Classement CCEK

Titre Environmental Emergency Reports

Type Dossiers Environementaux

Date D'ouverture 2006

Notes Document: Site Evaluation Report-Drinking Water pumping station Tasiujaq for Kativik Regional Government; 30 Novembre 2006

30 Mai 2008: Lettre de KRG; Environmental Emergency Response

KATIVIK

HAZARDOUS SPILL CLEAN-UP INFORMATION SHEET

In case of a hazardous spill it is important to call your local Fire Department, and the Kativik Regional Government Environmental Technician at (819) 496-2877. If the KRG Environmental Technician is not available, please call the KRG Kuujjuaq office at 1-877-964-2961.

If your local Fire Department does respond or the KRG Environmental Technician is not available, please feel free to call Emergency response in Rouyn-Noranda toll free 1-866-694-5454, and in Canada (613) 996-6666 (Collect calls are accepted).

How to recuperate a hazardous spill:

1. Put yellow tape or barricades around the spill and **notify the public to keep away.** Do not to smoke near the contaminated area.
2. Find empty barrels to hold the collected contaminated gravel, soil or water.
3. If there are no empty barrels available, place a large, durable plastic tarp in a designated hazardous waste collection site and spread the contaminated material on the tarp. When the contaminated material is all collected, cover it with another plastic tarp and secure the tarps to protect the material from wind and precipitation.
4. If the spill reaches a body of water, use absorbent booms or sheets to collect the material. Discard of the absorbents as you would any hazardous waste.
5. If the spill occurs on paved roads or the airport tarmac, use absorbent gravel and spread evenly over the contaminated area. Let stand for at least one hour, then remove the gravel by placing it in empty barrels or on a plastic tarp as above. Treat as hazardous waste.
6. Please take the time to complete the Nunavik Environmental Emergency Report Form. Always note the type of spill, where the spill is located, date of the incident, what caused the spill, and who is responsible for the spill. Add any information you feel is important. Fax the form to the KRG Environmental Technician at (819)496-2500.

If you have further questions, do not hesitate to contact the KRG.

Eli Angiyou
Kativik Regional Government
Environmental Technician
Tel: (819) 496-2877 Fax: (819) 496-2500
E-Mail: eangiyou@krg.ca

ᑲᑎᕕᒃ ᓄᓇᓕᕐᓕᒫᑦ ᑲᕙᒪᖓ
Administration régionale KATIVIK Regional Government
KATIVIK P.O. Box 9 KUUJJUAQ (QUÉBEC) CANADA J0M 1C0

ᓄᓇᕕᒻᒥ ᐊᕙᑎᒧᐊᖓᔪᒧᑦ ᐅᐃᒪᓇᕐᓯᔪᒥᒃ ᑐᓴᕐᑎᓯᓂᕐᒧᑦ ᐊᓪᓚᕕᑦᓴᖅ

ᓯᔭᕕᓂᐅᓂᖓ			
ᐅᓪᓗᖓ ᖃᐅᔨᑎᑦᓯᕕᐅᒍᑎᖓᑕ		ᓇᓗᓐᕐᑕᐅᓯᒪᕕᖓ	
ᓇᓃᓐᓂᖓ ᓯᓂᕕᓂᐅᑉ		ᓄᓇᓕᒻᒥ	
ᖃᐅᔨᓂᐊᕐᕕᐅᒎᓇᕈᖅ ᐅᓇ			
ᓯᓐᑦ ᑲᒪᒍᑎᐅᔭᑦ ᐊᒻᒪᓗ ᒥᑦᓴᐅᓵᕐᑕᐅᓂᖓ ᖃᓄᐃᓪᓗᐊᑑᓂᕐᒥᑦᑕ			
ᓄᓇ (ᓐᑦ) ᓯᕿᑕᐅᔭᖅ			
ᑲᒪᒋᐊᖏᑎᐅᑏᑦ ᓯᓇᐅᓂᕐᒥᑦ			
ᐊᓯᕐᒥᑦ ᑐᑭᓯᑎᑦᓯᒥᐊᖏᑏᑦ (ᐆᒃᑑᒥᓪᓗᒍ: ᑭᖑᓂᖓᒍᑦ ᖃᓄᐃᓕᐅᕐᑕᐅᒋᑕᐅᓂᖓ)			

ᑐᓴᕐᑎᓯᐅᑎ ᐊᑐᐃᓐᓇᒋᕐᑕᐅᔭᖅ ᐆᒧᖓ: ____________________ ᐅᓪᓗᖓ: ____________________

ᖃᐅᔨᒥᐊᕐᕕᐅᒎᓇᕈᖅ ᐅᓇ: KRG-ᒧᑦ ᐊᕙᑎᓕᕆᓂᕐᒧᑦ ᐱᓗᑯᒥᐊᓕᑦᑎ ᕿᕐᑲᖑᑕᐅᔾᔪᑦ: eangiyou@krg.ca

8 ᑕᑯᓗᒍ ᓇᓗᓐᕐᑕᐅᒪᓂᖓᑕ ᖃᓄᐃᓕᐅᕆᑎᐅᓂᖓ ᖁᑦᐸᖓᑕ ᐃᓪᓗᐊᓂ ᑐᓄᐊᓂ

ᐊᕙᑎᒧᐊᓕᖅᓯᐅᑎᒍᑦ ᐅᐃᒪᓇᕐᑐᓂᑦ ᓇᓃᕐᑕᐅᒪᒍᑎᖏᑦᑕ ᖃᓄᐃᑦᑑᓂᖏᑦ

ᓇᓗᓃᕐᑕᐅᒪᔪᖅ ᖅ :

ᐊᕙᑎᒧᐊᓕᖅᓯᐅᑎᒍᑦ ᐅᐃᒪᓇᕐᑐᐃᑦ ᑕᒪᓂ ᓇᓗᓃᕐᑕᐅᒪᔪᒥ 1 ᐃᒣᑦᑑᓐᓇᑐᑦ ᐱᐅᓯᖏᑦ:

ᑕᒪᓐᓇ ᓯᕐᕿᑕᐅᓂᖅ (ᓃᑦ) ᑕᒪᐅᓇ ᐊᕙᑎᑎᒍᑦ ᐊᒻᒪᓗ ᐆᒪᔪᖃᕐᕕᑎᒍᑦ ᓯᒪᓗᓗᐊᕐᕿᓗᓰᒍᓯᕐᑐᑦ ᐊᒻᒪᓗ ᓇᓗᓐᓇᐊᕈᑦᑑᓰᒍᑦᓯᓂ
ᐅᕝᕙᓘᓐᓃᑦ
ᑕᒪᓐᓇ ᓯᕐᕿᑕᐅᒍᑎ (ᒍᑏᑦ) ᐱᔭᓇᐊᕈᑦᑐᐊᐱᓕᒥᑦ ᐊᐅᓚᑕᐅᒍᓐᓇᑐᖅ ᐱᐅᓯᕐᓯᑎᑐᐃᓐᓇᑎᒍᑦ ᑲᒪᔾᔭᕐᑲᓇᐊᕐᓂᒧᑦ ᖃᓄᐃᓕᐅᕈᑎᑎᒍᑦ, ᑐᑭᓯᓐᓇᓯᐊᕐᓯᑎᓪᓗ ᐊᒻᒪᓗ ᑲᔪᓯᐅᑦᓯᐊᕈᓐᓇᑑᑦᓯᑎᓪ
ᐅᕝᕙᓘᓐᓃᑦ
ᓯᕐᕿᑕᐅᒍᑏᑦ ᑖᓂ ᐱᕐᑯᑎᕐᑲᕐᕕᐅᔪᒥ ᓯᒪᓗᓗᐊᓰᒍᓯᕐᑐᑦ ᐊᒻᒪᓗ ᐃᓄᐃᑦ ᐃᓅᒪᓯᐊᕐᓂᖏᑦᑕ ᖃᓄᐃᖅᓯᓯᐊᓇᐊᕐᑲᕐᓂᒧᑦ ᓯᕐᕿᑕᐅᒪᑎᓪ.

ᐆᑦᑐᑎ: ᓄᓇᕗᑦ ᑯᐱᓐᓂᐸᑦ ᐅᕐᓯᐊᓗᒥᑦ ᐅᓯᔭᒥᓂᑦ ᐃᓛᓂᐅᖅᓯᕐᑐᖅ

ᓇᓗᓃᕐᑕᐅᒪᔪᖅ ᑦ:

ᐊᕙᑎᒧᐊᓕᖅᓯᐅᔪᑯᑦ ᐅᐃᒪᓇᕐᓯᔪᖅ ᓇᓗᓃᕐᑕᐅᒪᔪᒥ 2-ᒥ ᐃᒣᑦᑐᔪᓐᓇᑐᑦ ᐱᐅᓯᖏᑦ:

ᑕᒪᓐᓇ ᓯᔪᐱᓂᐅᓂᕐᒧᑦ ᐃᓕᖅᓯᓂᕐᑲᕐᐸᑦ ᐊᑕᐅᓯᕐᒥᑦ ᐅᖅᓚᑳᓄᑦᑑᓃᑦ ᑯᑦᓴᓇᕐᑐᑕᓕᕐᒥᑦ ᓯᓇᒧᐊᓕᖅᓯᓂᕐᑲᕐᓯᓂ ᐊᖏᔪᑲᓪᓕᒥᓪᓗ ᓯᕐᕓᒍᓐᓇᑑᓗᓂ ᐊᕙᑎᒧᐊᓕᖅᓯᐅᔪᑯᑦ
ᐅᕝᕙᓘᓐᓃᑦ
ᑕᒪᓐᓇ ᓯᕐᕿᑕᐅᒍᑎ (ᓃ) ᐃᓅᑦᓯᐊᓇᐊᕐᑲᕐᓂᖅᓯᒍᑦ ᐃᓄᐃᑦ. ᑕᒪᓐᓇ ᐊᕙᑎᖅᓚ ᐅᕝᕙᓘᓐᓃᑦ ᐆᒪᔪᖃᕐᕕᑦ ᐱᓪᓚᕆᐊᖑᑐᐊᕐᐸᑦ ᐊᒻᒪᓗ ᐊᔪᕐᓇᑐᒪᓕᐅᓗᓂ ᓇᓗᓃᕐᓯᐊᕐᓇᐊᖅᓚ
ᐅᕝᕙᓘᓐᓃᑦ
ᐊᐅᓚᒪᓯᐊᕐᓗᒍ ᓯᓂᐱᓂᕐᓇᔭᐅᔪᖅ ᐊᔪᕐᓇᑐᐊᖑᕐᐸᑦ ᐊᒻᒪᓗ ᐊᐅᓚᑕᐅᒍᑎᖃᕐᓇᐊᕐᑲᓕᕐᓗᓂ ᐊᒥᓯᐃᓄᑦ ᖃᓄᐃᓕᐅᕿᓯᐊᕈᑎᓂᒃ
ᐅᕝᕙᓘᓐᓃᑦ
ᑕᒪᓐᓇ ᓯᔪᐱᓂᐅᒍᑎ ᓯᕐᕙᓕᐅᕐᑐᑦᒪᓇᐅᑉᐸᑦ ᓯᕐᕿᑕᐅᔪᑎᒍᑦ ᐃᓄᒥᐊᓐᓂᒍᑦ, ᐊᓯᐅᔾᔭᐅᔪᐃᓗ ᐊᖏᔪᐊᖑᑉᐸᑕ ᐊᒻᒪᓗ ᑕᒪᓐᓇ ᖃᓄᐃᖅᓯᐊᕐᓂᒍᑦ
ᖃᓄᐃᑦᑐᓕᕐᓂᖏᑦ ᐃᓄᒥᐊᑦᑐᑎᒍᑦ ᑲᕐᐱᐊᓈᕿᓕᕐᐸᑦ ᐅᕝᕙᓘᓐᓃᑦ ᓯᕐᕿᑕᐅᓕᖅᓚᓕᕐᓗᑎᒃ.

ᐆᑦᑐᑎ: ᓄᓇᕗᑦᑯᑦ ᑕᕐᓯᓗᒃ ᐅᓯᓗᓂ ᑯᑦᓴᓇᕐᑐᑕᓕᕐᓂᒃ ᓯᓇᓚᓕᕐᓂᒃ ᐊᕐᖁᑎᒥᓂᒃ ᐊᓯᕐᓇᓕᕐᐸᑦ ᐊᒻᒪᓗ ᐊᒥᓯᒪᓗᑦ ᓯᓇᑕᓂᑦ ᑯᐱᔪᐊᖑᕐᐸᑕ

ᓇᓗᓃᕐᑕᐅᒪᔪᖅ ᕐ:

ᐊᕙᑎᒧᐊᓕᖅᓯᐅᔪᑯᑦ ᐅᐃᒪᓇᕐᓯᔪᖅ ᓇᓗᓃᕐᑕᐅᒪᔪᒥ 3-ᒥ ᐃᒣᑦᑐᔪᓐᓇᑐᑦ ᐱᐅᓯᖏᑦ:

ᓯᓂᐱᓂᖅ ᐃᓕᖅᓯᓂᕐᑲᕐᐸᑦ ᐊᑕᐅᓯᕐᒥᑦ ᐅᖅᓚᑳᓄᑦᑑᓃᑦ ᑯᑦᓴᓇᕐᑐᑕᓕᕐᒥᑦ ᓯᓇᒧᐊᓕᖅᓯᓂᕐᑲᕐᓯᓂ ᐊᖏᔪᓪᓚᓇᐊᕐᑐᕐᒥᑦ ᓯᕐᕓᓗᓂ ᐊᕙᑎᑎᒍᑦ
ᐅᕝᕙᓘᓐᓃᑦ
ᑕᒪᓐᓇ ᓯᕐᕿᑕᐅᒍᑎ (ᓃ) ᖃᓄᐃᖅᓯᐊᓇᐊᕐᑲᕐᓂᖅᓯᒍᑦ ᐃᓄᒥᔭᐅᔪᑦ, ᑕᒪᓐᓇᓗ ᐊᕙᑎᖅᓚ ᐅᕝᕙᓘᓐᓃᑦ ᐆᒪᔪᖃᕐᕖᑦ ᓯᑯᐃᔪᓪᓚᓇᐊᕐᐸᑦ
ᐅᕝᕙᓘᓐᓃᑦ
ᑕᒪᓐᓇ ᓯᕐᕿᑕᐅᔪᖅ (ᔪᐃᑦ) ᐊᔪᕐᓇᑑᑉᐸᑕ ᓇᓗᓃᕐᓯᐊᕐᓇᐊᖅᓯᑦ, ᑕᒪᓐᓇ ᐱᐅᓯᐅᓕᕐᑐᖅ ᐊᐅᓚᑦᓯᐅᒍᓐᓃᑉᐸᑦ
ᐅᕝᕙᓘᓐᓃᑦ
ᐅᐃᒪᓇᕐᑐᕐᑲᓕᕐᒪᑦ ᖃᓄᐃᓕᒥᐊᕈᑎ ᐱᑕᖃᕈᑎᐅᒥᐊᕐᑲᓕᕐᐸᑦ ᑲᔪᓯᑦᓯᒥᐊᕐᑲᕐᓂᒥᑦ ᖃᓄᐃᓕᒥᐊᕈᑎᓂᒃ ᐃᓚᐅᐱᐅᒥᐊᕐᑲᕐᓯᓗᓂᓗ ᐊᖏᔪᑲᓪᓚᓗᑎᒍᑦ ᐃᑲᔪᕐᓯᒍᑎᐅᒥᐊᕐᑲᕐᓗᓂ ᐊᒥᓯᓪᓚᕆᓐᓄᑦ ᑎᒥᐅᔪᓄᑦ
ᐅᕝᕙᓘᓐᓃᑦ
ᑕᒪᓐᓇ ᑎᒥᖁᑦ ᐊᒻᒪᓗ/ᐅᕝᕙᓘᓐᓃᑦ ᐃᓯᒪᖁᑦ ᖃᓄᐃᖅᓯᐊᓇᐊᕐᑲᕐᓂᖅ ᐃᓄᑎᒍᑦ ᐃᓄᒥᐊᑦᑐᑎᒍᑦ ᓯᕐᕿᑕᐅᓗᓂ; ᐊᓯᐅᔾᔪᑦ ᐱᓪᓚᕆᐊᖑᓕᕐᓗᑎᒃ
ᐅᕝᕙᓘᓐᓃᑦ
ᑐᑭᓯᑦᓯᒍᑏᑦ ᐱᔪᑦ ᓄᓇᓕᒻᒥᐅᑕᓂᒃ ᐊᒻᒪᓗ ᑐᓴᕐᓴᓂᐊᕐᑏᑦ ᓄᐃᑕᑦᓯᓂᖅᓯᑦ ᐊᖏᔪᓪᓚᓇᓪᒥᒃ ᓄᐃᑕᑦᓯᓕᕐᐸᑕ ᐊᑭᓕᕆᑎᐅᒥᐊᓕᕐᒥᒃ ᐊᒻᒪᓗ ᖃᓄᐃᓕᐅᕈᑎᐅᒥᐊᕐᑲᓕᕐᐸᑦ ᑲᔪᓯᑕᐅᒥᐊᓕᕐᓂᒃ ᐱᒪᓇᐅᑎᐊᓗᓐᓄᑦ ᐃᑲᔪᕐᑎᓄᑦ.

