fuel/petroleum product is located.

- Drill holes through ice using ice auger to locate fuel/petroleum product.
- Once detected, cut slots in the ice using chain saws and remove ice blocks.
- Fuel/petroleum products collected in ice slots or holes can be picked via suction hoses connected to portable pump, vacuum truck or standby tanker. Care should be taken to prevent the end of the suction hose clogging up with snow, ice or debris.
- Fuel/petroleum products that have collected in ice slots may be disposed of by in-situ burning if sufficient holes are drilled in ice. Once all the holes are drilled, the oil which collects in the holes may be ignited. Consult with fire/safety consultants and government authorities to obtain approval.

Spills on Water

- Contain spills on open water immediately to restrict the size and extent of the spill.
- Fuel/petroleum products, which float on water, may be contained through the use of booms, absorbent materials, skimming, and the erection of culverts.
- Deploy containment booms to minimize spill area, although effectiveness of booms may be limited by wind, waves and other factors.
- Use absorbent booms to slowly encircle and absorb spilled material. These absorbents are hydrophobic (absorb hydrocarbons and repel water).
- Once booms are secured, use skimmers to draw in hydrocarbons and minimal amounts of water. Skimmed material can be pumped through hoses to empty fuel tanks/drums.
- Culverts permit water flow while capturing and collecting fuel along the surface with absorbent materials.
- Chemical methods including dispersants, emulsion — treating agents and shoreline cleaning will be considered.
- Use absorbent pads and similar materials to capture small spills/oily residue on water.

Other Response Alternatives

In-situ combustion is a disposal method available for fuels and petroleum products ~ In-situ burning can be initiated by using a large size portable propane torch (tiger torch) to ignite the fuel/petroleum products. Highly flammable products such as gasoline or alcohol, or combustible material such as wood, may be used to promote ignition of the spilled product. The objective is to raise the temperature for sustained combustion of the spilled product.

Precautions need to be taken to ensure safety of personnel. Also, spilled product should be confined to control burning. These include areas where the spilled material has pooled naturally or been contained via dikes, trenches, depressions or ice slots. Prior to any attempts at in-situ burning. Consultation with experts and approval by government authorities are required.

Chemical response methods are also available and may include the use of the following:

- Dispersants
- Emulsions-treating agents
- Visco-elastic agents
- Herding agents
- Solidiflers
- Shoreline cleaning agents

Biological response methods include, nutrient enrichment and natural microbe seeding.

11. WASTE MANAGEMENT

General (domestic and personal) Waste

All foreign material introduced to an area by employees or contractors will be collected and removed from the site to an approved landfill site unless the land use permit allows for on site disposal. All domestic and personal waste shall be managed in accordance with local health requirements:

General garbage will be incinerated prior to burial unless otherwise contradicted by government regulations. General garbage that is designated for shipment can be incinerated to reduce bulk unless otherwise contradicted by government regulations. Food wastes will not be stored on site; it will be incinerated and buried or shipped off site. Incineration will be conducted within an approved container (e.g. diesel-fired incinerator, modified steel drum). On site disposal of garbage will be avoided during reconnaissance' activities. 'The garbage will be returned to the base of operations for proper disposal. . Food-waste must be removed from remote locations on a daily basis. Food must be removed from remote locations whenever the locations are unoccupied.

Sewage will contained in a pit (latrine) located more than 100 metres away from surface water. Pits will be approximately 3 ft square and 5 ft deep and treated with lime and /or bacterial digestives on a daily basis. The pit will be filled and capped with topsoil upon demobilization of the camps.

Wastewater (greywater) from kitchen or showering facilities will be directed to sumps designed to prevent discharge of particulate material. The sumps will be located more than 100 metres away from surface waters and be approximately 3 ft deep. The sump will be located outside the main shelter and be covered to prevent animals from accessing the pit. Biodegradable soaps and detergents are to be used at all times.

Recycling

Recycling programs should be initiated whenever practicable.

12. REHABILITATION

All reasonable steps will be undertaken to return the land surface to its' 'original form, and to promote healthy re-vegetation and sustainable natural development. Rehabilitation varies depending on the speed of natural growth. Local land management authorities should be consulted concerning proven and recommended methods for rehabilitation and re-vegetation.

