Fuel and Hazardous Material Spill Contingency Plan

Former CAM-A (Sturt Point) Intermediate DEW Line Site, Nunavut

Submitted by: **Department of Indian Affairs and Northern Development (DIAND), Northern Affairs Program (Nunavut Regional Office)**

Prepared by: **Public Works and Government Services Canada (PWGSC)**
Real Property Services
Architectural & Engineering Services
Environmental Services
Western Region

October, 2012

Table of Contents

1 Site Description and characteristics

1.1 Sturt Point (CAM-A) site is located on Victoria Island (68º47' N, 103º20' W) overlooking Queen Maud Gulf, 2km inland from the coast and 80km east of Cambridge Bay. The site was reserved for use as an Intermediate DEW Line site in 1956. The military support facilities were constructed in 1957 and in 1963 the site was deactivated. Two years later, in 1965, DIAND assumed responsibility for the land. The buildings and equipment were removed from the site in the early 1970's. In 1985, some hazardous materials stored on site, found in equipment and found as surface contaminants were removed.

1.2 The terrain of the site is relatively flat with several ponds and lakes and an average elevation of 50m above sea level. The CAM-A radar facilities consisted of module train, warehouse, vehicle garage, a POL storage facility, a radar tower, an airstrip and a cargo beaching area. Since abandonement in 1963, the POL tanks at both the station and the beach have been removed. The warehouse, garage and module train structures have also been dismantled and removed from the station area leaving behind the concrete and wood foundations with miscellaneous debris. A section of the module train building remains onsite. The fate of the POL tanks and warehouse structure (i.e. where they were disposed of) are undetermined. The radar tower has been felled and is lying to the west of the module train foundation.

1.3 Environmental Site Assessments (ESAs) completed on the site in 1994 and 2010 showed that the site contained substances that require remediation. Consequently, a Remedial Action Plan (RAP) was written for the site and is planned to be executed in the next two (2) to three (3) years.

1.4 Details of the site location, characteristics/features, topography and other details are contained in the drawings attached to this Spill Contingency Plan. The drawings also contain the corner coordinates of the site as well as the proposed locations of the camp that will be set up during site remediation to accommodate the site workers.

2 Fuel and Hazardous Material Spills - General Information

2.1 This Spill Contingency Plan presents the prescribed course of action to be followed in the case of unanticipated *fuel or chemical spills* during the remediation of the former Intermediate DEW Line site at CAM-A (Sturt Point), Nunavut. The plan will enable persons in a particular spill emergency situation to maximize the effectiveness of the environmental response and meet all regulatory requirements for reporting to the appropriate authorities. The plan also describes the locations where hydrocarbons (fuel) and spill response equipment will be stored at the site.

2.2 This current plan is the standard procedure adopted by PWGSC / AANDC on Crown lands to address unanticipated spills and it is always provided to regulatory pre-contract award. After the selection of a contractor for the project, the successful contractor will develop a more detailed Spill Contingency Plan which will be included as a component of the Site Specific Health and Safety Plan (SSHSP). The SSHSP is always prepared prior to the commencement of site construction (remediation) activities and it will be posted on-site during the remediation activities. Also, a copy of the SSHSP will be submitted to Nunavut Water Board (NWB) as soon as it is completed. The following information will be included in the SSHSP:

1. a description of pre-emergency planning;
2. personnel roles, lines of authority and communication;
3. emergency alerting and response procedures;
4. evacuation routes and procedures, safe distances and places of refuge;
5. emergency alerting and response procedures;
6. directions/methods of getting to the nearest medical facility;
7. emergency decontamination procedure;
8. emergency medical treatment and first aid;
9. emergency equipment and materials;
10. emergency protective equipment;
11. procedures for reporting incidents; and
12. spill response and containment plans for all materials that could potentially be spilled.