ᐆᑦᑐᑎ: 1998-ᒥ ᓯᑯᓕᕈᑎᓕᐊᓗᓐᓂᒃ ᓯᓕᕐᓂᓗᓐᓂᐅᓚᐅᔪᖅ

ᑲᑎᕕᒃ ᓄᓇᓕᓕᒫᑦ ᑲᕙᒪᖓ
Administration régionale KATIVIK Regional Government
KATIVIK P.O. Box 9 KUUJJUAQ (QUÉBEC) CANADA J0M 1C0

Nunavik Environmental Emergency Report Form

Incident			
Notification date		***Category**	
Location of incident		**Municipality**	
Contact Person			
Material involved and estimated quantities			
Area(s) affected			
Intervention Description			
Other information (ie. follow-up)			

Report Prepared by: ______________________________ Date: ____________________

Contact Person: KRG Environmental Technician (eangiyou@krg.ca)

* See Category Description On Back

Environmental Emergency Category Description

Category 1 :

Environmental emergencies in Category 1 can present the following characteristics:

The impact(s) on the environment and habitats are minor and easy to identify
OR
The impact(s) is easily controlled with normal intervention measures, well understood and well executed
OR
Impacts on property are relatively minor and human health was not affected.

Example: A vehicle spills its diesel load in an accident

Category 2:

Environmental emergencies in Category 2 can present the following characteristics:

The incident concerns one or more hazardous material that could have a significant impact on the environment
OR
The impact(s) on the well-being of humans, the environment or habitat are important and difficult to identify
OR
Controlling the incident is complex and requires many particular means
OR
The incident momentarily disrupts the affected population, the losses can be significant and the health of the population is threatened or may be affected.

Example: A train transporting hazardous material de-rails and several product spills occur

Category 3:

Environmental emergencies in Category 3 can present the following characteristics:

Incident concerns one or more hazardous materials that could have a very significant impact on the environment
OR
The impact(s) on the well-being of humans, the environment or habitat are catastrophic
OR
The impact(s) are difficult to identify, the situation is out of control
OR
Emergency response requires the implementation of measures requiring major contributions from many organizations
OR
The physical and/or psychological well-beng of the human population is affected; losses can be importants
OR
Information from citizens and media represents a major challenge and requires the implementation of substantial resources.

Example: Ice-Storm of 1998

Veuillez prendre note qu'un rapport sur les résultats de la réhabilitation du site sera soumis au MDDEP et inclura les résultats ci-inclus ainsi que les résultats d'échantillons obtenus durant le printemps 2008.

Si vous avez des questions au sujet de ce plan, n'hésitez pas à me contacter le plus tôt possible puisque nous planifions disposer des sols avant la fin de septembre 2008.

Sincères salutations,

Michel

Ms. Lafrance-Rivard and Mr. Rosant,

Further to our conversation, please find attached the results of soil analyses on composite samples of drummed soils removed from the Northern store property following a heating spill in the spring of 2008 in Kangiqsualujjuaq. Since the results are below the Level A of Ministère du développement durable, de l'environnement et des parcs (MDDEP), we are planning to dispose the soils at the Kangiqsualujjuaq landfill site. We have received verbal authorization from Ms. Véronique Lafrance-Rivard of MDDEP and Mr. Romain Rosant of Kativik Regional Government (pending receipt of laboratory results). We will contact Mr. Jim Stewart, Municipal Manager of the Northern Village of Kangiqsualujjuaq, to coordinate soil transfer during the fall of 2008. Once emptied, the drums containing the soils will be also disposed at the landfill site.

The attached results include composite samples of soils in drums currently stored at the landfill site (Soil-1 and Soil-3) as well as samples of the base of the excavation at the Northern store (A3 @ 0.9 M, A7 @ 0.4 M, and B5 @ 0.9 M). Those samples were obtained in August, 2008.
Please note that a report on the results of remediation will also be submitted to MDDEP and include the attached results of analyses along with other results obtained in the spring of 2008.

If you have any questions or concerns with this plan please don't hesitate to contact the undersigned as your earliest convenience since we plan on proceeding with soils disposable before the end of September, 2008.

Best regards,

Michel

Michel Grégoire, P.Eng., P.Geo.
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Rusted tanks causing more home heating oil spills in Nunavut

Last Updated: Friday, September 12, 2008 | 9:46 AM CT Comments4Recommend1

CBC News

Nunavut officials say outdated fuel tanks in people's homes are largely to blame for the high number of heating fuel spills so far this year, with some residents seeing their tanks rust out much sooner than expected.

Seventy-six home heating fuel spills have been reported so far this year in Nunavut, spilling about 26,500 litres of fuel in total — about 28 oil tanks' worth of fuel, said Robert Eno, manager of pollution control in the territorial Environment Department.

It's making 2008 one of the worst years for heating oil spills, Eno said. There were 52 spills last year.

"We're only three-quarters of the way through the year [and] we've had 76 incidences and about 7,000 gallons of fuel spilled," Eno told CBC News.

"That represents about $33,000 in fuel."

The problem prompted Patterk Netser, the minister responsible for the Nunavut Housing Corp., to announce Wednesday that many public housing units will have their fuel tanks replaced.

"The corporation has already ordered 260 new fuel tanks that will be distributed throughout Nunavut on a priority basis," Netser said, adding that more will be ordered later.

Old fuel tanks mostly to blame

Netser said most of the spills this year have come from outdated fuel tanks, which he said are 20 to 30 years old.

But that wasn't the case for Iqaluit resident Dominique Dubeau, who found a pen-sized hole in the home heating fuel tank at his condominium this summer.

That hole caused 600 litres of heating oil to spill out. It cost $55,000 to clean up the spill, but it was covered by his insurance company and the condominium corporation.

"These tanks were put in in 2000, I believe, or 2002," Dubeau said.

"My understanding is the lifeline of these tanks should be about 20 years. So for it to rust out this quickly, it's very surprising."

Dubeau said his condo corporation is changing all 27 of its tanks in the subdivision where he lives.

Rob Eno

Oil spill hot line available

The Environment Department has published a homeowner's guide to inspecting heating oil tanks to encourage residents to check their own tanks.

"It's a fairly simple guide to follow and it identifies, for the homeowner, those things they should be looking at when they conduct an inspection of their heating oil tank and attendant fittings and other facilities," Eno said.

"We've tried to design this so that the homeowner can go out and look at this themselves and possibly identify any impending problems they might have with the installation."

Eno said all heating oil spills should be reported to Nunavut's 24-hour spill line: (867) 920–8130.

- Post a comment
  4Comments have been posted
- Recommend this story
  1Person has recommended this story

Story comments (*4*)

Sort: Most recent | First to last | Most recommended
Chilly1 **wrote:**Posted 2008/09/12
at 2:25 PM ETFrozen Eskimo makes it sound so simple.

I had a fuel spill on my property for that exact reason. I was paying someone to inspect my furnace. The service was supposed to include the draining of the tank but this was not the case.

I contacted a lawyer to find out that I would have a hard time proving that the service was not provided and that it just came down to Mother Nature.

My family had to pay over $50,000 out of our own pockets. Not all home insurance policies cover damage to your land. Check the fine print and all the conditions you must meet in order to be covered.

I suggest that as a home ownert you stay and make sure that the inspection of your furnace includes the draining of the tank of any water. Also, always check to make sure the covers are on the tank pipes at all time.

I think that the Government, both local and Federal, should have a financial assistance program to help people pay for the replacement of their tanks and any spill that may happen. We were "lucky" to have the equity to cover the costs but we did consider selling to cover the cost.

I would not wish this experience on anybody.
1*Personrecommendedthis comment1*Recommend this comment Report abuse

SubArcticGuy **wrote:**Posted 2008/09/12
at 1:41 PM ETI was very glad to pull my oil tank out and dispose of it last year. Ripped out my oil furnace and replaced it with an electric forced air unit. No maintenance (change the filters), no environmental risks, no worries about paying for the next tank, and much less noise (no loud oil pump)....Everybody said I was crazy...then the price of heating oil shot up and now I get calls from people looking for more info on switching over to electric....

I don't know about the northern communities, but any place in the South Slave should be moving away from oil...there is no reason not to be wasting the hydro power that is available.
1*Personrecommendedthis comment*/Recommend this comment Report abuse
tigerincanada **wrote:**Posted 2008/09/12
at 12:51 AM ETWe need major dollars invested in finding better solutions than oil-fired heating for our northern citizens, who already face enough problems due to climate change.
1*Personrecommendedthis comment*/Recommend this comment Report abuse
frozen eskimo **wrote:**Posted 2008/09/12
at 11:57 AM ETCondinsation is the problem....people are not draining their tanks of water that condenses thoughout the year, the tanks end up rusting from the inside out becuase of water in the tank so you really cannot see it.

☆ Trick is to keep your tank filled up and to drain the water in the tank 2, maybe three times a year. Simple and easy fix, preventative maintenance.

But if you want your insurance costs lower you would replace your extiror fuel tank every 10-12 years.
3*Peoplerecommendedthis comment*3Recommend this comment Report abuse

- Previous
- 1
- Next

Post your comment

Note: The CBC does not necessarily endorse any of the views posted. By submitting your comments, you acknowledge that CBC has the right to reproduce, broadcast and publicize those comments or any part thereof in any manner whatsoever. Please note that comments are pre-moderated/reviewed and published according to our submission guidelines.

You must be logged in to leave a comment. Log in | Sign up
Comment:

Post Submission policy

Subject: RE: Oil spill
Date: Monday, June 30, 2008 1:54 PM
From: Romain Rosant <rrosant@krg.ca>
To: "Zahariuk, Shauna" <Shauna.Zahariuk@Wardrop.Com>
Cc: Gabriel Chevrefils <gchevrefils@krg.ca>, Eli Angiyou <EAngiyou@krg.ca>, <jstewart@nvkangigsualujjuaq.ca>, Nancy Dea <ndea@krg.ca>, "Bergen, James" <James.Bergen@wardrop.com>

Shauna,

There in no specifics guidelines. But for sure:

- You have to make samples and analyzes of the soil for check the level of contamination
- In regards to this analyze you will be able to estimate the duration and the type of treatment
- You have to find a place (with authorization of the NV and Landholding) for the storage of this material. Usually we take a space in the dumpsite (in kangigsualujjuaq the dumpsite is full). Usually a geomembrane must be installed between the soil and the material.
- If you choose to treat the spill by the volatilization it will take time and you will have to mixed the material usually in a way to accelerate the processes and homogenize the treatment.
- After this period another analyze of the soil has to be done. If the soils are almost restore they can be reuse has recovering material for the dumpsite. (Authorization has to be approved by the Mddep before).

All this points require to hire someone who will take care of the follow up seriously.

Thanks.

Romain Rosant
Waste Management Project Manager
Municipal Public Works Department
Kativik Regional Government
rrosant@krg.ca
(819) 964-2961 ext: 2354

From: Zahariuk, Shauna [mailto:Shauna.Zahariuk@Wardrop.Com]
Sent: 27 juin 2008 10:00
To: Romain Rosant
Cc: Gabriel Chevrefils; Eli Angiyou; jstewart@nvkangigsualujjuaq.ca; Nancy Dea; Bergen, James
Subject: RE: Oil spill

Romain,

Thank you for the information. We are currently completing a cost estimate with regards to treating the soil in the community or shipping it south.

What are the guidelines/specifications for building a soil treatment cell within the community?

Shauna Zahariuk, B.Env.Sc.
Environmental Scientist
Wardrop Engineering

From: Romain Rosant [mailto:rrosant@krg.ca]
Sent: Thursday, June 26, 2008 10:47 AM
To: Zahariuk, Shauna
Cc: Gabriel Chevrefils; Eli Angiyou; jstewart@nvkangigsualujjuaq.ca; Nancy Dea
Subject: Oil spill

Good day Shauna,

First, someone from the community should complete the form and fax it to the KRG Environmental Technician, Eli Angiyou (in cc).
I believe a copy should also be sent to the MDDEP so they remain aware.

Concerning the treatment it 's a good thing to have all this material in 45-gallon drums.
Of course there is a way to treat them within the community...but due to the fact that it's a private company (The North West Company) who is responsible, all the drum should be take in charge by this company and sent down south for be treated by specialized firm.

If not all the treatment could always be supervised in the community by the North West Compagny. That's including use of heavy equipment, place to store this hazardous material,

staff, follow up, and of course treatment...for several month.

I think that it will be simpler for you to ship these barrels in a container with the summer boat and contract a firm for treat them.

Of course you will have to report all your activities to the MDDEP, KRG environmental technician, Municipality and me.

I hope it will help you.

I'm available for any questions and help,

Don't hesitate

Thanks,

Romain Rosant
Waste Management Project Manager
Municipal Public Works Department
Kativik Regional Government
rrosant@krg.ca
(819) 964-2961 ext: 2354

De: Zahariuk, Shauna [mailto:Shauna.Zahariuk@Wardrop.Com]
Date: lun. 2008-06-23 16:39
À: Gabriel Chevrefils
Objet : Kangiqsualujjuaq Heating Oil Spill Soil Treatment
Gabriel,

I was given your contact information from Jim Stewart (Town Foreman) in Kangiqsualujjauq. He indicated that there have been a few residential heating oil spills in the town, and that the residents were able to treat the soil within the community by spreading the soil out on a plastic sheet, to allow volatilization of the heating oil from the soil.

Our client, The North West Company, had a heating oil spill occur within the Town in late April 2008. We removed the impacted soil, and placed it into 45-gallon drums. We are now looking at either treating the soil within the community. We have approximately 70 drums of soil (~15 m3) which requires treatment. Is this something that can be done in the community? Who should we speak to?

Sincerely,

Shauna Zahariuk, B.Env.Sc.

Environmental Scientist
Oil and Gas & Industry Division – Winnipeg, Manitoba

Wardrop Engineering
400-386 Broadway
Winnipeg, Manitoba R2C 4M8
Tel: 204.956.0980 ext. 238
Fax: 204.957.5389
Email: shauna.zahariuk@wardrop.com

Subject: FW: Other oil spill Umiujaq
Date: Friday, June 6, 2008 12:05 PM
From: Michael Barrett <mbarrett@krg.ca>
To: NDea <ndea@krg.ca>

Hi Nancy Another one. This is not good for Environment Week. mb
------ Forwarded Message
From: Frederic Gagne <FGagne@krg.ca>
Date: Fri, 6 Jun 2008 11:23:33 -0400
To: Eli Angiyou <EAngiyou@krg.ca>, Michael Barrett <MBarrett@krg.ca>, Cecilia Anderson <CAnderson@krg.ca>
Cc: Alexandre Brissette <abrissette@krg.ca>
Subject: RE: Other oil spill Umiujaq

Sam Nuktie won't be there this PM: you can contact Aibelie Napartuk

Frédéric Gagné <mailto:fFrédéricgagne@krg.ca>
MPW-KRG

From: Alexandre Brissette
Sent: 6 juin 2008 10:27
To: Eli Angiyou; Michael Barrett; Cecilia Anderson
Cc: Frederic Gagne
Subject: Other oil spill Umiujaq

Hi

We got an other call from Umiujaq

A Honda hit the oil tank close to the youth center.

