

KANATAMI-NUNAVUMI
GEOSCIENCE TITIGAKVIIT

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1. Introduction

The Hall Peninsula Integrated Geoscience Project is being coordinated by the Canada-Nunavut Geoscience Office and will be delivered in collaboration with partners from the Geological Survey of Canada, universities, industry and Federal and Territorial governments. It will strive to use local Inuit-Owned businesses and hire Nunavummiut. Field work will be conducted during the summers of 2012-2013 with the possibility of an additional, less intensive, year in 2014 based from Iqaluit.

The long-term outcome of this work is to reduce risks to exploration, resource development and land use planning on Hall Peninsula. It will provide framework geoscience information and address regional geological problems through bedrock, surficial and thematic studies. All information will be made publicly available using the latest in GIS and data dissemination technology.

The project will be conducted on all or parts of six NTS (scale 1:250 000) map sheets (see map 1). Specifically, these map sheets include 25 J, I, P and O and 26 A and B. The most intensive work will be conducted in map sheets 25O and 26B. Mapping will be conducted out of tent-based camps in map sheet 25 O (CNGO South Camp) in 2012 and map sheet 26 B (CNGO North Camp) in 2013. These camps will be located on Crown Land. Field work will be conducted approximately from June 20th to August 20th in 2012 and 2013. If an additional year happens in 2014, fieldwork will be based from Iqaluit.

Proposed 2012 camp location (CNGO South Camp) (see map 2):

UTM: 645579mE 7018263mN

DMS: 63°15'49.516"N 66°05'56.604"W

DD: 63.263754(N) -66.099056(W)

NTS Map Sheet No: 025O08 Scale: 1:50,000

Proposed 2013 camp location (CNGO North Camp) (see map 3):

UTM: 570990.10mE 7153337.46mN

DMS: 64°29'52.977"N 67°31'19.905"W

DD: 64.498049(N) -67.522196 (W)

NTS Map Sheet No: 026B05 Scale: 1:50,000

2. Description of undertaking:

A fuel cache will be established at the camp which will store no more than 220 drums of aviation fuel, 3 drums of diesel and 1 drum of gasoline. The fuel will be stored in a self-supporting insta-berm. The base camp fuel cache will be inspected daily. Spill kits will be established at all designated refueling sites.

The spill plan described here will be effective as soon as fuel arrive at the designated campsite and last until the site as been cleaned at the end of the field season. The spill plan is activated as soon as a spill or a risk of a spill occurs.

3. Petroleum storage, inventory & transfer:

Electrical pumps supplied by the helicopter contractors will be used for the transfer of Jet B aviation fuel. Smoking, sparks, or open flames are prohibited in fuel storage and fuelling areas at all times.

A manual pump will be used to transfer gasoline and diesel from drum to jerry cans, for use with 1000W and 5000W generators and the water pump.

Refueling will be done in designated areas, all equipped with spill kits. Secondary containment will be used in areas of refueling.

4. Risk assessment and mitigation of risk:

4.1 Petroleum products and other fuels

- 1) **Drummed products:** Leaks or ruptures may affect storage containers of petroleum products.
- 2) **Fuel containers:** Leaks or ruptures could affect plastic jerry containers holding gasoline at generator stations.
- 3) **Propane cylinders:** Propane leaks may occur at the valves of propane containers.

Regular inspection and maintenance in accordance with recognized and accepted standard practices at the camp will reduce any risks identified above. The large fuel cache at the camp will be inspected daily.

Propane tanks will be transported with appropriate Dangerous Goods documentation. Tanks will be stored and secured in an upright position. Valves will be checked regularly and sealed with teflon tape, where required.

Spill response training will be provided to all personnel in camp, with particular attention to those individuals who will regularly be handling fuels. The training will include a presentation, mock spill, review of spill kit contents and their use, and reporting.

