

# DE BEERS CANADA EXPLORATION INC.

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Yellowknife, NT X1A 1R6

21 April 2004

NWB2K1K

David Hohnstein, Technical Adviser  
Nunavut Water Board  
Box 119  
Gjoa Haven, NU XOB 1JO

## **RE: REVISION TO SPILL-CONTINGENCY PLAN** **KIKERK/KNIFE LAKE PROJECT**

As per your request and Sec. II, para. #3 of Type B Water Licence #NWB2K1K0405, I am pleased to enclose a hard copy of the revised Kikerk/Knife Lake Spill Contingency-Plan, with MSDS sheets as attachments.

I trust the Nunavut Water Board will find all to be in order, as the Plan has been amended to include requested details, such as locations and contents of spill kits at the worksite; such a level of detail was not available in advance of occupation of the worksite.

Printed copies of the revised Plan are also provided herewith to Spencer Dewar-Iqaluit and Pat Larocque-Kugluktuk (Indian and Northern Affairs Canada) and to Dave Arthur-Yellowknife (Workers' Compensation Board-Mine Safety). A digital copy of the Plan was provided to Jack Kaniak of the Kitikmeot Inuit Association, as a courtesy.

Thank you for the opportunity to make this submission.

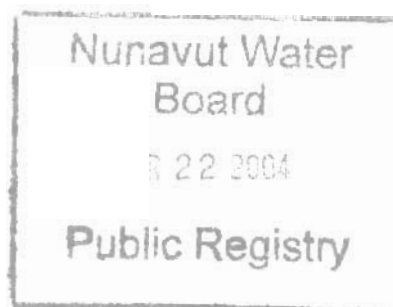
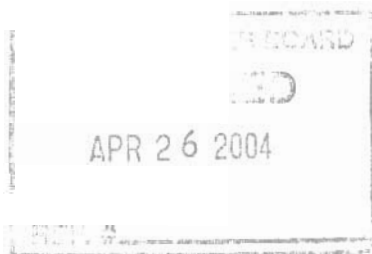


Shirley Standafer-Pfister  
Lands and Government Relations Manager  
[shirley.standaferpfister@ca.debeersgroup.com](mailto:shirley.standaferpfister@ca.debeersgroup.com)

attach.

cc: Spencer Dewar, Pat Larocque – INAC  
Dave Arthur – WCB

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# **SPILL CONTINGENCY PLAN**

## **KIKERK/KNIFE LAKE PROJECT**

(Revised: 08 April 2004)

### **1.0 BASIC STEPS - SPILL PROCEDURE**

De Beers Canada Exploration Inc. (DBCE) believes that, in the case of a spill or 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.

According to the DBCE Environmental Management System –Operating Procedure #036, the basic steps of a response plan are as follows:

1. Ensure the safety of all persons at all times.
2. Find and identify 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 appropriate action. (Appropriate action includes the notification of a government official, if required.)
4. Contain the spill or environmental hazard, as per its nature, and as per the advice of the Spill Line and Environmental Advisers, as required.
5. Implement any necessary cleanup or remedial action.

#### **1.1. BASIC STEPS - CHAIN OF COMMAND**

1. Immediately notify the Project Geologist, Peter Pereira **(867) 776-7350** (office) or **(867) 873-4552** (home), or Acting Project Geologist (office # above, or at field camp) of any spill. He/she then notifies the Response Co-ordinator (if a different individual). Project personnel for the spring 2004 programme also may be reached at the temporary DBCE office in Kugluktuk: **(867) 982-5866**.
2. Response Co-ordinator or his/her designate then contacts the **24-Hour Spill Line**, if warranted, as follows:

Phone: **(867) 920-8130**

FAX: **(867) 873-6924**

A "Spill Report Form" (*Figure 1*) is filled out as completely as possible before or after contacting the 24-Hour Spill Line.

Other members of the Northern team are notified, such as the Lands Adviser (Shirley Standafer-Pfister) and Regional Manager (Peter Holmes), both based in Yellowknife – (867) 766-7350 (phone), (867) 766-7351 (FAX). (Lands Adviser cell is (867) 444-1239; Regional Manager cell is (867) 873-1597).