The contact is Sam Nuktie.

Please, keep us inform of the actions you take for the 2 oil spills

Thanks

Alexandre Brissette ing. jr, *Project Manager*
Municipal Public Works department, KRG
Tel: (819) 964-2961 ext: 2351
Fax: (819) 964-0306

E-mail: abrissette@krg.ca <mailto:abrissette@krg.ca>

------ End of Forwarded Message

Subject: Oil spill
Date: Friday, June 6, 2008 11:09 AM
From: Bobby <bputulik@nvquaqtaq.ca>
To: NDea <ndea@krg.ca>

Hi Nancy,

We had an oil leak at the pumping station aproximately 500 to 800 litres of oil, we need some spill clean up info in order for us to dispose of it properly, when I complete all the reports, I will fax them to you and I have been trying to reach Eli Angiyou in Akulivik but, he hasn't return my calls yet.

Can you fax me or email the information kit on how to clean up the area!

thank you, and wait for your reply.

Bobby

June 2nd, 2008

Jobie Tukkiapik
Director General
Kativik Regional Government
Kuujjuaq, Nunavik (P.Q)
Jom 1C0

RE: "Aupaluk co-op hotel oil spill"

Hi Jobie,

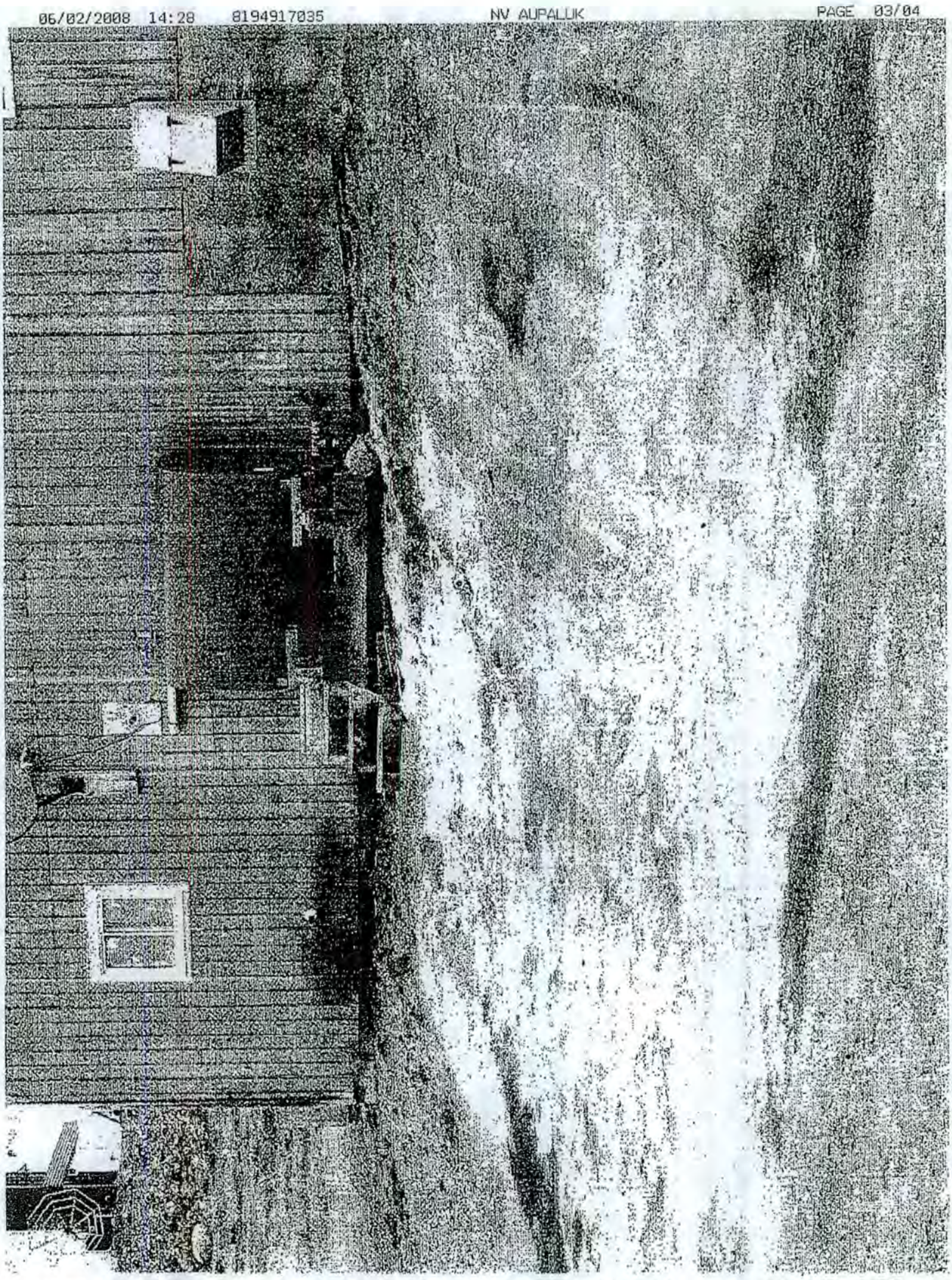
I didn't know where to send this information to at KRG, perhaps you can give them to the right person, since it is a oil spill and it smells very bad when you come close to it, and we believe it was almost full tank when it spill and it happens when I was in Kuujjuarapik. I called co-op manager to find out more but she is still waiting for a call from FCNQ. Can you have someone responsible call me or send me e-mail to dmalalucassie@nvaupaluk.ca
Nakurmiik,

Mala Lukassie
Aupaluk,

Quaqtaq Spill
↳ Bobby Putulik

Umiujaq Spill
↳ Sam Nukkie
or Aibelie Napartuk

They changed the oil tank



KRG → consultant to clean-up spill

ᑲᑎᕝᕕᒃ ᓄᓇᓕᓕᒫᑦ ᑲᕙᒪᖓ
Administration régionale KATIVIK Regional Government
KATIVIK P.O. Box 9 KUUJJUAQ (QUÉBEC) CANADA J0M 1C0

Nunavik Environmental Emergency Report Form

Incident	Furnance Oil Tank spill		
Notification date	20-May-08	***Category**	
Location of incident	Airport Garage	**Municipality**	Inukjuaq
Contact Person	Jack Papak		
Material involved and estimated quantities	Oil spill not sure how many liters leaked on the ground		
Area(s) affected	There is approximatly 900 square feet by 2 feet deep spill on the ground it's even under the garage building		
Intervention Descriptio	We have repleaced the oil tank temporarily and it will be replaced once we get the new oil tank		
Other information (ie. follow-up)	The oil tank was rusted and it started to leak where is was welded		

Report Prepared by: Jack Papak [signature] Date: 3-Jun-08

Contact Person: KRG Environmental Technician (eangiyou@krg.ca)

* See Category Description On Back

May 30, 2008

Mr. Robbie Tookalook
P.O. BOX 108
Umiujaq (QC.) J0M 1Y0

SUBJECT: Environmental Emergency Response

Mr. Mayor,

Please find enclosed a package of information regarding environmental emergency response in your community. This package includes:

- 10 copies of the Nunavik Environmental Emergency Report Form
- An example of a completed Nunavik Environmental Emergency Report Form
- Hazardous spill clean-up information sheet
- List of those who are certified to handle hazardous waste in each community

It is important to know what to do in case of an environmental emergency and whom you should contact. Please read the information carefully and should you have any questions, do not hesitate to contact me.

Sincerely yours,

Eli Angiyou
Environmental Technician, KRG

cc. Peter Tookalook, Municipal Manager

ᒪᐃ 30, 2008

Mr. Robbie Tookalook
P.O. BOX 108
Umiujaq (QC.) J0M 1Y0

<u>ᐱᑦᔪᑎ: ᐊᕙᑎᒧᐊᓕᖕᒐᔪᒥᒃ ᐅᐃᒪᓇᕐᑐᕐᑲᓕᕐᐸᑦ ᕐᑲᓄᐃᓕᒥᐊᕈᑎᕐᑲᕐᓂᖅ</u>

ᓯᕗᓕᕐᑎᒧᑦ,

ᑕᑯᓚᖕᒐᔪᑎᑦ ᐊᓪᓚᕐᑯᑎᓂᒃ ᑐᑭᓯᑎᑦᓯᒍᑎᓂᒃ ᐱᓪᓗᒍ ᓄᓇᓕᑦᓯᓂ ᐊᕙᑎᒧᐊᓕᖕᒐᔪᒥᒃ ᐅᐃᒪᓇᕐᑐᕐᑲᓕᕐᐸᑦ ᕐᑲᓄᐃᓕᒥᐊᕈᑎᑦᓴᕐᑲᕐᓂᒧᑦ. ᑖᒃᑯᐊ ᐊᓪᓚᕐᑯᑏᑦ ᐃᓚᕐᑲᕐᑐᑦ ᒪᑯᓂᖕᖓ:

- ᕐᑯᓕᐅᑦᓯᑎᒃ (10) ᐊᑦᔨᖕᒋᑦ ᓄᓇᕕᒻᒥ ᐊᕙᑎᒧᐊᓕᖕᒐᔪᒥᒃ ᐅᐃᒪᓇᕐᑐᓄᐊᓕᖕᒐᔪᒥᒃ ᑐᓴᕐᑎᓯᓂᕐᒧᑦ ᑕᑕᕐᓴᕿᑦᓴᑦ
- ᐆᒃᑑᕿᐅᑎᓕᐊᖕᒍᒪᔪᖅ ᐱᔭᓈᕐᓗᒋᑦ ᑕᑕᕐᓴᓂᕐᒥᒃ ᓄᓇᕕᒻᒥ ᐊᕙᑎᒧᐊᓕᖕᒐᔪᒥᒃ ᐅᐃᒪᓇᕐᑐᓄᐊᓕᖕᒐᔪᓂᒃ ᑐᓴᕐᑎᓯᓂᕐᒧᑦ ᑕᑕᕐᓴᒐᖅ
- ᑯᑦᓴᓇᕐᑐᒥᒃ ᑯᕕᕐᑲᕐᓂᐸᑦ ᓴᓗᒻᒪᓴᓂᕐᒥᑦ ᑐᑭᓯᑎᑦᓯᓂᕐᒧ ᐊᓪᓚᓯᒪᕕᒃ
- ᐊᓪᓚᑕᐅᒪᔪᐃᑦ ᑭᓇᒃᑯᑦ ᓇᓗᓃᒃᑯᑕᕐᑯᑎᕐᑲᕐᓂᖕᒋᓐᓂᒃ ᑲᒪᒋᔭᕐᑲᕆᓐᓇᑑᑦᓯᑎᒃ ᑯᑦᓴᓇᕐᑐᓂᒃ ᐃᒋᑕᑦᓴᓂᒃ ᐊᑐᓂᐅᑦᑎᑐᓂ ᓄᓇᓕᓐᓂ

ᐱᒻᒪᕆᐅᕗᖅ ᕐᑲᐅᔨᒪᒋᐊᕐᑲᕐᓂᖅ ᓱᒋᐊᕐᑲᕐᑐᕐᑲᓕᕐᒪᖔᖅ ᐱᓂᐊᕐᓂᑕᕐᑲᓕᕐᐸᑦ ᐊᕙᑎᒧᐊᓕᖕᒐᔪᒥᒃ ᐅᐃᒪᓇᕐᑐᕐᑲᓕᕐᑎᓪᓗᒍ ᐊᒻᒪᓗ ᑭᓇᒥᒃ ᕐᑲᐅᔨᑎᑦᓯᒥᐊᕐᑲᕿᔭᕐᒪᖔᑦᓯ. ᐊᓪᓚᓂᐊᑦᓯᐊᓗᒋᑦ ᑖᒃᑯᐊ ᑐᑭᓯᑎᑦᓯᒥᐊᕈᑏᑦ ᕐᑲᓄᑐᐃᓐᓇᓗ ᐊᐱᕐᓲᑎᑦᓴᕐᑲᕈᑦᓯ. ᕐᑲᐅᔨᓂᐊᕐᑌᓕᖕᖏᑐᓯ ᐅᕙᓐᓂᒃ.

ᐊᓪᓚᑐᖅ,

ᐄᓗ ᐊᖕᒋᔪᖅ
ᐊᕙᑎᒧᐊᓕᖕᒐᔪᓄᑦ ᐱᓪᓗᑯᒥᐊᓕᑦᑎ, KRG

cc. Peter Tookalook, Municipal Manager

Transmission Report

Date/Time	22-05-2008	08:38:31 a.m.	Transmit Header Text		
Local ID 1	8199642956		Local Name 1	K.R.G. Eco. Dev.	
Local ID 2			Local Name 2		

This document : Confirmed
(reduced sample and details below)
Document size : 8.5"x11"

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Administration régionale KATIVIK Regional Government
P.O. Box 9 KUUJJUAQ (QUÉBEC) CANADA J0M 1C0

TRANSMISSION

ATTENTION : Eli Angiyou, Env. Tech.

Fax number : 819-496-2500

Date : May 22, 2008

Number of pages / Nombre de pages — Including this one / Incluant celle-ci : 3

Sender / Expéditeur : Nancy Dea, KEAC

(Extension) : 2297

Subject :

Hi Eli:
Here is a fax from POV regarding a spill.
I am going to create a file to keep all these reports – maybe you should do the same so we have 2 copies of everything.
Call me if you have questions.
[signature]

Original will be mailed / L'original suivra par courrier: YES / OUI ~~NO / NON~~ (X)

Please contact the sender if any pages are missing

Total Pages Scanned : 3 Total Pages Confirmed : 3

No.	Job	Remote Station	Start Time	Duration	Pages	Line	Mode	Job Type	Results
001	682	8194962500	08:36:12 a.m. 22-05-2008	00:01:40	3/3	1	EC	HS	CP14400

Abbreviations:

HS: Host send	PL: Polled local	MP: Mailbox print	TU: Terminated by user	
HR: Host receive	PR: Polled remote	CP: Completed	TS: Terminated by system	G3: Group 3
WS: Waiting send	MS: Mailbox save	FA: Fail	RP: Report	EC: Error Correct

KATIVIK

ᑲᑎᕕᒃ ᓄᓇᓕᖕᓂᑦ ᑲᕙᒪᖓ
Administration régionale KATIVIK Regional Government
P.O. Box 9 KUUJJUAQ (QUÉBEC) CANADA J0M 1C0

TRANSMISSION

ATTENTION/ᐅᑯᖓ : Eli Angiyou, Env. Tech.

Fax number
ᓯᑲᑦᑐᑦ ᕿᓯᑦᓯᒍᑎᖓ : 819-496-2500

Date/ᐅᓪᓗᒥ : May 22, 2008

Number of pages
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Including this one
Incluant celle-ci
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3

Sender
Expéditeur
ᐊᐅᓪᓚᑎᑦᓯᔪᖅ

Nancy Dea, KEAC

(Extension)
(ᑐᕋᐃᓐᓇᕐᐱᖓᑕ ᕿᓯᑦᓯᒍᑎᖓ)

2287

Subject
ᐱᓪᓗᒍ :

Hi Eli:
Here is a fax from POV regarding a spill.
I am going to create a file to keep all
these reports – maybe you should do the
same so we have 2 copies of everything.
Call me if you have questions.

