-M	3,083,640	2,900,262	2,762,619
CAM-A3A	151,135	141,818	139,010
CAM-1A	297,135	278,879	273,101
CAM-B	281,135	263,907	258,261
CAM-2	266,135	249,747	244,251
CAM-CB	101,135	94,901	93,029
CAM-3	1,125,045	1,057,213	999,112
CAM-D	151,135	141,818	139,010
CAM-4	181,135	170,073	166,299
CAM-5A	297,135	278,911	273,101
CAM-FA	197,135	185,077	181,139
FOX-M	**4,159,650**	**3,911,877**	**3,726,171**

Site	Total Nominal Tank capacity per site (L)	Total Max Fill Volume per site (L)	Total Usable Volume per site (L)
FOX-1	251,135	235,652	230,972
FOX-A	181,135	170,073	166,299
FOX-2	588,135	552,560	539,154
FOX-B	251,135	235,652	230,972
FOX-3	1,230,870	1,156,745	1,106,996
FOX-CA	477,135	447,917	438,333
FOX-4	316,135	296,664	290,232
FOX-5	151,135	141,818	139,010
DYE-M	2,484,700	2,325,945	2,205,379
BAF-2	296,135	278,002	271,540
BAF-3	1,069,302	1,004,299	984,197
LSS-Q	4,995	4,671	4,552
BAF-4A	266,135	249,747	244,251
BAF-5	266,135	249,747	244,251
LAB-1	312,135	293,006	286,380
LAB-2	2,553,232	2,400,255	2,345,762
LAB-3	341,135	320,417	312,839
LAB-4	431,135	405,182	394,706
LAB-5	373,135	350,425	342,519
LAB-6	820,536	766,854	747,152

Table A8-2 provides a compliance assessment to the requirements of the E2 Regulations, section 4(2), to the location of the information in this emergency plan.

A8.2 Purpose

This plan is intended to be paired with the site descriptions from the NWS Environmental Protection Plan (EPP) (PLN-EHS-1) to meet the requirements of the E2 Regulations s.4.

Table A8-2: E2 Regulations Compliance Assessment

4(2)	Information Required	Location of information in this plan
a	a description of the properties and characteristics of the substance and the maximum expected quantity of the substance at the facility	The properties and characteristics of Jet A1 are described in this plan in: • Section 8.2; and • Appendix 7 (SDS). The maximum expected quantity is listed in Table A8-1.
b	a description of the commercial, manufacturing, processing or other activity involving the substance that takes place at the facility	A description of the activities using Jet A1 are in sections 8.2 and 8.3 of this plan.

4(2)	Information Required	Location of information in this plan
c	a description of the facility and of the area surrounding the facility that may be affected by an environmental emergency referred to in paragraph (d), including any hospitals, schools, residential, commercial or industrial buildings and any highways, public transit infrastructure, parks, forests, wildlife habitats, water sources or water bodies;	A description of this facility is included in the NWS Site Description.
d	an identification of any environmental emergency that could reasonably be expected to occur at the facility and that would likely cause harm to the environment or constitute a danger to human life or health, including the environmental emergency referred to in paragraph (e) and, if applicable, the environmental emergency that is more likely to occur than the environmental emergency referred to in paragraph (e) and that would have the longest impact distance outside the boundary of the facility	Scenarios including potential impacts are included in a risk assessment of spills on the NWS is included in Section 8.1 of this plan.
e	an identification of the harm to the environment or danger to human life or health that would likely result from an environmental emergency involving the release of	The potential impacts from fuel spills on the NWS sites are included in the risk assessment in section 8.1 of this plan.
e(i)	the maximum quantity of the substance that could be contained in the container system that has the largest maximum capacity, if a quantity of the substance is in a container system, and	Table 8-1 Catastrophic Tank Failure scenario
e(ii)	the maximum expected quantity of the substance that will not be in a container system, if a quantity of the substance is not in a container system	Table 8-1, Catastrophic fuel drum (205 L) failure (i.e. entire contents of drum spilled) scenario
f	an identification of the harm to the environment or danger to human life or health that would likely result from the environmental emergency identified under paragraph (d), if any, that is more likely to occur than the environmental emergency referred to in paragraph (e) and would have the longest impact distance outside the boundary of the facility;	Scenarios including potential impacts are included in a risk assessment of spills on the NWS is included in Section 8.1 of this plan.
g	a description of the measures to be taken to prevent and prepare for the environmental emergencies identified under paragraph (d) and the measures that will be taken to respond to and recover from such emergencies if they were to occur	Scenarios including mitigations are included in a risk assessment of spills on the NWS is included in Section 8.1 of this plan.
h	a list of the position titles of the persons who will make decisions and take a leadership role in the event of an environmental emergency and a description of their roles and responsibilities	Table A1-2 in Appendix A of this plan.
i	a list of the environmental emergency training that has been or will be provided to prepare personnel at the facility who will respond in the event that an environmental emergency identified under paragraph (d) occurs	NWS Spill Response training is described in Section 6.6 of this plan.