If the spill is minor (such as dripping of fuel during transfer, which can be absorbed by padding, absorbent crystals, etc.), then the Lands Adviser in Yellowknife is notified by phone (867) 766-7350, FAX (867) 766-7351, cell (867) 444-1239 or e-mail: (shirley.standaferpfister@ca.debeersgroup.com).

#### **OTHER CONTACTS–SPILL RESPONSE/ ASSISTANCE**

##### **Mobile Emergency Spill Response Unit Canadian Northern Oil (Shell Canada Bulk Plant, Yellowknife)**

Matthew Wasserman	(867) 873-3337 (during business hours)
Peter Lane	(867) 669-1459 (24-hour cell-phone number)

<b>G&amp;G Expediting</b>	Glen MacCara (cell)	(867) 873-1866
<b>De Beers Expeditor</b>	Bryon Jones (cell)	(867) 444-1173

##### **Environment Canada**

David Tilden, Yellowknife	(867) 669-4728
Nunavut Office, Iqaluit	(867) 975-4639
(Nunavut FAX line)	(867) 975-4645

##### **Lands Administration, Indian and Northern Affairs Canada**

Lands Administrator, Nunavut District	(867) 975-4275
	(867) 975-4286 (FAX)

<b>Water Resources, Indian and Northern Affairs (Iqaluit)</b>	(867) 975-4550
	(FAX) (867) 975-4560

##### **RCMP, Yellowknife detachment**

Emergencies only:	(867) 669-1111
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##### **RCMP, Kugluktuk detachment**

Emergencies only:	(867) 982-4111
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**Yellowknife Fire  
Department**

(867) 873-4506  
(867) 873-9056 (FAX)

**Kugluktuk Fire  
Department**

(867) 982-4222

**Workers' Compensation Board –Occupational Health and Safety (Iqaluit  
Office)**

(877) 404-4407

**Workers' Compensation Board-Exploration Site Accident Reports**

(800) 661-0792 (24hr)

## **2. TAKING ACTION**

### **2.1. BEFORE THE FACT: PREVENTIVE MEASURES**

The following actions illustrate the proactive approach of DBCE to environmental care. In addition, they minimise the potential for spills during fuel handling, transfer or storage:

1. Fuel transfer hoses with camlock mechanisms are to be 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. (For example, fabric-sheathed hose, such as fire hose or petrol-transfer hoses may develop pinholes or surficial cracks from normal weathering out of doors.
5. Drip pans are to be used at all sites where fuel is transferred and under stationary machinery (e.g., gen-sets).
6. Train personnel, especially those who will be operators, in proper fuel-handling and spill response procedures.

## 2.2 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 the Project Geologist, as soon as is practical; he in turn notifies the Response Co-ordinator (if a different individual).
- e) Assess whether or not the spill readily can be stopped.
- f) Contain or stop the spill at the source, if possible, by following these actions:
  - i. If filling is in progress, STOP AT ONCE.
  - ii. Close or shut off valves.
  - iii. Place plastic sheeting at the foot of the tank or barrel to prevent seepage into the ground or runoff of fuel.
  - iv. Use a patch kit to seal leaks, if practical to do so.

### 2. Secondary steps to take:

- a) Determine status of the spill event.
- b) If not reported under 1. d), report incident and steps taken to the Project Geologist, who in turn informs the Response Co-ordinator (if a different individual).
- c) If necessary, pump fuel from a damaged and/or leaking tank or drum into a refuge container.
- d) Notify the 24-hour Spill Report Line, and receive further instructions from the appropriate contact agencies listed in 1.2 (e.g., disposal of contaminated soil or ice/snow in sealed containers for removal from site, etc.)
- e) Complete and FAX a copy of the Spill Report Form (present in each DBCE camp and at the Yellowknife office).
- f) Notify permitting authorities and the Lands Adviser.
- g) If possible, resume cleanup and containment.

