

Spill Contingency Plan

Supervisor : Pierre Francus (professor-researcher)

Field team :
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Field season 2011

May-June 2011

Prepared in March 2011

Effective in May 2011

PROJECT DESCRIPTION

Past modes of climate variability from varved sediments

Location: South Sawtooth Lake, Fosheim Peninsula, Ellesmere Island.

Time frame: May 22nd to June 2nd, 2011.

Researchers: Pierre Francus and David Fortin (leaders, INRS-ETE, Quebec City), with Nick Balascio (University Massachusetts), Mark Abbott (University Pittsburgh) and Joseph Stoner (Oregon State University).

Description: This project seeks to reconstruct the Canadian High Arctic climate of the past by analysis annual laminations (or varves) from lake sediments.

The goal of this field season is to retrieve 15 m long sediment cores from 2 sites at South Sawtooth Lake that contains a record of the last 8000 years.

Methodology: Long sediment cores from the bottom of the lake will be retrieved directly through the lake ice using a *Uwitech* piston coring system. The system is entirely manual and only uses an electric winch that is powered by a generator. Holes will be drilled in the ice with an ice auger provided by PCSP. A temporary camp will be erected for the duration of the work. During the field season, two means of transportation will be used: airplane to reach the field locations and snowmobile on the lake ice and snow. We hope to leave the site prior to snowmelt. No hazardous material is brought in the field and we will bring everything back to Resolute Bay. Sediment cores retrieved from the lakes will be brought back intact to our laboratory and analyzed in order to provide multidisciplinary paleoenvironmental reconstructions.

Data: These data will be used for two PhD projects. Data will eventually be made freely available in world data centers and the Polar Data Catalog.

Reporting: We will also provide NRI with an annual report. Results will be published in scientific journals and conferences, and on web sites. If results are important, press releases will be made.

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During the field trip, we will have a camp near South Sawtooth Lake. Five persons will be on the site (David Fortin and Pierre Francus (party leaders), Nicholas Balascio, Mark Abbott and Joseph Stoner. The following types of fuel will be used on site : gasoline (stored in 5 gal. Jerrycan), Skidoo oil (stored in 1 l containers) and propane (stored in 20 lbs propane tank).

Response Organization: The first person on the site will (1) assess the spill situation, (2) immediately contact the field Party Chief and provide all information about the spill. Upon receiving this information, the Party Chief will recommend a course of action according to the following procedure:

- (a) Evaluates the scale of the spill.
- (b) Activates the initial response plan.
- (c) Assembles a spill response team and directs them in implementing the spill response plan including containment, recovery, remediation, and disposal operations.
- (d) Calls the NWT 24 Hour Spill Line at (867) 920-8130 as soon as possible to report the spill and provide initial incident details. A NWT Spill Report Form will be faxed to (867) 873-6924.
- (e) Gathers relevant information and submits a detailed spill report to the applicable regulatory agencies no later than thirty (30) days after the initial reporting of the spill.

Initial response plan:

The first person at the site will ensure safety of himself and those near the site. Next he will notify the Party Chief about the spill.

Gasoline:

If possible and safety permits, stop the flow and eliminate ignition sources. Gasoline forms vapors that can ignite and explode. No smoking is permitted when responding to a gasoline spill. Use particulate sorbent material to soak up the spill. All contaminated water, snow/ice, soils, clean up supplies, and absorbent materials will be stored in closed, labeled containers. The containers will be stored in ventilated areas away from incompatible materials. Electrically ground all containers and transporting equipment.

Propane:

If possible and safety permits, eliminate all ignition sources. No smoking is permitted when responding to a propane release. Do not attempt to contain or remove release. No disposal is required, as it cannot be contained once it has been released.

Reporting Procedure:

1. Fill out "**SPILL REPORT**" form as completely as possible before making the report.

2. Report IMMEDIATELY to Yellowknife using the 24 hour Spill Report Line. 24 HOUR SPILL REPORT LINE **(867) 920-8130**

3. Where FAX is available, follow up by sending a copy of the spill Report to **FAX # (867) 873-6924**

4. RCMP communications may be used if other means are not available. 5. DIAND's Water Resources Inspector ((867)-975-4298) will also be notified.

Spill Kits:

We will have spill kits available in the field camp. Each kit will be inspected by the Party Chief on a regular basis to ensure it contains the following:

- 1 package of 10 disposable 5 mil polyethylene bags.
- 10 lb. Bag of particulate
- 1 bail of 17' x 19' x absorbent sheets (100 sheets/bail)
- 2 PVC oil resistant gloves
- 2 respirators
- 2 pairs of splash protective goggles.

Contacts:

DIAND Water Resources: (867) 975-4555

Environment Canada: (867) 975-4636

INAC Environment and Contaminants: (867)-975-4549

INAC's Manager of Field Operation: (867)-975-4295

Qikiqtani Inuit Association: (867) 979-5391

Natural Resources Canada: (613) 995-0947

Fisheries and Ocean Canada: (613) 993-0999

Nunavut Department of Environment: (867) 975-7749