4(2)	Information Required	Location of information in this plan
j	a list of the emergency response equipment that is necessary for the measures described in paragraph (g) and the equipment's location	The list of the emergency response equipment and the location on-site is included in the NWS Site Description.
k	a description of the measures that will be taken by a responsible person or by a responsible person and local authorities, acting jointly, to communicate with the members of the public who may be adversely affected by the environmental emergency referred to in paragraph (f) to inform them, before the environmental emergency occurs, of	Section 6.3.1.5 of this plan.
k(i)	the possibility that the environmental emergency could occur	
k(ii)	the potential effects of the environmental emergency on the environment and on human life or health, taking into account the factors referred to in paragraphs (a) to (c), and	
k(iii)	the measures that will be taken by the responsible person to protect the environment and human life or health, and the means by which the responsible person will communicate with them, in the event that the environmental emergency occurs	
l	a description of the measures that will be taken by a responsible person or by a responsible person and local authorities, acting jointly, to, in the event that an environmental emergency involving the release of a substance occurs, communicate with the members of the public who may be adversely affected to provide them, during and after its occurrence, with information and guidance concerning the actions that could be taken by them to reduce the potential harm to the environment and danger to human life or health, including an explanation of how those actions may help to reduce the harm or danger	
m	the position title of the person who will communicate with the members of the public referred to in paragraphs (k) and (l)	LSS Manager
n	a description of the consultations that a responsible person had with local authorities, if any, with respect to the measures referred to in paragraph (k) and (l); and	No consultations completed.
o	a plan of the facility showing the location of any substances in relation to the physical features of the facility	A plan of the facility is included in the NWS Site Description.

APPENDIX 9: TERRITORIAL / PROVINCIAL PLAN COMPLIANCE

A9.1 Yukon

No requirements for a Spill Plan are stated in the Yukon Spills Regulations (O.I.C. 1996/193). The reporting thresholds from these regulations are listed in Appendix 4 of this document.

A9.2 Northwest Territories / Nunavut

The Spill Contingency Planning and Reporting Regulations (R-068-93) apply in the Northwest Territories and Nunavut. Section 4(2) of these regulations require the following information:

4(2)	Information Required	Location of information in this plan
a	the name, address and job title of the owner or person in charge, management or control	The "owner" is the North Warning System Office (NWSO), Department of National Defence (DND), and Government of Canada.
b	the name, job title and 24-hour telephone number for the persons responsible for activating the spill contingency plan	Appendix 1 of this plan
c	a description of the facility including the location, size and storage capacity	NWS Site Descriptions (from the EPP).
d	a description of the type and amount of contaminants normally stored at the location described in paragraph (c)	NWS Site Descriptions (from the EPP).
e	a site map of the location described in paragraph (c)	NWS Site Descriptions (from the EPP).
f	the steps to be taken to report, contain, clean up and dispose of contaminants in the case of a spill	Section 6.3 of this plan
g	the means by which the spill contingency plan is activated	Section 6.3 of this plan
h	a description of the training provided to employees to respond to a spill	Section 6.6 of this plan
i	an inventory of and the location of response and clean-up equipment available to implement the spill contingency plan	NWS Site Descriptions (from the EPP).
j	the date the contingency plan was prepared	The date that this plan was prepared is on the cover page and in the footer of every page of this plan.

A9.3 Newfoundland and Labrador

No requirements for a spill plan are stated in the Storage and Handling of Gasoline and Associated Products Regulations, 2003 (O.C. 2003-225). The reporting thresholds from these regulations are listed in Appendix 4 of this document.