3 Types and Quantities of Materials that will be stored on-site

3.1 The types and approximate quantities of fuels that will be stored on-site are:

Gasoline: Approximately 1025 L stored in five 205 L barrels;

Diesel: Approximately 3075 L stored in fifteen 205 L barrels;

Oil: Approximately 40 L of hydraulic oil (two 20 L pails) and 40 L of motor oil (two 20 L pails);

Propane: Three (3) 45 kg tanks; and

Grease*:* Approximately 20 tubes stored within two 4 kg cases.

3.2 Method of Storage & MSDS Sheets:

All liquid fuels will be stored in barrels on pallets within a containment area surrounded by a 0.5 m berm and lined with hydrocarbon resistant material. Refueling activities will occur directly from the barrels in the containment area into the respective vehicle. The containment area will be located on flat, even ground at a distance of no less than 30 m away from the camp and any natural drainage area or water body.

Propane will be stored in 45 kg (100 lb) certified tanks near the kitchen tent.

The above quantities are estimates. Upon award of contract, the successful contractor will provide more specific information on the types and actual quantities, of all fuels and chemicals on site.

Contractor will comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding employee training, use, handling, storage and disposal of hazardous materials.

Under Crown contracting procedure, the provision of Material Safety Data Sheets (MSDS), as required by WHMIS, is the responsibility of the successful contractor. Upon the award of contract for the CAM-A, the successful contractor will prepare the MSDS sheets for all fuels and chemicals he is bringing to site and include the MSDS sheets in the SSHSP which will be submitted to NWB before work can start on the site.

4 Fuel and Hazardous Material Spills Contingency Plan

4.1 The objective of the fuel-related contingency plan is to protect the environment and human health by minimizing the impacts of spill events through clear and concise instructions to all personnel.

4.2 A variety of fuels (diesel, gasoline and lubricating oils) will be used during the site remediation of the CAM-A (Sturt Point) DEW Line site. Fuels will be stored in either barrels of 205 liters or smaller capacity or in double walled tanks. For either storage option, it is anticipated that any spill quantity would likely be small.

4.3 Transportation of fuels must comply with the *Transportation of Dangerous Goods Act and Regulations.*

4.4 The most common pollution incidents would probably involve spills of diesel or gasoline onto land resulting from: human error during transfer, rupture of barrels from deterioration or damage, seepage from fittings or valves, or equipment failure. Daily

checking of equipment and preventative maintenance would also identify damage to the fuel system and reduce the risk of spills or leaks.

4.5 In the event of a spill, protection of human health and safety is paramount. Contamination of personnel involved in clean up is a real possibility as is contamination of the surrounding workplace and environment.

The individual responding to a spill shall:

1. Ensure personnel are appropriately trained.

    a. All employees working on the CAM-A (Sturt Point) Remediation Project, including contractors and sub-contractors, will be trained in the safe operation of all machinery and tools, as well as in the handling of materials to help prevent and respond to hazardous material spills in a timely and effective manner. All employees on site will also be trained for initial spill response in the event of a spill. The recommended training for these purposes consists initially of the 40-Hour Hazardous Waste Operations and Emergency Response (HAZWOPER) course offered by various environmental firms and the 8-Hour HAZWOPER refresher course every two (2) years thereafter.

2. Make use of materials and equipment available for adequate response to fuel spills, such as excavators for creating earthen dykes and hydrocarbon absorbent booms.

3. Warn people in the immediate vicinity and evacuate the area if necessary.

4. Wear protective clothing as required for handling spills.

5. Isolate and eliminate all ignition sources.

6. Identify the spilled material if possible, and take all safety precautions before approaching it.

7. Attempt to immediately stop the leakage and contain the spill, if safe to do so, by implementing the Spill Response Actions summarized in Section 2.5.1 below.

8. Report to the Field Team Leader on the spill location, type of material, volume and extent, status of spill (direction of movement), and prevailing meteorological conditions.

9. Follow all applicable federal/territorial regulations and guidelines or the disposal of spill materials.

10. Document all events and actions taken. Include information required by

applicable regulations and guidelines.

11. Notify appropriate government agencies using the contact list in Table 1 below. Report spills immediately on the 24-Hour Spill Report Line (867) 920-8130.