[signature]

Original will be mailed / L'original suivra par courrier: YES / OUI ~~NO / NON~~

Please contact the sender if any pages are missing

NORTHERN VILLAGE OF PUVIRNITUQ
P.O. BOX 150
PUVIRNITUQ, QUEBEC
J0M 1P0
Telephone: (819) 988-2825
Fax: (819) 988-2751

Date: 08-05-21

To: NANCY DEA EXECUTIVE SECRETARY "KEAC"

From:

Muncy Novalinga *Mayor*	☐	Aisara Kenuajuak *Regional Councillor*	☐
Sarah Beaulne *Secretary-Treasurer*	☐	Serge Auclair *Municipal Manager*	☑
Rebecca Unaluk *Ass. Secretary-Treasurer*	☐	Johnny Angutiguluk *Ass. Municipal Manager*	☐
Lydia Irqu *Ass. Secretary-Treasurer*	☐	Penina Tulugak *By-law officer*	☐
Mario Aubin *Project Coordinator*	☐	Jean-Marie Beaulne *Recreation Coordinator*	☐
Aisa Alasuak *Water Distribution*	☐		☐

Comments: SORRY FOR THE DELAY,

THANK YOU

SERGE AUCLAIR

☐ Original will be send by mail ☐ Original will not be send by mail

Number of pages including this page: 2

IF ANY PROBLEM OCCURS IN RECEIVING ALL THE PAGES AT THE TIME OF THE TRANSMISSION, PLEASE CALL THE NUMBER MENTIONED ABOVE.

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Administration régionale KATIVIK Regional Government
KATIVIK P.O. Box 9 KUUJJUAQ (QUÉBEC) CANADA J0M 1C0

Nunavik Environmental Emergency Report Form

Incident	Spill from Heating fuel Tank. "opening hole by rust"		
Notification date	May 13 2008	***Category**	/
Location of incident	House 597	**Municipality**	Puvirnituq
Contact Person	Serge Auclair, Municipal Manager.		
Material involved and estimated quantities	Heating fuel of about 150 Liters.		
Area(s) affected	Under the Tank, on the ground covering an area of about 3m². "Ground ⇒ soft sand + snow"		
Intervention Description	Intervention 1-2 and 3 of "How to recuperate a hazardous spill"		
Other information (ie. follow-up)	—		

Report Prepared by: Serge Auclair Date: 08-05-20.

Contact Person: KRG Environmental Technician (eangiyou@krg.ca)

* See Category Description On Back

Subject: FW: Follow up clean up spill at house# 48 Kanigrsuk
Date: Saturday, May 24, 2008 11:15 AM
From: Michael Barrett <mbarrett@krg.ca>
To: NDea <ndea@krg.ca>

Hi Nancy

Fuel spills will be on the agenda for the RC meeting this week. Please give me a call regarding the forms and information. Am leaving at noon on Monday. mb Hi Nancy Do you have the information kit
------ Forwarded Message
From: Minnie Abraham <assistant@cnvkangirsuk.ca>
Date: Thu, 22 May 2008 16:41:38 -0400
To: Michael Barrett <mbarrett@krg.ca>
Cc: <jannahatak@krg.ca>
Subject: Follow up clean up spill at house# 48 Kanigrsuk

Good afternoon Mike,

The clean up coordinator came back and informed us that the clean up needs to continue since snow
melted and the big mess is now underneath the local house# 48 Arnaarartalik from previous spill from
house# 48 then pass the water stream line heading towards the shoreline.

The clean up coordinator will continue and collect the most contaminated gravel and send the gravel where the rest of the contaminated gravel being stored up hill being secured with plastic tarp underneath.
Pictures will be taken again around the spill surroundings.

The Coordinator will be willing to re-evaluate and continue untill the whole contaminant material is cleared
up and handled.

We'll keep everything posted until the final clean up.

Regards,

Minnie Abraham
Assistant Secretary Treasurer
Northern Village of Kangirsuk
P.O. Box 90
Kangirsuk, Quebec J0M 1A0
Tel: (819) 935-4388 ext. 25
Fax: (819) 935-4287
E-Mail: assistant@cnvkangirsuk.ca

------ End of Forwarded Message

ᑲᑎᕕᒃ ᓄᓇᕗᑦ ᑲᑎᕕᒻᒥᐅᑦ
Administration régionale KATIVIK Regional Government
KATIVIK P.O. Box 9 KUUJJUAQ (QUÉBEC) CANADA J0M 1C0

Nunavik Environmental Emergency Report Form

Incident	Residential fuel tank Spill. Fuel leaked under the tank, around House #44 and spread to a street and another building because of melting snow. It was contained at the second building but some may have went into the Kangirsuk River, near the marine infrastructure.		
Notification date	Thursday, May 1, 2008	***Category**	1
Location of incident	House #44, belonging to KMHB	**Municipality**	Kangirsuk
Contact Person	Etua Putulik, Municipal Manager and Minnie Abraham, Secretary Treasurer 819-935-4388		
Material involved and estimated quantities	750 litres heating fuel		
Area(s) affected	Soil and snow around House #44 was contaminated. Soil between the house and the street and the other building was also contaminated. Some fuel may have entered Kangirsuk River.		
Intervention Description	Heavy Equipment was used to excavate the contaminated snow and soil and it was taken near the dumpsite and spread out on a tarp. Some absorbent pads were used to soak up fuel. These were provided by FCNQ and the municipality. The Fuel tank was replaced by KMHB.		
Other information (ie. follow-up)	Many fuel tanks in Kangirsuk and rusting and cracking. No one is sure of who is responsible for their inspections and replacement or repair. Muncicipal Manger noted that it was difficult to locate people within the communitty who could help with the clean-up. He also noted that the community needs more equipmemt to deal with spills.		

Report Prepared by: Eli Angiyou Date: 12-May-08

Contact Person: KRG Environmental Technician (eangiyou@krg.ca)

* See Category Description On Back

SITE EVALUATION REPORT
DRINKING WATER PUMPING STATION, TASIUJAQ
CLIENT : KATIVIK REGIONAL GOVERNMENT

Prepared by : _____
Jean-Louis Bertrand, Chemist, Ph.D.

Revised by : _____
Philippe Simon, P. Eng., Ph.D

Stabilis
ENVIRONNEMENT INC.

November 30, 2006

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF FIGURES

LIST OF TABLES

1. INTRODUCTION

Kativik Regional Government, from its office located in Kangirsuk, contracted Stabilis Inc. in order to perform a site evaluation and mitigate soils contaminated with heating oil after a spill had occurred at the drinking water pumping station in the community of Tasiujaq.

The fuel tank, located on the north side of the building, had released all of its contents after the feed line between the tank and the building had been damaged or broken. Public Health was a concern because of the location and Stabilis was also asked to assess the risk that the water in the well of the pumping station might be affected and contaminated by hydrocarbons released from the spill.

Assessment of the drinking water supply was initiated on the evening of our arrival on November 17th, 2006. Some additional remediation work was performed on site on November 19th and 20th, 2006 by Stabilis personnel, assisted by municipal staff and Heavy Equipment operators. This work was done in order to investigate further and to reach a temporary solution that would be acceptable to Authorities and that would prevent any risk to the water supply or to the environment until the climate conditions would allow for a more thorough cleanup to take place.

Mitigation measures and backfilling was to be done after our departure solely by staff and equipment of the municipality following instructions provided by Stabilis.

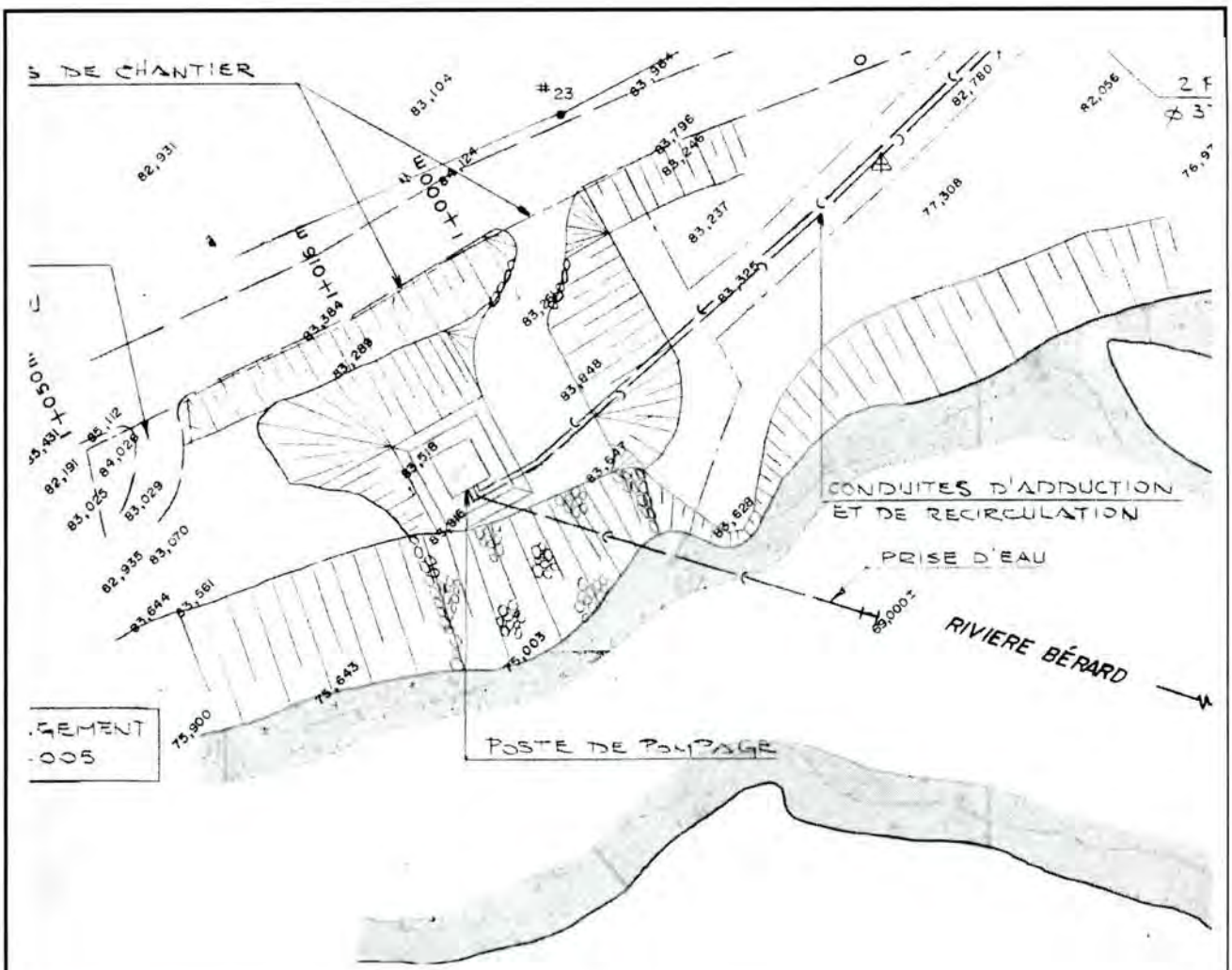
2. DESCRIPTION OF SITE AND HISTORY OF SPILL

The Tasiujaq pumping station where the spill occurred is located between the river where it takes its water and the road connecting the local airport to the community.

The building itself lays on four (4) stands and reinforced pyramidal steel supports which are lying on standard wooden pallets. The whole sits on one-meter deep fill that was put into place on top of the natural ground (see general view photo 1 from Appendix C and photo 5 showing the structures on which the pumping station stands). The walls of the well of the pumping station stand above that fill approximately 0,60 m high and are braced to the floor of the building by a wooden structure made of 2x3" studs. Elevation of the well at that point is 81,000. The well is not in the center of the structure but rather located asymmetrically below the east portion of the building. Water is pumped and re-circulated close to the bottom of that well through pipes of 250 mm diameter that connect to the well through link seals at elevation 69,300. The piping to the water intake extends 50 m away from the well (downstream the river) and the intake lies approximately four (4) meters below the actual river level. For over two (2) years, water was delivered to housing by pumping from that location directly into the water truck with chlorination done directly into the tank of the truck. The water distribution plant (photo 2, Appendix C) has not been in use since the rupture of a pipe between the pumping station and the plant, over two years ago.

The fuel tank for heating oil is located on the north side of the building, close to the entrance (photo 3, Appendix C). Measurements of the tank confirm the volume of total oil spilled to be approximately 2 200 litres. The tank had been filled 48 to 72 hours before the incident was reported on the morning of November 16th, 2006 and hence we will assumed the tank was full and contained a maximum of 2 200 litres at the time of the incident. As reported by the water truck operator, who first noticed the spill, almost all the fuel had spilled to surrounding ground and underneath the building from the feed line between the tank and the building (see photo 4, appendix C). As the fill underneath the building has a slight slope towards the west and south, excess oil had flown outside the perimeter of the building over the 2-3 inches thick ice that covered the entire fill below the building.

When Stabilis Inc. arrived on site, a granular sorbant had been used to adsorb the vast majority of the oil that had spilled underneath the building (photos 5 and 6, Appendix C) and some excavation work had already been done to remove the most apparent contamination in the soils on the west and south sides of the station (photos 7 and 8, Appendix C). Small amounts of oil have also moved towards the east side of the building, close to the macadam



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Project : Figure 1 – Location of Drinking water pumping station in Tasiujaq	
Prepared by : Jean-Louis Bertrand	Scale :
Drawn by :	File :
Approved by :	Revision :
Date : November 30, 2006	Sheet N° : 1 of 1

that goes down to the river. From our discussion with the water truck operator and our own observations, the quantity that may have flown in that direction is not significant.

3. DESCRIPTION OF SITE WORK AND ASSESSMENTS

3.1 QUALITY OF DRINKING WATER

Authorities had a major concern about the drinking water being affected by the proximity of the spill. Upon our arrival, the well of the pumping station was immediately examined. Observations revealed construction of the well to be sturdy, intact and exempt of any apparent cracks for possible infiltrations. The pumps were functioning as we arrived and after inspection at a depth close to the bottom of the well, no sheen of hydrocarbons were detected anywhere, air above the water surface or anywhere else in the well was exempt of any detectable odour, and the water in the well looked perfectly clear and had no particular taste.

Having done these observations and after having consulted the drawings of the pumping station at KRG's office in Kuujjuak, Stabilis confirmed to the client that water supply was free of hydrocarbons and water deliveries to households of the community could resume.

Nevertheless, the water truck tank had been contaminated by what seemed to be small amounts of hydrocarbons. One hypothesis to explain the reasons of the contamination is the attempts that had been made in the community to pump water from alternate sources since the order had been given to stop using water from the pumping station in the morning of November 16th, 2006. The alternate pump used for that purpose may have operated badly and oil may have been pumped with water when the water truck was being filled at the alternate location.

Municipal staff had already cleaned the tank of the water truck four (4) times, pouring in one (1) litre of a non identified chlorine base solution (most probably 12% hypochlorite) into the 15 000 litres of water that the tank can contain. Stabilis Inc. then recommended that the tank be flushed with fresh water taken from the pumping station of from the distribution station four (4) times or until any odour of hydrocarbon or chlorine had disappeared.

After discussing with MDDEP (Ministère du Développement Durable, de l'Environnement et des Parcs) representative in the morning hours of November 18th, 2006, from whom Stabilis received verbal statement, the Tasiujaq municipal manager was informed that it was reasonably safe to resume delivery of drinking water, and that the community should be

notified to boil it until notified otherwise. Boiling notice is a common practice in Tasuijaq since the breakage of the piping between the pumping station and the disinfection plant about 2 years ago.

The water truck started his route early afternoon on November 18th and a water sample was taken from the pumping station at that time (see results in section 4). The driver/operator was also instructed to leave the water level in the water truck tank approximately on foot above the top level of the outlet until further notice, so that any redidual hydrocarbon would remain in the tank of the truck.