At the completion of exploration in an area, an inspection will be made to assess whether all rubbish has been removed, all drill holes have been capped, excavations have been backfilled. Topsoil replaced and bare lines scarified.

Regardless of location, the following steps are to be taken to aid natural rehabilitation of tracks, drill sites, camp sites, excavations, etc as soon as practicable after exploration is complete:

- Remove ~ rubbish and waste material. Fill in all holes, trenches, and sumps with the stockpiled subsoil and compact it.
- Backfill excavations with the stockpiled subsoil and topsoil.
- Re-contour disturbed topography, particularly natural drainage patterns, as much as possible.
- Contour rip cleared or compacted surfaces to prevent erosion and to trap seeds. Compacted areas should be ripped to a depth of 0.5m where practicable using rippers with a minimum spacing of lm.
- Cap all drill holes.

- Spread topsoil (or surface material useful for regeneration or re-vegetation) over all disturbed areas as a rooting medium for re-vegetation.
- Spread any cleared vegetation to trap wind-blown seeds, promote re-growth and minimize erosion.
- If necessary, spread fertilizer and an approved mix of seed over the disturbed area. (No exotic seeds are to be sown in native vegetated areas.)
- Fencing may be required in some areas of re-vegetation.
- Close off all cleared lines and tracks.
- Photographs should to be taken of sites before, during and after the operation where surface disturbance is expected.
- Rehabilitated areas should be monitored after exploration is complete either by physical inspection or by contacting the appropriate licensing authority.

13. REPORTING AND RECORDS MANAGEMENT

Incident Reporting and Investigation

Any significant environmental incident must be promptly reported and adequately investigated. Authorities must be notified as per regulations.

Examples of environmental incidents resulting from activities are:

- Hazardous materials spill.
- Bush fire.
- Introduction of noxious weeds or diseases.
- Damage to a heritage, cultural or sacred site.
- Contamination of surface or ground water,
- Significant erosion requiring major rehabilitation.

Appendix 4
Spill Contingency Plan

SPILL CONTINGENCY PLAN
For Camps and Remote Operations

Shear Minerals Ltd.

Mar 2004

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1.0 Introduction

The Shear Minerals Ltd. Spill Contingency Plan shall be in effect from February 01, 2003 to February 2008. All future amendments will be posted and recorded on the attached amendment record form.

This Shear Minerals Ltd. Spill Contingency Plan encompasses all its present camps and active remote sites in Canada.

This Spill Contingency Plan is posted at operational remote sites.

Shear Minerals Ltd. endeavors to take every reasonable precaution toward ensuring the protection and conservation of the natural environment, the safety and health of Shear Minerals Ltd. Employees, sub-contractors and contractors and (protecting) the community (at large) from any harmful effects of its materials and operations.

2.0 Facilities

No camp facilities have been established at this time.

3.0 Petroleum and Chemical Product Storage and Inventory

3.1 Remote Location Fuel Inventory, Storage and Handling Procedures

At times, Shear Minerals Ltd. may establish remote fuel caches for company use. Typically these caches would consist of 8 drums or less of jet fuel, stored in accordance with CSA approved methods of storage of drummed product.

3.2 Petroleum Product Transfer

Manual and automatic pumps (and aviation fuel filters for jet fuel) are used for the transfer of all petroleum products. Smoking, sparks, or open flame are prohibited in fuel storage and fuelling areas at all times.

4.0 Risk Assessment and Mitigation of Risk

4.1 Petroleum Products and Other Fuels

Following, is a list of potential sources of fuel spills:

1) Drummed product: Leaks or ruptures may occur. This includes and is not limited to drums of jet A/ B, diesel, waste fuel, waste oil.

2) Fuel cylinders: Propane, leaks may occur at the valves. All cylinders are secured at all times.

3) Vehicles and equipment: Wheeled vehicles and equipment, aircraft (fixed and rotary wing), snowmobiles, generators, pumps. Incidents involving leaking or dripping fuels and oils may occur due to malfunctions, impact damage, and lack of regular maintenance, improper storage, or faulty operation.