4.6 Spill Response Actions on Different Media:

On Land

- Do not flush into ditches or drainage systems.
- Block entry into waterways and contain with earth, snow or other barrier.
- Remove small spills with sorbent pads.
- On tundra use peat moss and leave in place to degrade, if practical.

On Snow & Ice

- Block entry into waterways and contain with snow or other barrier.
- Remove minor spills with sorbent pads and/or snow.
- Use ice augers and pump to recover diesel under ice.
- Slots in ice can be cut over slow moving water to contain oil.
- Burn accumulated diesel from the surface using Tiger Torches if feasible and safe to do so.

On Muskeg

- Do not deploy personnel and equipment on marsh or vegetation.
- Remove pooled diesel with pumps and skimmers.
- Flush with low pressure water to herd diesel to collection point.
- Burn only in localized areas, e.g., trenches, piles or windrows.
- Do not burn if root systems can be damaged (low water table).
- Minimize damage caused by equipment and excavation.

On Water

- Contain spill as close to release point as possible.
- Use spill containment boom to concentrate slicks for recovery.
- On small spills, use sorbent pads to pick up contained oil.
- On larger spills, use skimmer on contained slicks.
- Do not deploy personnel and equipment onto mudflats or into wetlands

Rivers & Streams

- Prevent entry into water, if possible, by building berm or trench.
- Intercept moving slicks in quiet areas using (sorbent) booms.
- Do not use sorbent booms/pads in fast currents and turbulent water.

5 Notification and Reporting Procedure on Crown (AANDC) Site

5.1 Report to the Project Manager / Site Supervisor the spill location, type of material, volume and extent, status of spill (direction of movement), and prevailing meteorological conditions.

5.2 A person shall immediately report the spill where the spill is, or where there is a reasonable likelihood of a spill, in an amount equal to or greater than the amount set out in Schedule B of the NWT / Nunavut *Spill Contingency Planning and Reporting Regulations* or in Schedule A of the *Yukon Spill Regulations*.

5.3 Notify appropriate government agencies using the contact list provided below (Table 1)

5.4 When reporting a spill, a person shall give as much of the following information as possible:

1. date and time of spill;
2. location of spill;
3. direction spill is moving;
4. name and phone number of a contact person close to the location of spill;
5. type of hazardous product/material spilled and quantity spilled;
6. cause of spill;
7. whether spill is continuing or has stopped;
8. description of existing containment;
9. action taken to contain, recover, clean up and dispose of spilled material;
10. name, address and phone number of person reporting spill; and
11. name of owner or person in charge, management or control of hazardous materials at the time of the spill.

6 Key Contacts' List

6.1 24-Hour Spill Report Line

1. In the event of a spill, contact the 24-Hour Spill Report Line and provide them with all the relevant details (as stated in section 5 above). The contact details are: Telephone: (867) 920-8130 Fax: (867) 873-6924

2. Environment Canada, as lead agency, shall then be contacted by officials to ensure the appropriate response. The lines are staffed 24 hours a day and can also be used to co-ordinate a response in the event of a non-spill emergency outside of normal working hours.

6.2 Other Contacts

1. In the event of a non-spill emergency (e.g. related to wildlife, fisheries, herirage resources etc.), contacts are provided in Table 1 below.