Three (3) more drinking water samples were taken on November 20th, 2006. They were from the following sampling points:

- House T-38 from the tap of the sink (first house that received water upon resuming deliveries on November 18th, 2006);
- Water truck outlet
- Pumping station (from flexible piping before connecting to water truck)

The interior of the tank of the water truck was also examined on November 19th to confirm that hydrocarbons residuals were undetected at that time.

3.2 DESCRIPTION OF REMEDIATION WORK AND MITIGATION MEASURES

A near contiguous trench was excavated and done before Stabilis arrived on site. As shown in photos 7 and 8 (Appendix C), the excavation trench performed on the west and south sides of the station is quite wide. Volume estimate for that part of the work is approximately 80 cubic meters (by truck box measurements). Soils were deposited in the landfill site, segregated from the rest of the waste (photos 9 and 10, Appendix C). As surface soils were probably contaminated further away from the immediate perimeter of the building, the actual depth of the excavation probably did not need to be so extensive at that distance from the building.

West side excavation:

Size of excavation was 5,3 m long x 3,3 m wide and 2,5 m deep as measured upon arrival.

The plume of contamination on the west side in the excavation present on November 18th, 2006 was extending in proximity of the north-west stand of the building about 3,3 m wide and

variable depth from 0,6 to 1,2 m. Although it was not possible to go very far underneath the pallet supporting that stand, we believe the contamination may not have migrated very far towards the east, probably half or to the full extent of the pallet itself. This leaves a reasonable distance to the walls of the well of the station itself, decreasing the risk that oil approaches them, in which case the walls may probably not be affected anyway.

The plume of contamination on the west side underneath the south-west stand of the building was much smaller and was not measured. This area seemed less affected than the south side of that same stand.

Extra excavation was performed on the west side of the station on November 19th, mostly to scarify soils still attached to the north-west pallet and accessible to the excavator (Photos 11 and 12, Appendix C). This additional work and cleaning up any soil that fell into the existing excavation resulted in approximately 15 cubic meters of contaminated soils to be removed. New depth of excavation was 3,4 m and new maximum depth of contaminated soils on that newly created wall of excavation was measured at 2,2 m on November 20th, 2006 (Photo 15, Appendix C). This deeper plume observed on the next day can be explained by being closer to the source or by removing the soils that restricted or slowed down the migration of the oil.

South side excavation :

Size of excavation was 10,0 m long x 3,3 m wide and 2,5 m deep as measured upon arrival. This excavation had been practiced approximately 1,8 – 2,0 m away from the immediate perimeter of the building, except in the vicinity of the south-west stand of it.

The plume on the south side was only measured after additional scarification was performed on November 20th, and heavily spotted soils measurements extended over a width of 1,5 m, reaching a depth of 1,2 m. Observations on soils removed from underneath the pallet support the same hypothesis as for the north-west stand, that is the contamination is probably limited to the soils lying underneath the wooden pallet that supports the stand.

This additional excavation work resulted in two (2) more truck loads, or approximately 20 cubic meters of contaminated soils to be removed (photos 13 and 14, Appendix C).

Contaminated soils disposal

All soils excavated were deposited on a strong plastic membrane (tarp) for temporary storage and sampling at the local landfill before deciding on the method of elimination. Stabilis

recommended that municipal authorities order additional tarp as well as heavy duty polyethylene. These will be used to extend the area over which the soils were deposited at the landfill, lowering the height of the pile, and covering the whole with the polyethylene for the winter season.

Backfilling

Municipal staff and authorities were instructed to initiate backfilling the excavations, after approval obtained from the regional MDDEP representative on November 20th, 2006. Stabilis has recommended the following method of backfilling:

- Fixing adsorbent pads (supplied to the municipality by Stabilis) vertically against all patches or apparent trace of contamination on the interior walls of the excavations
- Laying intact plastic film over the adsorbent pads
- Backfilling while taking precautions not to displace adsorbent pads or the plastic film
- Compacting backfill material on every lift, using excavator bucket or tracks, or any other more sophisticated compaction method.

3.3 NATURE OF SOILS AND OTHER OBSERVATIONS

The general nature of materials excavated from the trench was as follows:

- No top soil present
- Approximately one (1) meter of fill used for construction and lift for the building supports. Small to medium gravel (approximately 30%) and coarse sand;
- Deeper than one (1) meter: medium to coarse sand (80 to 90%) and small gravel (10% to 20%), homogeneous.

3.4 SAMPLING

Soil samples were taken according to procedures suggested by authorities of Ministère du Développement Durable, de l'Environnement et des Parcs du Québec (MDDEP), as defined in « Politique de protection des sols et de réhabilitation des terrains contaminés » and « Guide d'échantillonnage des sols, cahiers 1 et 5 », except for the cleaning procedures with solvents, which were not available to us in Tasiujaq.

Nevertheless, all equipment in contact with soil samples was thoroughly rinsed, cleaned with a phosphate-free soap, and rinsed again with tap water before being rinsed with tap water before proceeding to the next sample.

3.4.1 Soils

A total of ten (10) soil samples were taken on site from the following sampling stations[1]:

- Floor of west side excavation, composed of 5 sub-samples
- Exterior of wall west side excavation, composed of 3 sub-samples taken at depths between 0,9 and 1,8 m;
- Interior of wall west side excavation, composed of 3 sub samples, all taken in the apparent non contaminated area of the wall at depths of 2,2 – 3,0 – 2,2 meters respectively. The jar containing this sample was broken during transport to Montreal. As the sample is for the interior wall and that backfilling technique includes segregating the contaminated soils from clean fill, this incident has no negative impact on the decision of backfilling until work around the station resumes next year.
- North end of west side excavation, composed of 3 sub samples taken at depths between 0,9 and 1,8 m;);
- Floor of south side excavation, composed of 5 sub samples;
- Exterior wall of south side excavation, composed of 5 sub samples, taken at depths between 0,6 and 1,2 m;
- Interior wall of south side excavation, composed of 3 sub samples taken at depths between 0,6 and 1,2 m, excluding the more obvious contaminated area around the south-west stand;
- East end of the south side excavation, composed of 3 sub samples taken at depths between 0,6 and 1,2 m;
- One composite sample (7 sub samples) of the first 80 m^3 of soils excavated and deposited at the landfill;
- One composite sample (7 sub samples) of the last 35 m^3 of soils excavated (from extra scarification) and deposited at the landfill.

As the only contaminant suspected to be present is heating oil, all samples were analyzed for Petroleum Hydrocarbons (C_{10}-C_{50}) only.

[1] All samples were taken on November 20th, 2006, after all additional excavation work had been completed.

3.4.2 Water

Four (4) drinking water samples were taken during site evaluation. Description of samples has been given earlier in the text. Bottles used were bottles from Maxxam pre-prepared for C_{10}-C_{50} analysis in water.

No underground water or other potential water bodies except the river were present.

4. RESULTS AND INTERPRETATION

Soil samples and water samples were analyzed by Maxxam Analytique Inc. in Montreal. Results and observations for soils are reported in Table 1, and generic criteria of MDDEP are shown and defined in Table 2. Analysis certificates can be found in Appendix B.

Table 1 – Petroleum Hydrocarbons Analysis (C_{10}-C_{50}) versus MDDEP criteria

Sampling Station	Result (mg kg^{-1})	MDDEP criteria (mg kg^{-1})
Floor of west side excavation (5 sub-samples)	ND[2]	<A
Exterior of wall west side excavation (3 sub-samples)	ND	<A
Interior of wall west side excavation (3 sub samples); Jar broken during transport.		
North end of west side excavation (3 sub samples)	ND	<A
Floor of south side excavation (5 sub samples)	2 300	BC
Exterior wall of south side excavation (5 sub samples)	640	AB
Interior wall of south side excavation (3 sub samples)	ND	<A
East end of the south side excavation (3 sub samples)	100	<A
First 80 m^3 of soils excavated and deposited at the landfill; (7 sub samples)	2 800	BC
Last 35 m^3 of soils excavated (from extra scarification) and deposited at the landfill (7 sub samples).	1 600	BC

According to Appendix 2 of the « Politique de protection des sols et de réhabilitation des terrains contaminés » from MDDEP, samples taken from piles of excavated soils lie within the BC range. As such, they could be potentially used as daily cover material for municipal waste in the landfill site.

[2] ND = none detected, or below detection limit.

As for samples taken from the south side excavation, both the floor and exterior wall are above criterion A for hydrocarbons (C_{10}-C_{50}). However, the interior wall, quite distant from the immediate perimeter of the building of the pumping station, shows no trace of contamination. For both of these samples, taken after the operator had excavated extra material from the south side close to the south west stand of the building, we believe the soils left at the bottom and on the exterior wall were leftovers and that the operator had smoothened the bottom of the excavation with existing material rather than taking all possible traces out of the excavation, as he did for the west side excavation. Therefore, the potential for one or two sub samples being taken from that hot spot is high.

Sample for the exterior wall yielded results that remain in the acceptable "AB" range. Soils for residential use or institutional use are acceptable as long as they are below the "B" value (see Table 2). As for the floor of the excavation, we believe the quantity is not significant and must be limited to small volumes of soils, but the excavation could be reopened next spring or next summer to insure those remaining quantities are effectively removed.

Table 2 – Generic Criteria from MDDEP for soils and interpretation

Criteria	Concentration value for Petroleum Hydrocarbons (mg kg^{-1})	Generic Interpretation
A	300	**Level A** : Generally accepted quantitative limit of detection for organic parameters. Quantitative limit of detection is the minimal concentration that can be quantified by an analysis method with defined reliability.
B	700	**Level B :** Maximum acceptable limit for residential, recreational and institutional land use. Institutional use includes hospitals, schools and daycare centres.
C	3 500	**Level C :** Maximum acceptable limit for commercial land use, located outside residential areas and only for industrial use.

Soils deposited at the landfill have been laid down on a heavy duty tarp, segregated from all other dumping areas of the landfill. Partial quantities of the first volumes of soils excavated were emptied into two (2) old tanks, over which the soils were deposited in the landfill at the same location. Instructions were given to the municipal management as to the mid-term

storage of soils, including covering them for the season with a properly anchored polyethylene film.

All water samples but one showed non detectable quantities of hydrocarbons (less than 100µg per litre). The only sample containing hydrocarbons was the one taken from the tap of house T-38 on Monday November 20th, 2006, reaching a concentration of 930 µg per litre. It is not possible to conclude as to the origin of the hydrocarbons. It could have been from the water truck tank not being perfectly clean on Saturday November 18th. The truck was inspected on Saturday before resuming deliveries but no samples were taken at that time. The sample from the truck taken on Monday resulted in undetectable levels of hydrocarbons. The presence of hydrocarbons in house T-38 water supply could also come from other sources, which are unknown at this time.

4.1 CONCLUSIONS

Regarding drinking water quality, all samples analyzed confirmed that the source and the water truck were free of hydrocarbon contamination. The only sample containing hydrocarbons was the one taken from the tap of house T-38 on Monday November 20th, 2006, reaching a concentration of 930 µg per litre. It is not possible to conclude as to the origin of the hydrocarbons at that location. Nevertheless, samples taken at the pumping station and in the water truck on the dates specified indicated contamination at the source or during transport had to be discarded as a possibility.

Soils sampled during excavation indicated that all floors and walls remained free or almost free of hydrocarbons, except very localized areas practiced on the south side of the building. Cause for the small remaining quantities of contaminated soils may originate from minor deviations from instructions given to the heavy equipment operator present at the site.

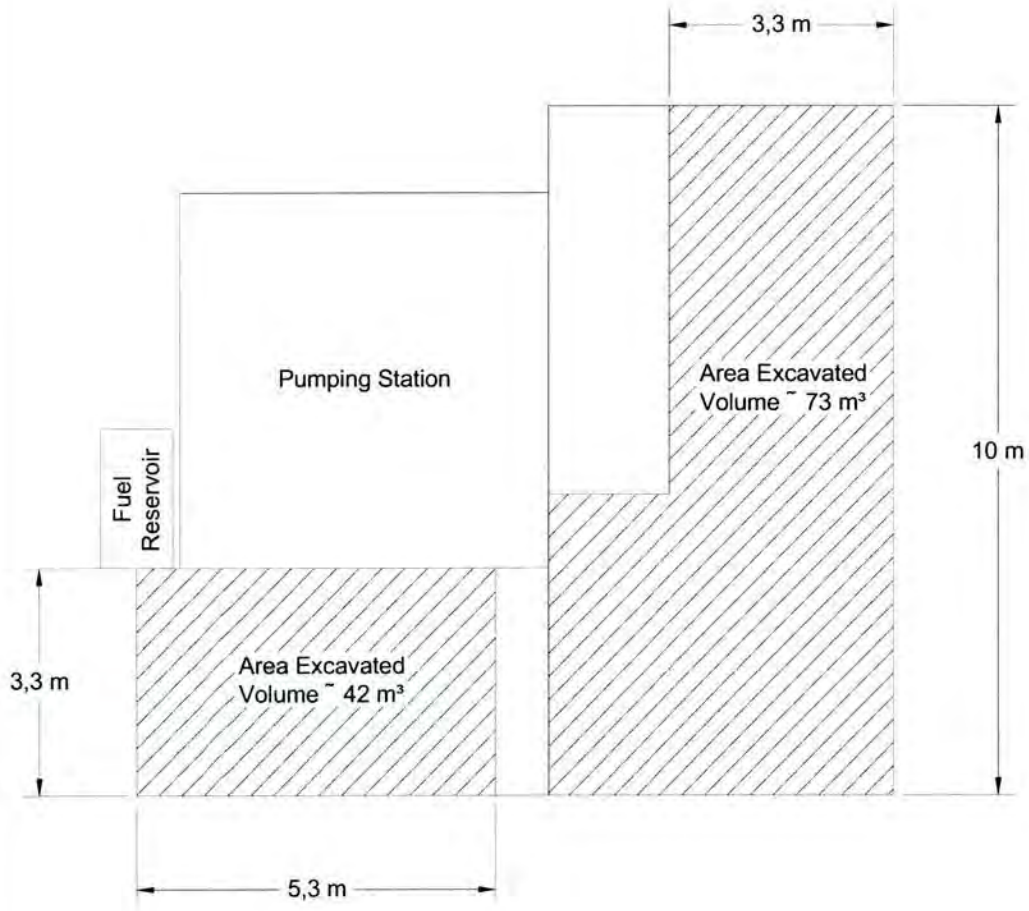
More heavily contaminated material was left underneath both stands of the pumping station, as those soils could not be accessed without disrupting the structure of the building. Local topography and soils and sub-soils conditions observed during the works support the assessment of a low risk of migration of contaminants around the pumping station. Potential solutions can then be evaluated with time during the winter season as to what further steps may be required for remediation at the pumping station. Further steps may include:

- Excavation underneath support stands of the pumping station
- Extra excavation on the south side to remove hot spots

- Removal and disposal of all sorbant material used to contain the original spill
- Methods of elimination/disposal of soils stored at local landfill.

APPENDIX A

Plan of exploration trench
after all excavation work has been completed



Potable Water Pumping Station
Tasiujaq, Quebec

General Notes - Notes Générales:

Legend - Légende:

Excavation Area

NO.	DATE	REVISION - RÉVISION	APPR.