Regular inspection and maintenance in accordance with recognized and accepted standard practices at all Shear Minerals Ltd. camps and/ or fuel caches, reduces risks associated with the categories listed above.

Spill response training is provided to personnel who handle fuels and other petroleum products, and at least one emergency response drill will be held during the season. A report will be prepared by the response coordinator following each drill, noting response time, personnel involved and any problems or deficiencies encountered. This report will be used to evaluate emergency response capability and remedy any deficiencies if required.

Oil/Fuel Spill Kits are positioned at all camps and/ or fuel caches. A list of Spill Kits, their location, description, and contents are listed in Section 8.

5.0 Responding to Failures and Spills

5.1 Spill Response Contact List

Shear Minerals Ltd. 24 hour telephone contact:

Pamela Strand, President

Work: 780 435-0045
Home: 780 455-6264
Cell: 780 903-0820

5.2 Basic Steps — Spill Procedure

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

The basic steps of the response plan are as follows:

1) *Ensure* the safety of all persons at all times.

2) *Identify* and find the spill substance and its source, and if possible, stop the process or shut off the source.

3) *Inform* the immediate supervisor or his/her designate at once, so that he/she may take appropriated action. (Appropriate action includes the notification of a government official, if required, Spill Report forms are included in Appendix 3.

4) *Contain* the spill or environmental hazard, as per its nature, and as per the advice of the Spill Line as required.

5) *Implement* any necessary cleanup or remedial action.

5.3 Basic Steps — Chain of Command

1) *Immediately* notify Shear Minerals Ltd.. You may then be instructed to directly contact the:

   NWT 24 HOUR SPILL LINE and/or the DIAND 24Hour Line at:

   NWT Spill Line
   Tel. 1-867-920-8130, Fx. 1-867-873-6924.

Diand
Tel. 1-867-975 4298

2) ***A Spill Report Form (Appendix 2)*** is filled out as completely as possible before or after contacting the 24 Hour Spill Line.

3) Other members of the team are notified as deemed necessary.

5.4 Other contacts for spill response/assistance

Environment Canada:		
	Dave Tilden:	867-669-4728
Indian and Northern Affairs		
Land Use Inspection:	Keb Dahl:	867-669-2757
Water Licence Inspection	Philip DePiso:	867-360 6338
Fisheries and Oceans Canada	Ron Allen:	867-669-6641
GNWT Environmental Protection Service	Ken Hall:	867-876-7654

6.0 Taking Action

6.1 Before the Fact: Preventative Measures

The following actions illustrate the proactive approach of Shear Minerals Ltd. to environmental care. In addition, these actions minimize the potential for spills during fuel handling, transfer and storage:

1) Fuel transfer hoses with cam lock mechanisms are used.

2) Carefully monitor fuel content in the receiving vessel during transfer.

3) Clean up drips and minor spills immediately.

4) Regularly inspect drums, tanks and hoses for leaks or potential to leak.

6) Train personnel, especially those who will be operators, in proper fuel handling and spill response procedures.

6.2 After the Fact: Mitigative Measures

1. First steps to take when a spill occurs:

   a) Ensure your own safety and that of others around you, beginning with those nearest to the scene.
   b) Control danger to human life, if necessary.
   c) Identify the source of the spill.
   d) Notify your supervisor.
   e) Assess whether or not the spill can be readily stopped.
   f) Contain or stop the spill at the source, if possible, by following these actions:

If filling is in progress, STOP AT ONCE.
Close or shut off valves.
Place plastic sheeting at the foot of the tank, barrel, or piece of equipment to prevent seepage into the ground or runoff of fuel
Use absorbent materials (sheets, pads, booms) to absorb and contain the fuel spill.
Use a patch kit to seal leaks, if practical to do so.

2. Secondary steps to take:

Determine status of the spill event.
If necessary, pump fuel from a damaged and/or leaking tank or drum into a refuge container.
Notify the 24-hour Spill Report Line, and receive further instructions from the appropriate contact agencies listed in *Section 5.4.* (e.g. disposal of contaminated soil or ice/snow in sealed containers for removal from site, etc.).
Complete and Fax a copy of the Spill Report Form *(Appendix 3).*
Notify permitting authorities.
If possible, resume cleanup and containment.