Table 1: Contact List

Resource	Location	Phone Number	Fax Number
24 Hour Spill Line	NWT/Nunavut	(867) 920-8130	(867) 873-6924
Local Fire Department	Luc Grandmaison, Director / Fire Chief Emergency and Protective Services, Government of Nunavut, Iqaluit, Nunavut	(867) 976-5657	(867) 979-0680
Environment Canada, Enforcement Branch	Curtis Didham Enforcement Officer, Iqaluit, Nunavut	(867) 975-4644	
Aboriginal Affairs and Northern Development Canada – Operations Department	Andrew Keim Acting Manager / Water Resource Officer, Iqaluit Region District Operations Manager	(867) 975-4289	(867) 979-6445
Government of Nunavut	Robert Eno Director of Environmental Protection, Government of Nunavut Iqaluit, Nunavut	(867) 975-7729	867) 975-7739
Fisheries and Ocean Canada (DFO)	Fisheries and Oceans Canada P.O. Box 2208 Iqaluit, X0A 0H0	(867) 979-8000	
Kitikmeot Inuit Association (KIA), Kugluktuk	Geoff Clark Director, Lands, Environment & Resources Kitikmeot Inuit Association P.O. box 360 Kugluktuk, X0B 0E0	(867)-983-2458/9	
Aboriginal Affairs and Northern Development Canada – Project Proponent	HQ - Gatineau Dele Morakinyo, AANDC Project Manager OR Iqaluit Office Natalie Plato, Director, Contaminated Sites	(819) 934-9224 (867) 975-4730	(819) 934-9229 (867) 975-4736
Public Works and Government Services Canada – Project Manager	Program Manager – Matthew McElwaine, PWGSC Project Manager	(780) 497-3690	(780) 497-3842

7 NT-NU Spill Report Form

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 ENVIRONMENT
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS		

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

REPORT LINE USE ONLY

N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT	REPORT LINE NUMBER (867) 920-8130