## **2.3 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 and/or from the two DBCE environmental advisers.

### **2.3.1 Procedure for spills on rock**

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

1. Response Co-ordinator or his designate obtains plastic tarp(s) and absorbent sheeting on-site.
2. A berm of peat, native soil or snow is constructed downslope 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 later off-site.
4. Absorbent sheeting is placed on the rock to soak up spilled oil, petrol, etc.
5. Saturated sheeting is disposed of in an empty drum, which is then labelled and sealed. Alternatively, the pads may be wrung out into the empty drum(s); the drums marked and then secured for eventual disposal off-site. The pads may be reused.
6. The disposal container is then transported off-site.
7. Depending on the nature and volume of the spill, the 24-Hour Spill Line may be contacted after Step 4 or after Step 5.

### **2.3.2 Procedure for spills on land**

1. Response Co-ordinator or his designate obtains plastic tarp(s), absorbent sheeting, Spagh-zorb 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 downslope 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 by transporting to a solid waste disposal facility.

4. Petroleum-product sheening on vegetation may be controlled by applying a thin dusting of Spagh-Zorb or other ultra-dry absorbent to the groundcover.
5. Contact the 24-Hour Spill Line. Receive instruction from the appropriate contact agencies listed in 1.2 regarding collection of the contaminated soil or vegetation, its removal and site cleanup/ restoration.
6. Depending on the nature and volume of the spill, Response Coordinator or his designate implements the spill action plan.

## **2.4 FUEL SPILLS ON WATER**

### **2.4.1 Procedure for spills on water**

It is important to limit immediately 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 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 that environmental factors such as high winds and wave action can adversely affect attempts at spill cleanup.
4. *Absorbent* booms then can 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.)

7. If the spill is sufficiently large, and cannot be contained by rapid action of personnel present, contact the Mobile Environmental Response Unit for assistance. (Weather permitting, this unit can be flown to an emergency spill site within several hours.)

## **2.5 FUEL SPILLS ON SNOW AND ICE**

### **2.5.1 Procedure for spills on snow and ice**

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

#### **Drilling from ice: Best practice**

Driving the casing invariably is a messy (visually untidy) but benign operation. Although drilling from ice is accomplished by means of a closed-circuit system, wet sediments brought to surface may drip onto the ice surrounding the drill. Dribblings of fuel and oil from the drill, heater, compressor(s), etc., occasionally may collect on ice during a shift, even when drip pans are placed under equipment, but easily are absorbed by snow, and, if required, by ultra-dry commercial absorbent. Drillsites are marked with flags and pickets prior to drilling, and this enables easy visual location of drillsites after move-off. Scraping and/or steaming removes all such material, and removed material is then bagged and transported by snowmachine or other vehicle to a containment area (sump or depression) on shore. After drillsite cleanup, no débris will remain on the ice.

No material or equipment not required for immediate use is to be stored by the company or its contractors on the surface ice of lakes or other waterbeds. Material or equipment so placed (e.g., survey stakes, fuel, timbers, pipe racks, drill sheds, and the like) is to be placed on ice of sufficient thickness (*see attached Table 1*) and removed promptly once temporary use has ceased.

#### **2.5.1.1 SPILLS ON SNOW**

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



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 incident, notify the 24-Hour Spill Line. Receive instructions on the preferred disposal method (e.g., storage in sealed drums, transport off-site for disposal) from the appropriate contact agencies listed in 1.2.

#### **2.5.1.2 SPILLS ON ICE**

Spills on ice are handled in similar fashion as those on snow. However, as ice presents the potential 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) must be scraped from the ice surface and disposed of in an appropriate manner.
3. Contact the 24-Hour Spill Line. Receive disposal instructions (e.g., sealing in drums, transport off-site, etc.) from the appropriate contact agencies listed in 1.2.
4. Where fuel or oil has escaped to the receiving waters, also contact the 24-hour emergency line of the Mobile Environmental Response Unit.