6.3 Fuel Spills on Land

"Land" may be defined as soil, gravel, sand, rock, and vegetation. Advice on spill containment and cleanup may be obtained from the 24-Hour Spill Line.

6.3.1 Procedure for Spills on Rock

For hydrocarbon spills on rock outcrops, boulder fields, etc.:

1) First responder or his designate obtains plastic tarp(s) and absorbent sheeting on-site.

2) A berm of peat, native soil or snow is constructed down slope of the seepage or spill.

3) the tarp is placed in such a way that the fuel can pool for collection and removal (e.g. at the foot of the berm). If there is a large volume of spilled product, pump the liquid into spare empty drums for sealing and disposal.

4) Absorbent sheeting is placed on the rock to soak up spilled oil, fuel, etc.

5) Multi Sorb (crushed lava rock) can be used to scrub the rock surface.

6) Saturated material is disposed of in an empty drum, which is then labeled and sealed. Alternatively, the pads may be wrung out into the empty drum(s), the drums marked and then secured for eventual disposal.

7) Depending on the nature and volume of the spill, the 24-Hour Spill Line may be contacted after Step 4 or Step 5.

6.3.2 Procedure for Spills on Land

1) First responder or his designate obtains plastic tarp(s), absorbent sheeting, Multi Sorb or other ultra-dry absorbent and any other necessary spill containment equipment, pump, hoses, etc.

2) A berm of peat, native soil or snow is constructed down slope of the seepage or spill.

3) The tarp is placed in such a way that the fuel can pool for collection and removal (e.g. at the foot of the berm). If there is a large volume of spilled product, pump the liquid into spare empty drums, and dispose of product as advised by the 24-Hour Spill Line.

4) Petroleum-product sheen on vegetation may be controlled by applying a thin dusting of Multi Sorb or other ultra-dry absorbent to the groundcover.

5) Contact the 24-Hour Spill Line, Receive instructions from the appropriate contact agencies listed in Section 5.4 regarding collection of the contaminated soil or vegetation, its removal and site cleanup/restoration.

6.4 Fuel Spills on Water

6.4.1 Procedure for Spills on Water

It is important to immediately limit the extent of spills. The following is the procedure to be implemented when an incident occurs:

1) If the spill is small, deploy hydrophobic (water repellent) absorbent pads on the water. Hydrophobic pads readily absorb hydrocarbons. Alternatively, an ultra-dry absorbent designed for use on water-based spills may be deployed.

2) If the spill is larger, ready several empty drums to act as refuge containers for the spill.

3) Deploy *containment* booms on the water surface to "fence in" the spill area gradually and to prevent it from spreading. Keep in mind those environmental factors such as high winds and wave action can adversely affect attempts at spill cleanup.

4) *Absorbent* booms can then be deployed to encircle and then absorb any hydrocarbon spillage that may have escaped the *containment* boom.

5) Once a boom has been secured, a skimmer may be brought on-scene to aid in capture of the hydrocarbon; once captured, the product should be pumped to the empty fuel drums and held for disposal.

6) As soon as possible either during or after the incident, contact the 24-Hour Spill Line. (This will ensure government agencies are informed).

6.5 Fuel spills on Snow and Ice

By its nature, snow is an absorbent, and fuel spilled on snow is collected with relative ease, either by shovel, in the case of small-range spills, and by loader, in the case of more extensive spills.

6.5.1 Procedure for Spills on Snow

1) Assess the nature of the spill. Necessary equipment might include shovels, plastic tarp(s), empty drums, and wheeled equipment.

2) Shovel or scrape contaminated snow and deposit in empty refuge drums. If the spill is more extensive, build peat-bale berms or compacted snow berms with plastic over top, around the affected area.

3) Either during or immediately after the accident, notify the 24-Hour Spill Line. Receive instructions on the preferred disposal method (e.g. storage in sealed drums, incineration or

deposit in a designated lined containment area on land) from the appropriate contact agencies listed in *Section 5.4*.