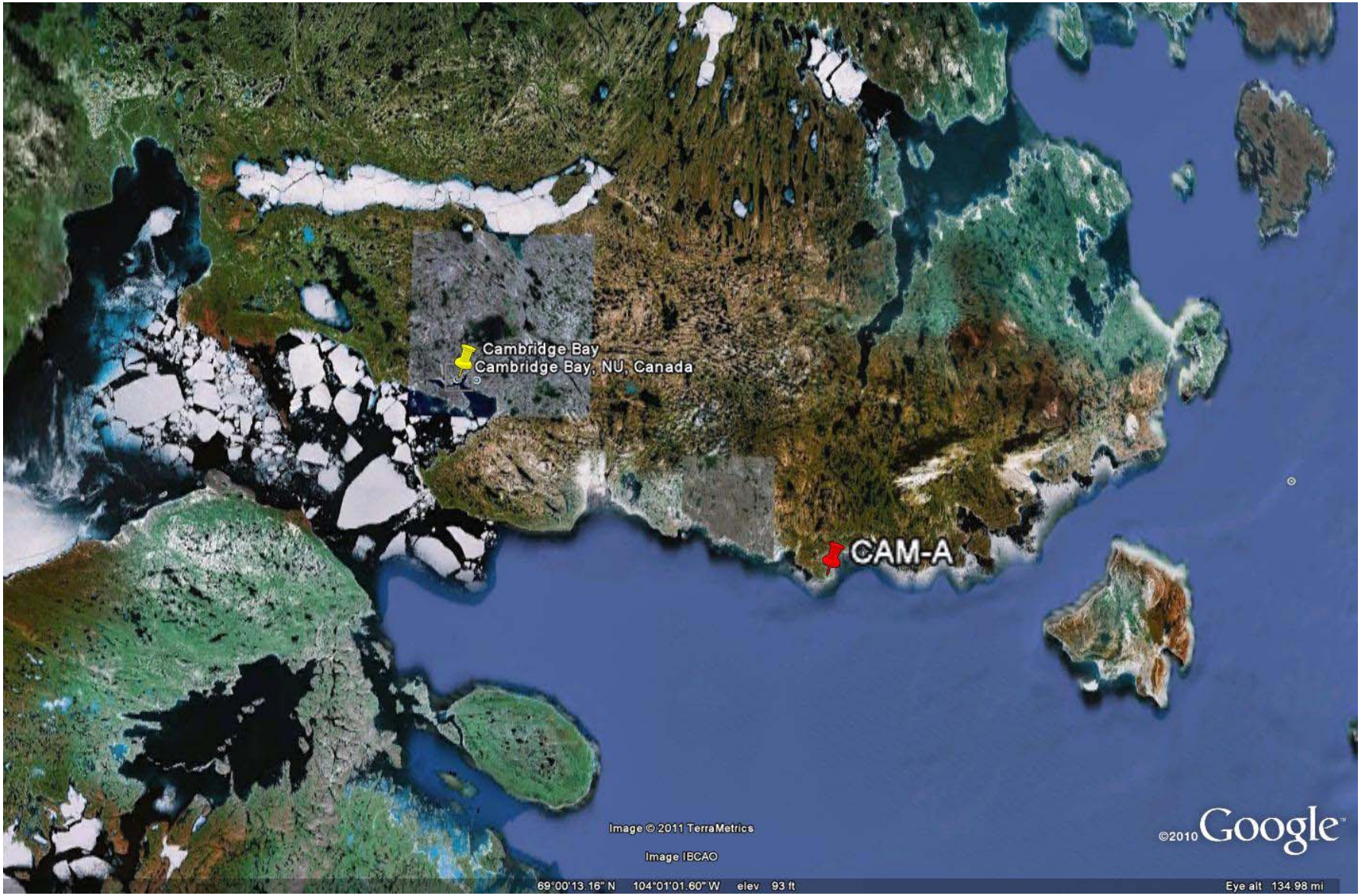
LEAD AGENCY ☐ EC ☐ CCG ☐ GNWT ☐ GN ☐ ILA ☐ INAC ☐ NEB ☐ TC

SIGNIFICANCE ☐ MINOR ☐ MAJOR ☐ UNKNOWN

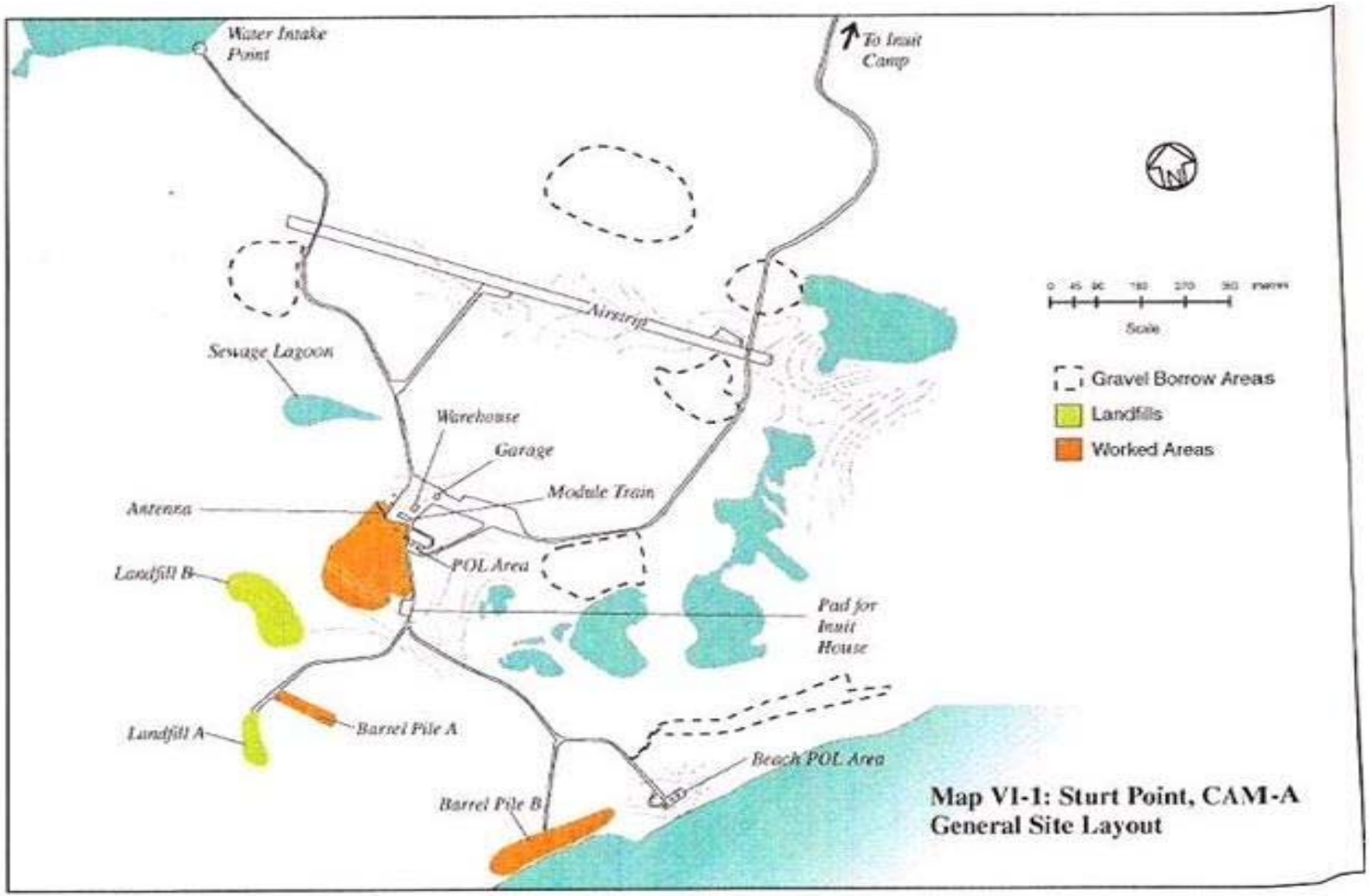