Spill kits will be positioned at all refueling stations, including two designated locations for each helicopter, at the transfer point for gasoline from drum to jerry cans and at each generator location. A description of the contents and configuration of the fuel spill kits is provided in section 11.6

5. Responding to failures and spills

5.1 Spill response contact list

24 hour Spill Line

(867) 920-8130

<http://env.gov.nu.ca/node/66>

AANDC Water Resources Inspector

Iqaluit, NU

(867) 975-4295

Environment Canada

Iqaluit, NU

(867) 975-4644

24-hour pager (867) 766-3737

GN-DOE

(867) 975-7700

Manager of Pollution Control and Air Quality

(867) 975-7748

Qikiqtani Inuit Association

Salamonie Shoo
Lands and Resources
P.O. Box 1340
Iqaluit, NU X0A 0H0
Tel: (867) 975 8422
Fax: (867) 979 1643

5.2 Basic steps – Spill Procedure

In the case of any spill or other environmental emergency, it is necessary to react in the most immediate safe and environmentally responsible manner. No spill or incident is so minor that it can be ignored and every spill must be reported.

The basic steps of the spill response plan are as follows:

1. Ensure the safety of all persons at all times.
2. Identify and find the spill substance and its source, and, if possible stop the process or shut off the source of the flow.
3. Inform the on-site coordinator or his /her designate at once, so that he/she may take the appropriate actions. Appropriate action includes the notification of the spill to the 24-hour Spill line and AANDC Water Resource Officer, a copy of the Spill Report can be found in Addendum I.
4. Contain the spill or environmental hazard, as per its nature, and as per the advice of the Spill Line and the AANDC Water Resource Officer as required.
5. Implement any necessary cleanup and/or remedial action.

5.3 Basic Steps – Chain of Command

1. Immediately notify and report to the 24-hour Spill Line at (867) 920-8130, and the Water Resource Officer at (867) 975-4295, Environment Canada personnel at (867) 766-3737, Qikiqtani Inuit Association Land Inspector at (867) 975-8422
2. **A Spill Report Form (Addendum 1)** is filled out as completely as possible before or after contacting the 24 hour Spill Line.

5.4 Other contacts for spill response/assistance and further reporting

Nunavut Water Board.....(867) 360-6338
Fisheries and Oceans Canada, Habitat Impact Biologist.....(867) 979-8007
Government of Nunavut Department of Environment.....(867) 975-5910
Qikiqtani Inuit Association, Land Use Inspector.....(867) 975 8422

6. Taking action:

6.1 Spill Response Actions for Gasoline and Jet B Aviation Fuel

*Take action only if safety permits. Stop the source flow if safe to do so and eliminate all ignition sources. **Never smoke** when dealing with these types of spills.*

On Land:

Build a containment berm using soil material or snow and place a plastic tarp at the foot of the berm for easy capture of the spill after all vapors have dissipated.
Remove the spill by using absorbant pads or excavating the soil, gravel or snow.
Remove spill splashed on vegetation using particulate absorbant material.
Contact regulatory agencies for approval before commencing with the removal of any soil, gravel or vegetation.

On Muskeg

Do not deploy personnel and equipment on marsh and vegetation.

Remove pooled gasoline or Jet B with sorbent pads and/or skimmer.
Flush with low pressure water to herd oil to collection point.
On advice from regulatory agencies, 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 containment boom to capture spill for recovery after vapors have dissipated
Use absorbent pads to capture smaller spills.
Use skimmer for larger spills.

On Snow and Ice:

Build a containment berm around spill using snow.
Remove the spill using absorbent pads or particulate sorbent material.
The contaminated ice and snow must be scraped and shoveled into plastic buckets with lids, 205 liter drums, or polypropylene bags

Storage and Transfer

All contaminated water, ice, snow, soil and clean up supplies will be stored in closed, labeled containers. All containers will be stored in a well ventilated area away from incompatible materials.

Disposal

Any contaminated material will be shipped to a site to an appropriate and approved facility. The DOE monitors the movement of hazardous wastes from generators, carriers to receivers, through a tracking document (Waste Manifest). A waste manifest will accompany all movements.