Stabilis

SCALE - ÉCHELLE: Not to Scale

PROJECT - PROJET: Soil Characterisation

TRADE - MÉTIER: SITING

DATE: 2007-02-23

SUBJECT - SUJET: Layout of the Exploration Trench

PRODUCTION	CONCURRENCE - ASSENTIMENT
DESIGNED - ÉTUDIÉ	JEAN-LOUIS BERTRAND
DRAWN - DESSINÉ	GREG JOHNSON
CHECKED - VÉRIFIÉ	JEAN-LOUIS BERTRAND
CO-ORDINATION	REVIEWED - REVU

DWG. NO. - DESSIN NO.: SC565-01

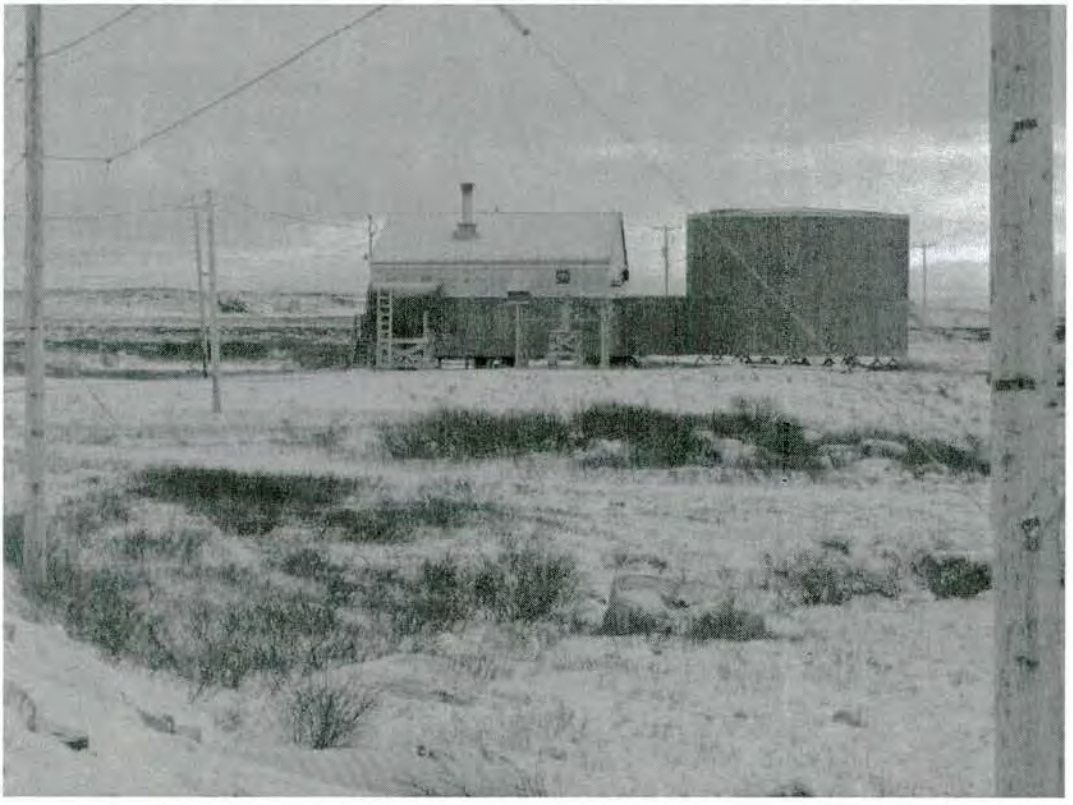
APPENDIX B

Request forms and Sample analysis certificates

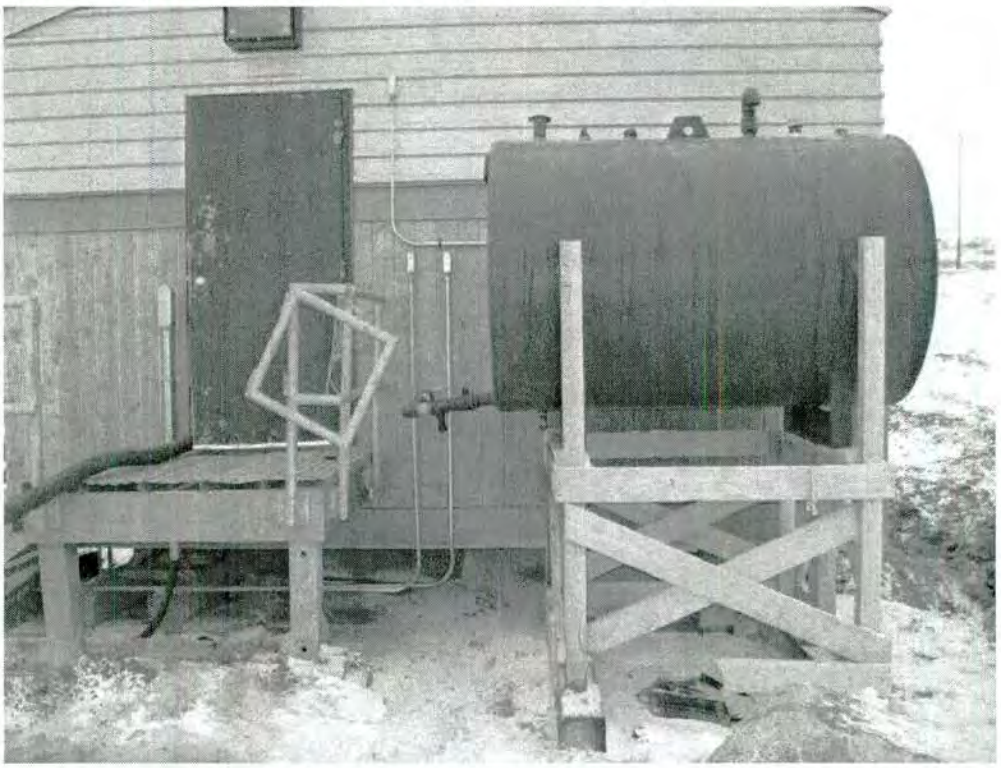
APPENDIX C

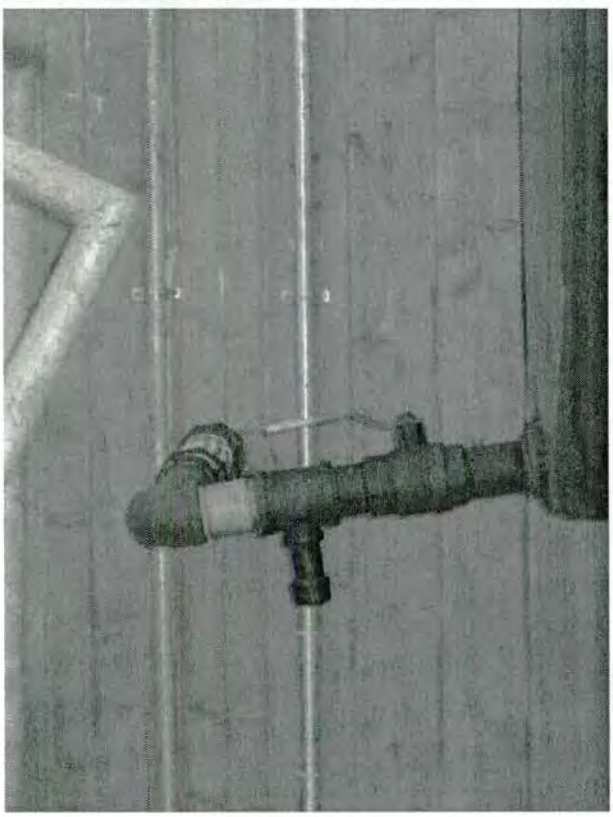
Photos of site and Remediation Work

Photos 1 and 2 – North view of Tasiujaq pumping station and Disinfection plant



Photos 3 and 4 – Fuel tank and identified source of spill





Photos 5 and 6 – Surface soils below building covered with sorbent materials

Photos 7 and 8 – Excavation work prior to Stabilis arrival on site

Photos 9 and 10 – Soils excavated and deposited at the community landfill site

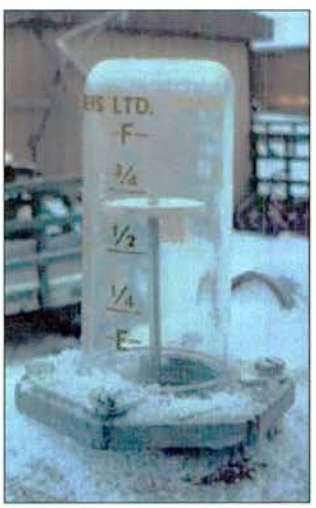
Photos 11 and 12 – Extra scarification work on the west side of the station

Photos 13 and 14 – Extra scarification work on the south side of the station

Photo 15 – Mobility of hydrocarbons on west side excavation wall after scarification work

Illustrated Homeowner's Guide

to Heating Oil Tank Inspections



Government of Nunavut
Department of Environment
Environmental Protection Division

February 2008 • 1st Edition

1 Introduction

As a result of a marked increase in spills from home heating oil tanks over the past few years, and the subsequent costly cleanup expenses borne by Nunavut homeowners, the Department of Environment has developed this *Illustrated Homeowner's Guide to Heating Oil Tank Inspections.*

While this Guide was developed with the private homeowner in mind, it can also be used by commercial building owners and/or property managers. Additionally, it should serve as a useful guide to anyone contemplating the purchase of a new home. Many prospective home buyers give little or no consideration to the condition of the heating oil tank and associated fittings. Knowing beforehand the potential environmental and financial liabilities associated with sub-standard heating oil tank installations would most certainly bring this consideration to the forefront.

Nunavut's *Environmental Protection Act* (EPA) prohibits the discharge of a contaminant into the environment. Heating oil, when spilled, is considered to be a contaminant. The EPA further stipulates that the person in charge, management or control of the contaminant, is responsible for the cleanup of any spills of that contaminant. In other words, if you are a homeowner, and your heating oil tank springs a leak or is overturned or sustains any other kind of damage which results in an oil spill, you are responsible for the cleanup of that oil spill and any other associated costs. As you will see after reading the case histories presented in this Guide, cleanup costs can be very high and often place enormous and crushing financial burdens on individual homeowners.

The purpose of this Guide is twofold:

1. As a pollution prevention measure; and
2. To alert home and building owners about the potential environmental and financial liability that may be just outside of their door.

1.1 Use of this Guide

This Guide is provided as a courtesy only. It is not intended to be an all-encompassing manual on the proper installation and maintenance of heating oil tanks and accessories; nor does using it guarantee a clean bill of health for the installation being inspected. It is intended to provide the homeowner with a general outline of the obvious areas where maintenance or risk prevention is advisable. The homeowner is responsible for ensuring that their heating oil tank is inspected and serviced by a qualified plumber or boiler mechanic so that it is thereby physically and mechanically fit and completely safe for its intended use.

To the prospective home buyer: it is strongly recommended that, in addition to conducting your own inspection of the heating oil tank and associated fittings and accessories, you should follow this up by having a qualified plumber or boiler mechanic do the same.

1.2 Acknowledgements

Drafts of this Guide were presented to individuals from the private sector, including fuel delivery companies, plumbers, boiler mechanics and installers, as well as regulators from Nunavut and the NWT, for review and comments. All reviewers provided valuable input and advice. Their contributions are gratefully acknowledged.

2 Roles and Responsibilities

2.1 Environmental Protection Division

The Environmental Protection Division (EPD) of the Department of Environment (DOE) is the Government of Nunavut (GN) agency responsible for initiatives that control the discharge of contaminants and their impact on the natural environment. EPD is responsible for ensuring that environmentally acceptable management procedures, emission levels and disposal methods are maintained. By practice, EPD programs are applied primarily to Commissioner's Land, lands administered by municipal governments or GN undertakings. Legislative authority is provided by the *Environmental Protection Act* (EPA) and *Pesticide Act*. Contact EPD for a listing of relevant regulations and guidelines.

2.2 Homeowner

The homeowner is responsible for ensuring that his heating oil tank and accessories are kept in good working order and are in compliance with current environmental and other regulations and codes of practice. In the event of an oil spill, the homeowner is ultimately responsible for cleaning up the spill and further, bringing the affected land back to a condition that meets acceptable environmental standards.

3 Case Histories

A homeowner noticed that there was a leak in his heating oil tank. By this time, he had lost over half a tank of oil – 700 litres (150 gallons). The oil spill migrated into a small valley behind his house and which runs between his neighbours' houses, contaminating several properties. A contractor was hired to clean up the spill. It took them 4 months to complete the job. Total cost for the cleanup came in at $65,000, of which the homeowner had to pay 100%.

• • • • • • • • • • • • • • • • • •

A homeowner noticed that his furnace had stopped running. He called a boiler mechanic to investigate the reason. The boiler mechanic discovered that the homeowner's heating oil tank had emptied onto the ground beside his house. Some of the oil escaped under his house while the rest contaminated adjacent properties. The cause: accumulated water which collected in the one-inch-diameter drip leg of the oil tank, froze and burst the drip leg, releasing the entire contents of the tank – over 450 litres (100 gallons) – onto the ground. Total cost for the resultant cleanup was $115,000, of which the homeowner's insurance company paid only half. The homeowner had to borrow money from the bank to pay for the cleanup costs.

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A heating oil tank attached to a commercial office building sprang a leak, releasing its entire contents onto the ground and underneath the building. As a result, heating oil fumes permeated the building, ruining furniture, carpets, books, etc. Employees complained of headaches. Their clothes and hair smelled of heating oil even after they left the building for the day. Because the building was sitting only a foot above ground level, it was not possible to get at the spilled material under the building by conventional means. The firm renting the building cancelled their lease and subsequently vacated the building citing unsafe working conditions. The building owner not only lost his rental revenue but also faced huge cleanup costs.

The above situations are actual events that could have been avoided had the home and property owners taken a few precautions by inspecting and maintaining their heating oil tank installations on a regular basis. Many homeowners do not give their heating oil tanks any thought whatsoever until something happens and they are facing cleanup costs in the order of tens of thousands of dollars or more. Insurance companies may or may not cover the costs associated with these types of oil spill incidents. Those that do may cover only limited amounts such as any costs associated with cleaning up adjacent properties. Insurance companies may refuse any payment whatsoever if it can be demonstrated that the spill was entirely preventable had the homeowner taken appropriate precautions and followed a routine of regular inspections. ***Homeowners are strongly encouraged to consult their insurance company to see exactly what their policy covers and what their obligations are in terms of personal responsibility and liability.***

Aside from the short-term and often enormous cleanup expenses, oil spills can cost the homeowner in the long term by greatly diminishing the value of his property and thus, the re-sale value and re-sale potential of his home.

Since 1982, approximately 110,000 litres (24,000 gallons) – equal to 100 home heating oil tanks – of heating oil has spilled out of domestic heating oil tanks in Nunavut. This represents close to $90,000 worth of fuel (2007 price). In most cases, these spills were preventable.

While homeowners are encouraged to conduct regular inspections of their heating oil tank and associated fittings and accessories, it should be noted that in addition to this, a qualified plumber or boiler mechanic should conduct a more thorough inspection as part of their annual servicing; at least once or twice per year.

4 Inspection List: What to Look For

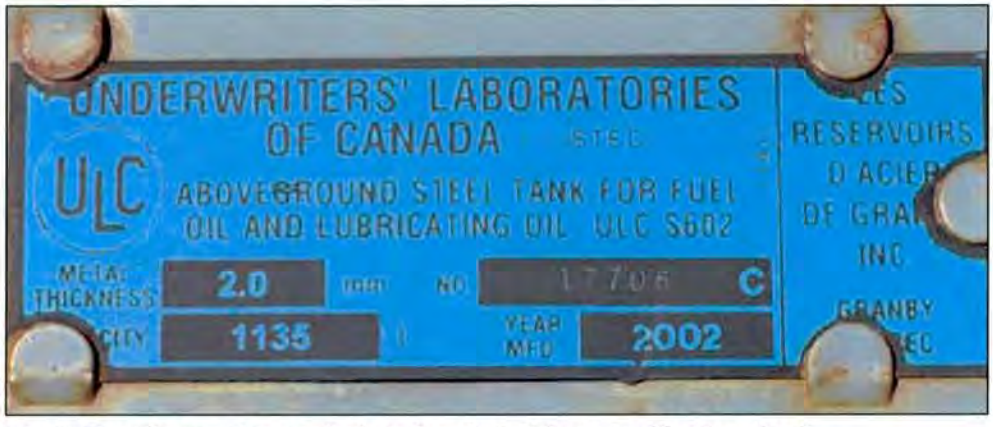
The home/building owner should inspect the following items:

- Certification Plates
- Rusting/Corrosion/Dents/Physical Damage
- Tank Stand
- Flex Connectors
- Fittings and Valves
- Fuel Lines
- Vents and Filler Caps
- Drips and Ground Staining
- Oil Level Gauge
- Secondary Containment
- Tank Location

Each of these items is covered in greater detail in the sub-sections that follow.