6.5.2 Procedure for spills on Ice

Spills on ice are handled in similar fashion as those on snow. However, as ice presents the added danger of immediate access to water, care must be taken to respond quickly to such spills. Should fuel seep or flow through cracks or breaks in the ice, despite all precautions, assistance should be sought immediately.

1) Construct a compacted-snow berm around the edge of the spill area.

2) Although hard ice will retard or prevent fuel entry to the receiving waters below, all contaminated snow and ice, as well as objects embedded in the ice (such as gravel or frozen absorbent pads) must be scraped from the ice surface and disposed of in an appropriated manner.

3) Contact the 24-Hour Spill Line. Receive disposal instructions (e.g. sealing in drums, burn off, etc.) from the appropriate contact agencies listed in *Section 5.4*.

6.6 Procedure for Chemical Spills

1) Assess the hazard of the spilled material. REFER TO THE MSDS SHEETS NOW. Members of the emergency response team who might be susceptible in certain situations, (such as asthmatics, where fumes or airborne particles are evident), should be replaced with alternates.
2) Assemble the necessary safety equipment before response (e.g. latex or other protective gloves, goggles, or safety glasses, masks or breathers, etc.)

3) Apply absorbents to soak up liquids.

4) Place plastic sheeting over solid chemicals, such as dusts and powders, to prevent their disbursement by wind or investigation by birds or other mammals.

5) Neutralize acids or caustics. Place spilled material and contaminated cleanup supplies in an empty refuge drum and seal for disposal.

6) Contact the 24-Hour Spill Line. Receive instructions on disposal methods and designated locations from the appropriate contact agencies listed in *Section 5.4*.

6.7 Procedure for Loss of External Load

The loss of external loads of fuel, oil, or chemicals from aircraft almost certainly results in complete and catastrophic failure of the container that once held the product. Immediate response is imperative.

1) Mark the loss target with GPS coordinates and relay to camp or base ASAP. Include quantity and type of load loss.

2) Base or camp will contact 24-Hour Spill Line, and receive direction and instruction.

3) Administer the appropriate procedure for Spills on Land, Water, Snow, or Ice.

7.0 Spill Equipment

Complete spill kits, oil absorbent kits, are kept on hand at all camps.

8.0 Training and Practice Drills

8.1 Training

All members of the Response Team will be familiar with the spill response resources at hand, this Contingency Plan, and appropriate spill response methods. Involvement of other employees may be required, from time to time.

This familiarity will be acquired through:

1) Initial or refresher training, as appropriate, provided once per season.

2) Regular inventory updates are provided in list form to all team members. Information to be reported includes listing of all resources, number of items, their location, condition, date of last inspection and any special comments (such as expiry dates, under whose authority they may be accessed and special handling instructions).

8.2 Practice Drills

Shear Minerals Ltd. is aware that without practice, no Contingency Plan has value.

At least one practice drill will be held per season to give personnel a chance to practice emergency response skills. Each practice will be evaluated and a report prepared with the objective of learning where gaps and deficiencies (either in skills or physical resources) exist, and in what areas more practice is required.

Appendix #1

Manual Distribution

Title

Company President

Pamela Strand

Geologists

Kris Raffle

Johanna Tuck

Dean Besserer

Safety Officer

Johanna Tuck

An amendment instruction sheet shall be included that lists and identifies pages in the manual to be added or replaced.

Amendment No.	Amendment Date	Date Entered	Entered By
1	Dec 2, 2003	Dec 2, 2003	J. Tuck

Appendix #2

Spill Report Form

No spills have occurred to date.

Figure 1
2003 Land Use Map

480000 500000 520000 540000 560000 580000 600000 620000

7060000 7040000 7020000 7000000 6980000

Chesterfield Inlet

Rankin Inlet

Legend

- Churchill property outline
- Churchill West property outline
- Settlements
- Coastline

Shear Minerals Ltd.

Churchill Diamond Property
2003 Property Location
License NWB2CHU0305

3000 0 3000 6000 Meters

Scale: 1: 500,000
NAD 27 UTM ZONE 15
APEX Geoscience Ltd.

Edmonton, Alberta March, 2004

Figure 1

Figure 2
2003 Drillhole Location Map