6.2 Spill Response Actions for Propane

Take action only if safety permits. Gases stored in cylinders can explode when ignited.
Never smoke when dealing with these types of spills.

On Land:

Do not attempt to contain the propane release

On Water

Do not attempt to contain the propane release

On Snow and Ice:

Do not attempt to contain the propane release

General

It is not possible to contain vapors when released
Water spray can be used to knock down vapors if there is no chance of ignition.
Small fires can be extinguished with dry chemical or CO₂
Personnel should withdraw immediately from the area unless the leak is small and can be stopped immediately upon being detected
If tank is damaged, gas should be allowed to disperse and no recovery attempt should be made
Personnel should avoid touching release point on containers since frost forms very rapidly
Keep away from tank ends

Storage and Transfer

It is not possible to contain vapors when released

Disposal

Any contaminated material will be shipped to a site to an appropriate and approved facility. The DOE monitors the movement of hazardous wastes from generators, carriers to receivers, through a tracking document (Waste Manifest). A waste manifest will accompany all movements.

7. Spill Equipment:

Spill kits will be on site at all designated refuelling stations. Spill kits consist of:

- heavy PVC tarp, impermeable to jet B aviation and gasoline spills, sized in accordance with fuel containers (12x14' for drums of Jet B, 4x4' for jerry cans of gasoline at generator stations)
- aluminum stakes to secure impermeable tarp to ground
- particulate absorbant
- petroleum sorbent pads
- 2 pair pvc gloves
- 2 pair safety goggles
- disposable bags
- 1 shovel
- fire extinguisher per spill site

8. Permits and Licences:

The applicant has applied for all necessary Land Use and scientific research permits and licences. These include:

Nunavut Research Institute.....Licence #:.....issued: in progress
Nunavut Impact Review Board....Report #:.....issued: in progress
INAC Landuse Permit.....Permit #:.....issued: in progress
Qikiqtani Inuit Association.....Landuse Permit.....issued: in progress
Nunavut Water Board.....Licence:.....issued: in progress

9. Project Contacts:

Project Proponent in charge and 24h contact:

David Mate

*Chief geologist
Canada-Nunavut Geoscience Office
626 Tumiit Plaza, Suite 202
Box 2319 / B.P. 2319
Iqaluit, Nunavut, Canada X0A 0H0
Tel: 867-975-4412
Blackberry: 613-282-3942 (24h)
Fax: 867-979-0708
dmate@NRCan.gc.ca*

Addendum 1



NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE

TEL: (867) 920-8130

FAX: (867) 873-6924

EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH - DAY - YEAR		REPORT TIME		<input type="checkbox"/> ORIGINAL SPILL REPORT, OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT NUMBER _____	
	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 <input type="checkbox"/> NWT <input type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN		
E	LATITUDE DEGREES MINUTES SECONDS			LONGITUDE DEGREES MINUTES SECONDS			
F	RESPONSIBLE PARTY OR VESSEL NAME		RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION				
G	ANY CONTRACTOR INVOLVED		CONTRACTOR ADDRESS OR OFFICE LOCATION				
H	PRODUCT SPILLED		QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES		U.N. NUMBER		
	SECOND PRODUCT SPILLED (IF APPLICABLE)		QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES		U.N. NUMBER		
I	SPILL SOURCE		SPILL CAUSE		AREA OF CONTAMINATION IN SQUARE METRES		
J	FACTORS AFFECTING SPILL OR RECOVERY		DESCRIBE ANY ASSISTANCE REQUIRED		HAZARDS TO PERSONS, PROPERTY OR 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 <input type="checkbox"/> EC <input type="checkbox"/> COG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> TC			SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED		
AGENCY		CONTACT NAME	CONTACT TIME	REMARKS			
LEAD AGENCY							
FIRST SUPPORT AGENCY							
SECOND SUPPORT AGENCY							
THIRD SUPPORT AGENCY							

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