4.1 Certification Plates

Heating oil tanks should be affixed with a metal plate indicating that it meets national construction standards (CAN 4-S602). This is usually in the form of a ULC (Underwriters' Laboratories of Canada), UL (Underwriters' Laboratories [USA)]) or CSA (Canadian Standards Association) certification. Most insurance companies require proof of this before they will provide homeowner coverage. Heating oil tanks should be installed in accordance with CAN/CIA B139-M91 Installation Code for Oil Burning Equipment. If in doubt, consult a qualified plumber or boiler mechanic.



4.1a ULC certification plate: standard, single-wall, steel aboveground heating oil tank

4.1b ULC certification plate: standard, double-wall, steel aboveground heating oil tank

4.2 Rusting/Corrosion/Physical Damage

Check for surface rusting. Some surface rusting is normal, however, excessive rusting may be an indication that your tank is approaching the end of its useful life and in need of replacement. Check for excessive denting and any other signs of physical impacts that may have weakened the tank, thus making it more subject to leakage and rupture.

Surface rusting notwithstanding, serious and unseen rusting generally happens from the inside of the tank due to a yearly buildup of condensation water that collects on the bottom of the tank. Environment Canada officials from the Maritimes have reported a phenomenon related to internal rusting: if you notice a dark line along the bottom of your oil tank – it will look like someone has drawn a line along the bottom length of the tank with a marker – the tank is likely on the verge of rupturing and therefore it should be replaced without delay.

Heating oil tanks should be drained of accumulated water at least once per year, usually in the early autumn and concurrent to the pre-winter servicing of your furnace. This is not as difficult a task as it may sound: because water is heavier than oil, the water will collect on the bottom of the tank while the oil floats on top of the water. In this way, water can be drained from the bottom of the tank with relative ease. Refer to the following section, 4.3, for further details.

Homeowners can purchase a chemical indicator such as "TESTMASTER" (http://www.rectorseal.com/index.php?site_id=1&product_id=150) which will detect the presence of water. These are thick pastes that are applied to a dipstick and which will turn a fluorescent colour if water is present in the tank. Other products such as "Aquasorb" act to disperse and absorb any residual water in the tank thus preventing internal corrosion. Products such as Aquasorb should not be seen as a substitute for physically draining water from the oil tank, but as a means of mopping up any remaining water residue after most of the water has been physically removed from the tank.

It is recommended that homeowners consult a plumber/boiler mechanic before using these products.

4.3 Drip Leg/Drain Plug

A drip leg is a section of pipe which runs at right angles to the main fuel line and which protrudes below the level of the bottom of the oil tank. In this way, water will naturally collect in this low spot in the fuel line, making it easier to remove.

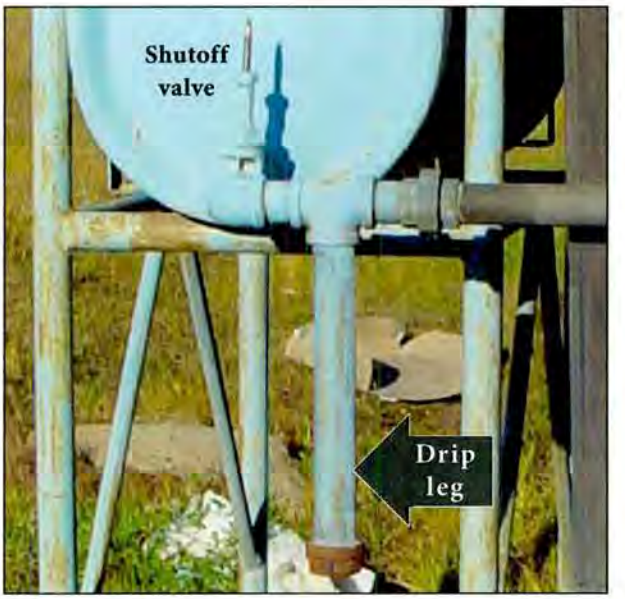
Drip legs should be drained at least once per year, in the autumn. Any accumulated water will, during the winter months, freeze, expand and possibly rupture the drip leg, consequently releasing the entire contents of the heating oil tank onto the ground. One of the experienced professional installers consulted for this Guide suggests that drip legs should be emptied of water ***twice*** per year, in the spring and in the autumn.

It is strongly recommended that this task be performed by a qualified plumber or boiler mechanic.

The section of fuel line exiting from the bottom of the oil tank and immediately before the drip leg should be fitted with a shut off valve so that the oil tank can be isolated, thus preventing the accidental release of oil from the tank while the drip leg is being drained of water.

Ensure that the bottom of the drip leg is fitted with a screw-on end cap and that the cap is tightened down so that it cannot be removed by hand. This prevents tampering by children and vandals.

A fuel line and drip leg of a large diameter – two inches – is the best configuration as it is much more forgiving if accumulated water freezes inside of it. Narrow diameter lines of one inch and less are far less forgiving and tend to rupture when water freezes inside of them. If the fuel line/drip leg diameter is less than two inches, the drip leg should be as long as possible – a minimum of 12 inches – to increase its capacity to hold water. This, however, should not be used as a substitute for regularly draining water from the heating oil tank and drip leg.



4.3 Drip leg extends below the level of the fuel line.

4.4 Tank Stand

A full 1,135 litre (250 gallon) tank weighs approximately 1000 kg (2,025 pounds) or one ton. Standard metal tank stands are inherently unstable because they are top-heavy and subject to tipping over unless properly anchored. Tank stands should be bolted to a solid footing and/or fitted with a very broad base. An ideal foundation consists of a large concrete pad onto which the metal tank stand is firmly

4.4a Unstable tank installation: the tank stand is not secured to a solid foundation, thus the tank and stand have a noticeable lean to the right. A good strong wind or a minor physical impact would be enough to topple the tank.

4.4b This heating oil tank was resting on a wood-metal stand, which eventually collapsed under the weight of the tank, spilling 445 litres (100 gallons) of heating oil onto the ground.

4.4c Note that owner has stabilized the base of his oil tank by lengthening the horizontal support members on the side of the tank where the fuel delivery ladder is located, and adding steel struts at a 45-degree angle to provide greater stability.

4.4d A twin tank installation firmly secured to a full concrete pad. This provides a solid foundation.

bolted. Alternatively, the stand can be bolted to ***treated*** wood timbers (a minimum of 6 inch x 6 inch) which should be buried just below ground level.

Many installers and homeowners make the mistake of anchoring the heating oil tank and stand to the building's siding, which in itself is fastened to the building with only one inch by one inch strapping. This provides virtually no holding strength and certainly not enough to hold one ton of dead weight.

Many spills occur as a result of the heating oil tank and stand tipping over due to wind, the weight of accumulated snow and ice, and children climbing on them.

Wooden tank stands are generally rickety and weak; furthermore, they are prohibited under the National Fire Code of Canada.

Heating oil tanks are particularly subject to toppling over during the spring runoff, when flowing meltwater tends to undermine the ground upon which the oil tank and stand rest. For this reason, heating oil tanks should be situated on a dry, well-drained location and well clear of any pathways of flowing water.

4.5a The flex connectors on this installation are out of alignment, possibly due to ground shifting. In other words, the flex connectors have served their purpose: a solid fuel line would have broken under the stress, resulting in an oil spill. Nevertheless, the flex connectors appear to have reached their limit of flexure. Now it is time to re-align the tank and fuel line fittings. This will likely require that the tank foundation be shored up and reinforced and that the flex connectors be replaced. Failure to attend to this situation in a timely manner will likely result in one or more of the flex connectors shearing and the entire contents of the affected tank(s) emptying onto the ground.

4.5 Flex Connectors

Flex connectors are intended to compensate for heating oil tank and/or building shifting; they are ***not intended to compensate for misaligned fittings.*** Under normal conditions and when initially installed, the flex connector should be aligned in a straight line. If the flex connector is "S"-shaped and/or out of alignment, the tank and fittings should be re-aligned.

A flex connector should not be compressed along its long axis. To test for this, inspect the steel weaving of the flex connector by grasping it with your hand. If the weave is "bagged"; that is, if it is loose and you are able to compress it by hand, the flex connector needs to be replaced. The steel weave provides the structural strength of the flex connector and therefore it must fit tightly around the inner lining.

If in doubt, talk to a qualified plumber or boiler mechanic.

4.5b This flex connector has reached the limit of its flexure. The fittings must be re-aligned and the flex connector replaced with a new one. Any further movement will likely result in a broken flex line and subsequent release of the entire contents of the heating oil tank onto the ground.

4.5c This flex connector has been properly installed: note that it is aligned in a straight line and the steel weave is tight.

4.6 Fittings and Valves

Examine all fittings and valves. Look for signs of rust, corrosion and any other mechanical distress. Check for leakage and weeping (a thin film of oil coating the area around the joints). If you find or suspect any such defects, contact your boiler mechanic/plumber and have him inspect, and if required, repair the defect as soon as possible.

4.7 Fuel Lines

Excessively long fuel lines should be avoided. The longer the fuel line, the more it will be subject to breakage due to ground shifting, vandalism and accidents.

Ideally, the length of the fuel line between the heating oil tank and heating appliance should be as short as possible: from the heating oil tank on one side of the wall, to the heating appliance on the other side of the wall. If long fuel lines are unavoidable (such as a heating oil tank located on the side of the house opposite the boiler room) the line should be firmly supported along its entire length. Furthermore, fuel lines should be easy to access for regular inspections. If you cannot easily see it, then you will not see developing problems. If the fuel line runs underneath your home, take the time and effort to inspect it every once in a while; at least 3 or 4 times per year, and definitely ensure that it is inspected by a qualified boiler mechanic or plumber at the same time that your furnace is being serviced.

Buried fuel lines should be avoided. Buried lines cannot be inspected and further, are particularly subject to corrosion and mechanical distress. Furthermore, any developing problems will likely remain undetected until a spill occurs. By this time, the damage has been done and now you are facing expensive cleanup costs. A significant volume of heating oil has been spilled in Nunavut as a result of ruptures in underground fuel lines which remained undetected for months.

An often-overlooked aspect of fuel line installation is protection from falling ice. Fuel lines located below the slope of a roof are subject to breakage from falling and/or accumulating ice. If possible, re-route any lines that are subject to this hazard or find a means to protect them. This also holds true for the heating oil tank itself.

Drifting snow is another hazard not often considered by homeowners. The weight of accumulated drifting snow can rupture a fuel line. More often than not, the rupture occurs at the weakest section of the fuel line: usually the

4.7 This unsupported fuel line provides a convenient monkey bar for children to play on, with predictable results.

flex connector. If the rupture occurs on that section of the fuel line that is buried in snow and if the damage is only enough to cause a slow leak, it can remain undetected for months.

If you find that your fuel line is subject to burial by drifting snow, it is strongly recommended that you take steps to install structural support along the affected section of the fuel line – consult your boiler mechanic or plumber for advice on how to best do this – and regularly clear the drifted snow from around the fuel line. Alternatively, consider re-locating the fuel line to an area free of snowdrifts.

4.8 Vents and Filler Caps

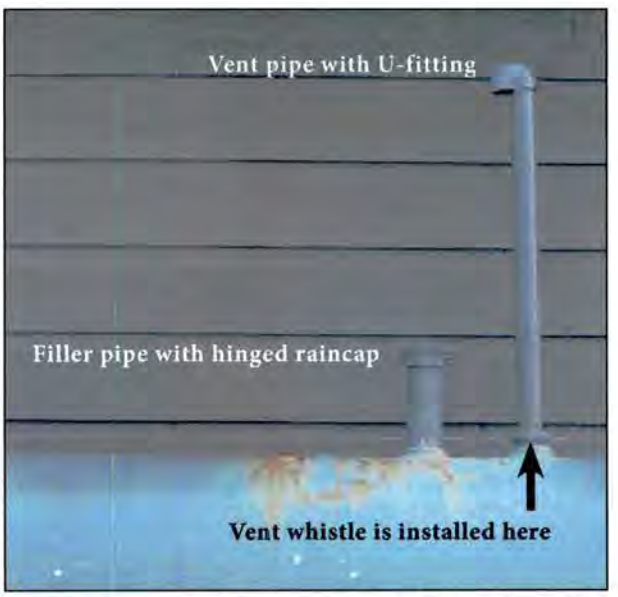
Ensure that the heating oil tank vent pipe is clear and free of obstructions.

Ideally, a vent whistle should be installed. A vent whistle is a device that is fitted directly onto the oil tank at the base of the vent pipe. Note figure 4.8a: the "tail" of the vent whistle protrudes into the oil tank. Only the top two inches of the vent whistle will be visible after it has been installed. It whistles (very much like a kettle on a hot stove) as the oil level rises to the top of the tank during re-fueling. This alerts the oil delivery man that the tank is becoming full. When the fuel level reaches the tail of the vent whistle, it stops whistling. At this point, the fuel delivery man, if he is paying attention (as he should be),

4.8a Heating oil tank vent whistle: the tail of the vent whistle protrudes into the oil tank; the vent pipe screws into the top of the vent whistle.

should stop filling the tank. This prevents overflows and spillage. It also ensures that there will be sufficient air space between the oil level and the top of the tank to allow for thermal expansion of the oil. This air space is also is referred to as "headspace". Refer to Section 6 of this Guide for further details about headspace.

It is worth mentioning that ***the person delivering the heating oil must stay with the fuel nozzle at all times during the re-fueling of your heating oil tank.*** While fuel nozzles are equipped with an automatic shut off, there is no substitute for having a human being at the nozzle and ready to shut off the flow of heating oil should there be an overfill or other mishap. DOE strictly enforces this requirement, therefore any violations should be reported to your local Conservation Officer.



4.8b Note the length of the oil tank vent (the pipe on the right hand side of the tank) is roughly one foot higher than the filler pipe.

Vent whistles are inexpensive and easy to install. Most reputable plumbing and installation firms automatically include a vent whistle on any new heating oil tank installation. Discuss this with the firm that services your furnace.

Vent and filler pipes should be fitted with rain caps to prevent water from entering the tank; in the case of the vent pipe, a "U-fitting" is a better option. The vent pipe should be at least 12 inches higher than the filler pipe. Filler pipe caps should be affixed to the filler pipe with a hinged arrangement to prevent accidental loss of the cap. Most filler pipe caps can be locked to prevent tampering and/or theft of heating oil.

4.9 Drips and Ground Staining

Check for excessive ground staining. This may be a sign of chronic spillage from overfills (refer to Section 4.8 on vents and filler caps) or leakage from the tank. Check for drips. Leaking/dripping tanks and fittings should be repaired or replaced immediately. It should be noted that the owner of the building is responsible for cleaning up any contaminated soil around their heating oil tank. Furthermore, banks and other lending institutions generally require an environmental "clean bill of health" before they will finance the purchase of a home. In other words, leaving contaminated soil in place will make it difficult, if not impossible, to sell your home.

Potential home buyers are strongly advised to conduct a thorough inspection of the area surrounding the heating oil tank for signs of past chronic oil spillage. This should be followed up with an inspection by a professional, such as a building inspector or engineer. Home insurance companies can provide advice on this.

4.9 Excessive ground staining from a poorly installed and maintained oil tank.

4.10a Oil level gauge

4.10 Oil Level Gauge

Your heating oil tank should be fitted with an oil level gauge and it should be functional. The easiest way to test this is to look at the gauge over a period of weeks during the winter to see if the level indicator changes position. If it does not, then there may be a problem with the gauge. Broken and/or malfunctioning gauges should be repaired or replaced without delay.

As gauges are subject to malfunctions, it is strongly recommended that a vent whistle (refer to Section 4.8) be installed. One backs up the other.