FILE STATUS ☐ OPEN ☐ CLOSED

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

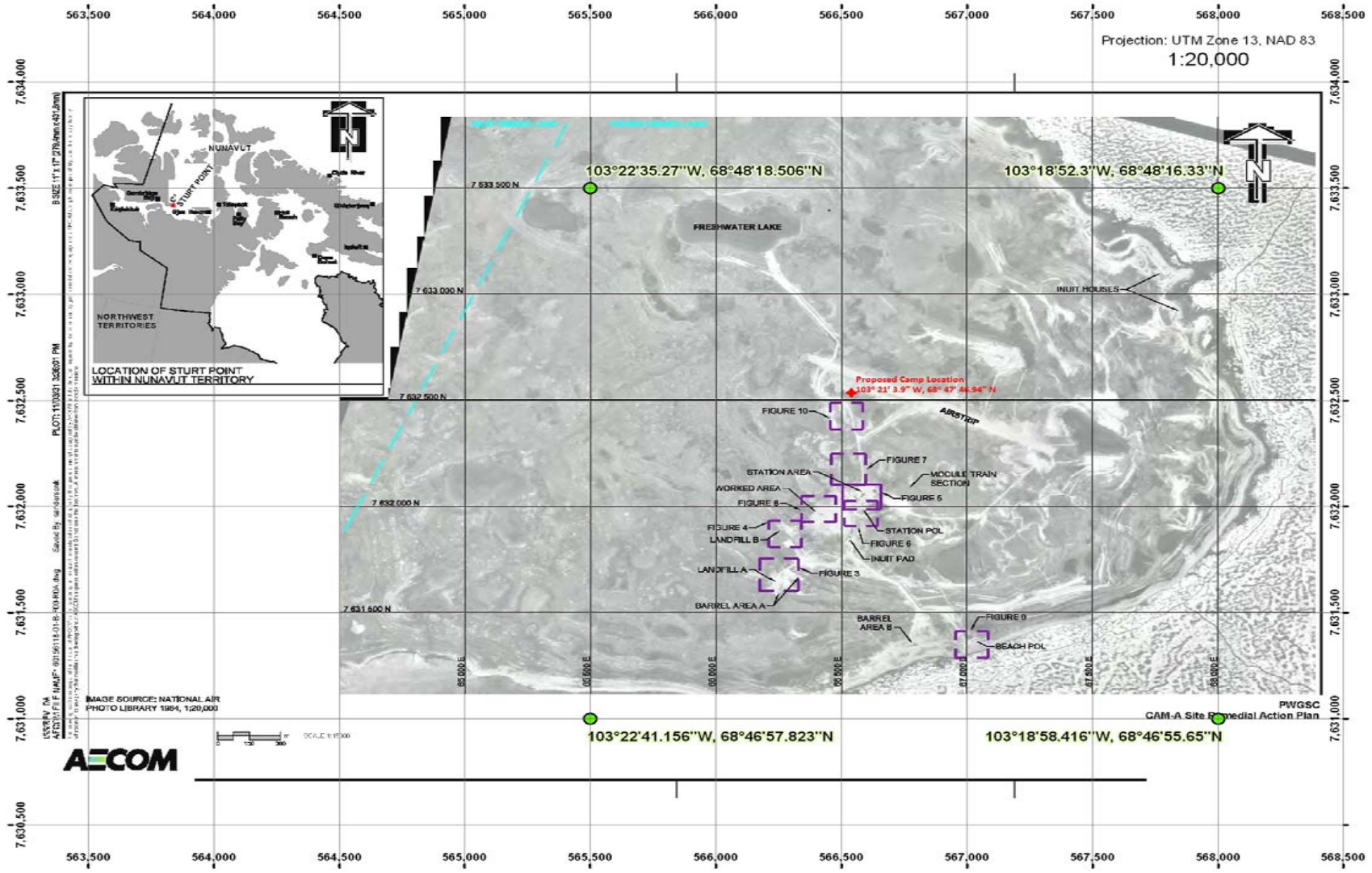
8 MAPS - Site Location, Features and Topography Maps