Gauges should ideally be equipped with a heavy steel gauge protector to prevent accidental damage from falling ice, vandalism and other accidents.

4.10b Tank gauge protector (courtesy of Kerr Smart Energy – www.kerrsmartenergy.com)

4.11 Secondary Containment

The general purpose of a secondary containment structure – also referred to as a "containment berm" – is to prevent heating oil from escaping into the environment in the event of a catastrophic failure of the enclosed heating oil tank. It also serves to contain nuisance leaks and minor spills.

Heating oil tanks with a capacity of greater than 2,500 litres (550 gallons) are required to have secondary containment. For this reason, and as a general rule of thumb, secondary containment structures are usually associated with large commercial buildings.

Secondary containment is not required for standard domestic 1,135 litre (250 gallon) home heating oil tanks. If in doubt, contact your local Conservation Officer or the Environmental Protection Division.

Containment berms should be kept clear of water, garbage and other debris. Most containment berms are fitted with a drain valve for the purpose of releasing accumulated water. The drain valve should be fitted with a lock or the spout should be fitted with a pipe plug or pipe cap to prevent tampering by vandals and children. Before draining accumulated water, ensure that it does not also contain heating oil.

Secondary containment must have a capacity of 110% of the volume of the enclosed heating oil tank. In other words, if your heating oil tank has a capacity of 3,000 litres, the secondary containment berm must have a capacity of 3,300 litres.

4.11 4,550 litre (1000 gallon) tank with a concrete berm. Note that the drain valve is not fitted with a lock or chain and thus can be tampered with.

4.12 Tank Location

As indicated earlier, your heating oil tank should be located as close as possible to the heating appliance. The oil tank should also be located where it will not be subject to vehicular impact and/or any other related physical hazard. For example, in Nunavut, it is quite common to see a heating oil tank situated right next to the potable water fill pipes and/or sewage pump-out pipes. While the water delivery and sewage pump-out crew are generally careful when backing into spaces, all it takes is one slight bump from one of these large and extremely heavy vehicles to topple or crush a heating oil tank. In some cases, it may not be possible to re-locate the heating oil tank, in which case, it should be protected by a solid and immovable physical barrier such as large boulders (of which there are plenty in Nunavut) or steel-concrete posts securely anchored into the ground.

In southern Canada, many home heating oil tanks are located indoors, usually in a dedicated room in the basement. This protects them from quite a few of the hazards described in this Guide, including external corrosion, ice, snow, vandalism, ground shifting, running water and vehicular impacts. Some regulatory agencies encourage homeowners to locate their heating oil tank indoors for these reasons. Finally, the fact that the heating oil is kept warm by being stored indoors, means that your furnace burns it more efficiently.

In Nunavut, heating oil tanks have traditionally been located outdoors, beside the building, due to the fact that houses up here do not have basements and further, useable indoor space is generally at a premium. Nevertheless, when it comes time to replace your heating oil tank, you may wish to consider re-locating it indoors if you have the available space. Before considering this option you should ***first consult a building inspector and the Office of the Fire Marshal as there are specific codes of practice related to the indoor installation of heating oil tanks.***

5 Replacing Your Heating Oil Tank: Some Options

Eventually, whether because of wear and tear, age, accidents, or as dictated by your insurance company at renewal time, your heating oil tank will have to be replaced. Currently, the expiry date, as far as insurance companies are concerned, appears to be about 10 years for a standard single-wall steel heating oil tank.

Once you have determined that it is time to replace your heating oil tank, there are several options available to you. Some, ***but not all***, are discussed here.

5.1 Single-Wall Steel Heating Oil Tank

Generally, the least expensive option is to purchase a standard single-wall 1,135 litre (250 gallon) steel heating oil tank. As of 2007, the cost is approximately $1,300, landed at Iqaluit. The disadvantage is that, like your old heating oil tank, it will be subject to corrosion from both outside and inside. As indicated at the beginning of this section, the life span of a standard 1,135 litre steel (250 gallon) heating oil tank, as dictated by many insurance companies, appears to be 10 years.

5.2 Epoxy-Coated Single-Wall Steel Heating Oil Tank

In terms of cost and durability, the next step up is a 1,135 litre (250 gallon) steel heating oil tank coated with epoxy paint, which provides excellent protection against the elements. As these tanks are not similarly coated on the inside, they are still subject to internal corrosion from accumulated moisture/water. One manufacturer suggests a life span of 20 years. As of 2007, these tanks cost roughly $1,700, landed at Iqaluit.

5.2 Epoxy-coated 1,135 litre (250 gallon) heating oil tank.

5.3 Double-Wall Steel Heating Oil Tank

One of the more expensive options is to purchase a 1,135 litre (250 gallon) double-wall steel heating oil tank. A double-wall tank is essentially an oil tank within an oil tank, with an air space – also referred to as "interstitial space" – in between. If the inner tank, which holds the heating oil, springs a leak, the outer container will prevent the oil from escaping into the environment.

5.3 Double-wall 1,135 litre (250 gallon) steel heating oil tank. Note the inspection port on the top left end of the fuel tank.

Double-wall heating oil tanks should be fitted with an inspection port that allows the homeowner to regularly monitor the interstitial space for signs of leakage. The installer can show you how to do this.

Double-wall tanks are sometimes referred to as "self-bermed" and therefore will, if the tank has a capacity of greater than 2,500 litres (550 gallons) (refer to Section 4.11), satisfy the requirement for secondary containment.

Like other steel heating oil tanks, double-wall oil tanks are still subject to internal corrosion and therefore must be drained of accumulated water once or twice per year.

Double-wall heating oil tanks have an estimated life span of greater than 20 years; however, it is recommended that you consult your insurance company and your local installer for specific information. Double-wall heating oil tanks are somewhat pricey: as of 2007, they cost about $2,800, landed at Iqaluit. Considering their inherent safety features, coupled with their relatively long life span, they may be an attractive option for the homeowner who is contemplating replacing his heating oil tank.

Most domestic heating oil tanks in Nunavut are "gravity fed"; that is, the heating oil flows from the bottom of the tank, through the fuel line and into the heating appliance. For this reason, the heating oil tank has to be placed at a higher elevation than the heating appliance. On some double-wall tank installations – primarily on commercial buildings – the heating oil is suctioned through the top of the oil tank via a fuel pick-up line that extends to just a few inches above the bottom of the oil tank. This requires that a pump be installed in the building's mechanical room to draw the oil from the tank. The advantage to this system is that if the exterior/outside section of the fuel line suffers a break or rupture, the contents of the heating oil tank will not empty onto the ground, as it would with a gravity-fed system. Homeowners should first seek advice and technical information from a professional boiler mechanic or plumber before considering this option.

5.4 Fibreglass Heating Oil Tank

Fibreglass 1,135 litre (250 gallon) heating oil tanks are relatively new on the market but are becoming increasingly popular in the south and particularly in the Maritime provinces where the salt water environment tends to accelerate corrosion in steel tanks. Their greatest advantage is that they are not subject to rust and corrosion and therefore will last for a very long time. The manufacturer consulted for this Guide offers a 30-year limited warranty on all of their fibreglass heating oil tanks. Fibreglass heating oil tanks are lightweight: 90 kg (190 lbs) for a single-wall 1,135 litre (250 gallons) tank and, according to the manufacturer, they are also fire resistant. These tanks are available in single- and double-wall configurations. As of 2007, a 1,135 litre (250 gallon) single-wall fibreglass heating oil tank, purchased directly from the supplier in southern Canada, sells for just over $1,000. The double-wall 250 gallon version comes in at $1,500. Note that ***these prices do not include the cost of shipping to Nunavut.***

Fibreglass heating oil tanks have many features that make them an attractive option for anyone contemplating the purchase of a new oil tank.

5.4 Fibreglass, 1,135 litre (250 gallon) single-wall heating oil tank. Note the protective shield over the fuel outlet valve. (Photo courtesy of ZCL Composites, Edmonton, AB.)

5.5 Used/Second-Hand Heating Oil Tanks

It may be tempting to purchase that used/second-hand heating oil tank that a friend has sitting in his shed and which he is willing to sell to you for a few hundred

dollars. You might save several hundred dollars in the short-term, but is the long-term risk really worth it?

It is difficult to assess the physical condition of a second-hand heating oil tank and in particular, the degree and extent of internal corrosion. A second-hand heating oil tank may last for years or it may rupture the day after it is installed. The cost of purchasing a brand-new heating oil tank – where you can be assured of its structural integrity – is far less than what it would cost to clean up an oil spill from what may turn out to be a defective second-hand heating oil tank. Furthermore, your insurance company may refuse to renew your homeowner's policy if you have replaced your old heating oil tank with a second-hand heating oil tank.

5.6 Which Option Should I Choose?

This will be dependent upon your budget, your best judgement and advice from your local installer, plumber or boiler mechanic. Considering the high cost of cleaning up an oil spill in Nunavut, homeowners are advised to place a high priority on quality.

Each option has its own pros and cons. There are many other options out there that have not been covered by this Guide. It is not the purpose of this Guide to provide a detailed examination of the different types of heating oil tanks, of which there are many, only to advise the homeowner about a few of the more common options available to them. It is suggested that the homeowner do his own research – the Internet is a useful tool for this – and discuss those options with his local installer.

6 Other Considerations

6.1 Thermal Expansion

Heating oil will expand and contract with changes in temperature. Homeowners should therefore pay particular attention to their heating oil tanks during the spring season, when temperatures tend to fluctuate dramatically from one day to the next and sometimes over a period of hours.

What happens is this: the oil delivery company may fill up your heating oil tank to capacity on a cold spring day. The next day, the temperature might increase by several degrees. This temperature increase causes the oil in the tank to expand. In some cases, the oil in the tank may expand to the point where it has nowhere to go but through the top of the filler pipe, spilling onto the ground. The amounts spilled are not especially great: in the order of a few litres, however, if this goes on for several days per year, year after year, it all adds up. This is a needless waste of an expensive and finite resource and further results in environmental cleanup costs to the homeowner.

The best way to avoid this problem is to take steps to ensure that there is ample headspace between the oil level and the top of the tank. Vent whistles are useful devices for ensuring that an adequate headspace is maintained, thus allowing room for the oil to expand (refer to Section 4.8). Most oil delivery companies should be aware of this, however, it is a good idea to remind them.

7 Reporting Spills

Heating oil spills of 100 litres (20 gallons) or more must be reported to the Northwest Territories/Nunavut (NT-NU) 24-Hour Spill Report Line*. There are two ways to do this:

1. Call (867) 920-8130 and report the spill. ***Collect calls are accepted***. The person at the other end of the line will ask you a few questions including your name, address, telephone number, where the spill occurred and how much was spilled.
2. Alternatively, the spill report form attached to this Guide can be filled out and faxed to the spill line at (867) 873-6924. Interactive spill report forms are also available electronically and can be filled out on your computer, printed and faxed, or e-mailed to the spill line. Interactive electronic spill report forms are available upon request or can be downloaded from DOE's website at: http://www.gov.nu.ca/env/applications.shtml.

* please note that while heating oil spills of less than 100 litres are not *reportable*, all spills of hazardous materials, including heating oil, must be cleaned up regardless of the quantity involved.

8 Conclusion

Over the past several years, DOE environmental inspectors have seen a marked increase in spills from domestic heating oil tanks and have further had the unenviable task of informing the homeowner that they are legally responsible for cleaning up the spill, with the full knowledge that the cost for such cleanups will, more often than not, result in serious financial hardship for the homeowner.

It is hoped that the release of this Guide will result in a significant decrease in the number and volume of spills from home heating oil tanks and consequently, serve to protect the environment and further, prevent financial hardship for homeowners.

This Guide should be considered as a work in progress. Any suggestions for improvements and/or questions are encouraged and should be directed to:

Robert Eno
Manager, Pollution Control
Department of Environment
Government of Nunavut
Bag 1000, Station 1360
Iqaluit, Nunavut X0A 0H0
(867) 975-7748
reno@gov.nu.ca

9 References

Canadian Council of Ministers of the Environment. *Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products.* 2003.

Government of Newfoundland and Labrador. *Heating Oil Storage Tank System Regulations.* 2003.

Government of Nova Scotia, Environment and Labour. *Homeowners Guide to Heating Oil Tank Systems.*

Government of Nova Scotia, Environment and Labour. *Tank System Accessories.*
http://www.gov.ns.ca/enla/petroleum/accessories.asp

Government of the Northwest Territories, Environment and Natural Resources. *Check Your Heating Fuel Tank!*

Government of Nova Scotia, Environment and Labour. *Installation and Environmental Management Guide for Aboveground Domestic Oil Tanks in Nova Scotia. March 2007.*

Government of Prince Edward Island, Fisheries, Aquaculture and Environment. *Home Heat Tank Safety, What You Should Know About Your Home Heat Tank.*

State of Alaska. Department of Environmental Conservation. Prevention and Emergency Response Program. *Alaska Heating Oil Tanks.* January 2003.

State of Alaska. Department of Environmental Conservation. Prevention and Emergency Response Program. *Spill Prevention for Residential Heating Oil Tanks.* September 1999.

The Home Construction & Information Website. Building & Environmental Inspection, Testing, Diagnosis, Repair, & Problem Prevention Advice. *Heating Oil Underground & Aboveground Oil Storage Tank Leaks, Testing, Problems & Solutions, Home Buyer's / Home Owner's Guide.* 2007.
http://www.inspect-ny.com/oiltanks/tanks.htm

10 Legislation, Codes and Standards

Legislation

Government of Nunavut

- *Environmental Protection Act*
- *Environmental Protection Act: A Simplified Summary*
- *Spill Contingency Planning and Reporting Regulations*
- *A Guide to the Spill Contingency Planning and Reporting Regulations*
- *Environmental Guideline for Site Remediation*
- *Environmental Guideline for the General Management of Hazardous Waste*

The above is available for viewing at the following website:

http://www.gov.nu.ca/env/environment.shtml

or if you wish to obtain hard copies and do not have Internet access, by contacting your local Conservation Officer

or

by contacting the Manager of Pollution Control, Department of Environment, Iqaluit (867) 975-7748

Government of Canada

Storage Tank System for Petroleum and Allied Petroleum Products Regulations

http://www.ec.gc.ca/st-rs/default.asp?lang=En&n=06EF27CF-1
http://www.ec.gc.ca/st-rs/

Legislation is expected to come into force by early to mid-2008. This does not affect private homeowners (unless they are situated on Federal land), however, the legislation contains useful information.

Codes

- *National Fire Code of Canada 2005*
- *National Building Code of Canada 2005*

Unfortunately, the above Codes cannot be accessed via the Internet but must be purchased from the National Research Council Canada in Ottawa. Their website address is:

https://commerce-irc.nrc-cnrc.gc.ca/b2c/b2c/init.do

The site provides a list of Canadian Codes and Guides which can be purchased online.

Standards

Underwriters' Laboratory of Canada Publications:

- National Standard of Canada. CAN/ULC-S602, *Above Ground Steel Tanks for the Storage of Combustible Liquids Intended to Be Used as Heating and/or Generator Fuels.*

http://www.orderline.com/detail.asp?group=448

- *Underwriters' Laboratories of Canada. ULC/ORD C80, Aboveground Non-Metallic Tanks For Fuel Oil*

http://www.orderline.com/detail.asp?group=338

Canadian Standards Association (CSA):

- Canadian Standards Association, *Installation Code for Oil Burning Equipment (CSA B-139)*

http://www.csa.ca/products/energy/Default.asp?articleID=4414&language=english

Appendix

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	REPORT NUMBER
B	OCCURRENCE DATE: MONTH – DAY – YEAR	OCCURRENCE TIME	☐ UPDATE # _____ TO THE ORIGINAL SPILL REPORT	____-_____

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			

Instructions for Completing the NT-NU Spill Report Form

This form can be filled out electronically and 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 to the spill line. Forms can also be printed and faxed to the spill line at 867-873-6924. 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 environment: 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**.