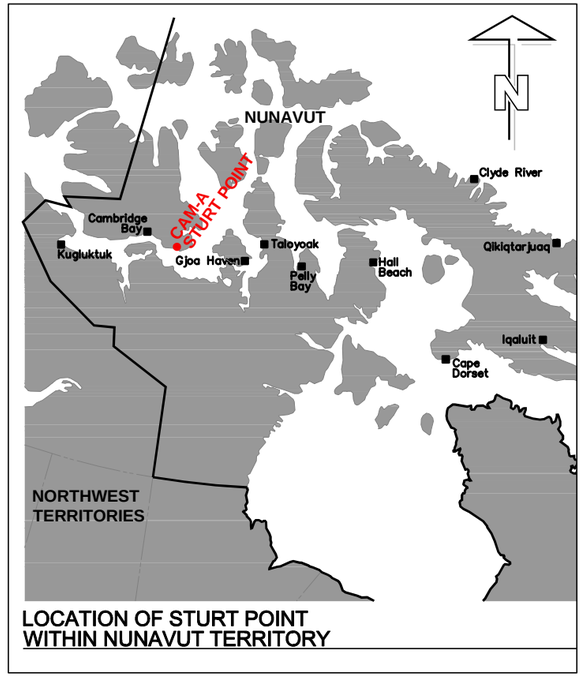
Site Location Map



Sketch of Site Features (ESG Report, 1995)



Site Features and Proposed Camp Location (Aerial View)



LOCATION OF STURT POINT
WITHIN NUNAVUT TERRITORY

INUIT OWNED LAND
CROWN OWNED LAND
7 633 500 N
7 633 000 N
7 632 500 N
7 632 000 N
7 631 500 N
FRESHWATER LAKE
INUIT HOUSES
FIGURE 10
AIRSTRIP
FIGURE 7
STATION AREA
MODULE TRAIN SECTION
WORKED AREA
FIGURE 5
FIGURE 8
STATION POL
FIGURE 4
LANDFILL B
FIGURE 6
INUIT PAD
LANDFILL A
FIGURE 3
BARREL AREA A
BARREL AREA B
FIGURE 9
BEACH POL
65 000 E
65 500 E
66 000 E
66 500 E
67 000 E
67 500 E
68 000 E

IMAGE SOURCE: NATIONAL AIR PHOTO LIBRARY 1964, 1:20,000

0 150 300 m
SCALE 1:15000

PWGSC
CAM-A Site Remedial Action Plan

Site Location

Figure 1

AECOM