## **2.6 PROCEDURE FOR CHEMICAL SPILLS**

1. Assess the hazard of the spilled material. Members of the camp 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 or powders, to prevent their disbursement by wind, or investigation by birds or other mammals.
5. Neutralise 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 1.2.

# NUNAVUT SPILL REPORT FORM

**Figure 1**

<b>NUNAVUT SPILL REPORT</b> (Oil, Gas, Hazardous Chemicals or other Materials)		24-ᓄᓐ ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ Phone/ᐃᔪᓐᓂᓐ (403) 920-8130 Fax/ᐃᔪᓐᓂᓐ (403) 873-6924	
Report date and time ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ		B Date and time of spill (if known) ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ	
C <input type="checkbox"/> Original report <input type="checkbox"/> Update no.		Spill number ᐃᔪᓐᓂᓐ	
D Location and map coordinates (if known) and direction (if moving) ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ			
E Party responsible for spill ᐃᔪᓐᓂᓐ			
F Product(s) spilled and estimated quantities (provide metric volumes/weights if possible) ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ			
G Cause of spill ᐃᔪᓐᓂᓐ			
H Is spill terminated? <input type="checkbox"/> yes/ᐃ <input type="checkbox"/> no/ᐃᔪᓐᓂᓐ		I If spill is continuing, give estimated rate ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ	
J Is further spillage possible? <input type="checkbox"/> yes/ᐃ <input type="checkbox"/> no/ᐃᔪᓐᓂᓐ		K Extent of contaminated area (in square metres if possible) ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ	
L Factors affecting spill or recovery (weather conditions, terrain, snow cover, etc.) ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ		M Containment (natural depression, dykes, etc.) ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ	
N Action, if any, taken or proposed to contain, recover, clean up or dispose of product(s) and contaminated materials ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ			
O Do you require assistance? <input type="checkbox"/> no <input type="checkbox"/> yes, describe: ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ		P Possible hazards to persons, property, or environment; eg: fire, drinking water, fish or wildlife ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ	
Q Comments and/or recommendations ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ		<b>FOR SPILL LINE USE ONLY</b> ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ	
		Lead Agency ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ	
		Spill significance ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ	
		Lead Agency contact and time ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ ᐃᔪᓐᓂᓐ	
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Telephone ᐃᔪᓐᓂᓐ		Telephone ᐃᔪᓐᓂᓐ	

**NOTE:** Area code has not yet been changed on this government form; it should be (867), NOT (403).

**TABLE 1**

**GUIDE TO REQUIRED ICE THICKNESS**

**ICE STRENGTH FOR TRAVEL**

*(expressed in inches and centimetres)*

*(weights and ice thickness measures rounded to nearest whole)*

242,500lb. (121t)	= 50 inches (127cm)
154,000lb. (77t)	= 40 inches (102cm)
100,000lb. (50t)	= 32 inches (81cm)
55,000lb. (28t)	= 25 inches (64cm)
22,000lb. (11t)	= 15 inches (38cm)
17,600lb. ( 9t)	= 14 inches (36cm)
7,700lb. ( 4t)	= 10 inches (25cm)

**ICE STRENGTH FOR STATIONARY LOADS**

*(expressed in inches and centimetres)*

*(weights and ice thickness measures rounded to nearest whole)*

242,500lb. (121t)	= 90 inches (229cm)
154,000lb. (77t)	= 70 inches (178cm)
100,000lb. (50t)	= 60 inches (152cm)
55,000lb. (28t)	= 43 inches (109cm)
22,000lb. (11t)	= 30 inches ( 76cm)
17,600lb. ( 9t)	= 24 inches ( 61cm)
7,700lb. ( 4t)	= 18 inches ( 46cm)

**TABLE 2**

**REQUIRED ICE THICKNESS FOR TYPICAL AIRCRAFT WEIGHS**

Transport Canada Industrial Standard

Table 2 below presents a numerical summary of the Transport Canada (1974) required fresh water ice thickness versus aircraft load from the AK-68-14-001 standard.

**TABLE 2**

**AK-68-14-001 Transport Canada Standard**

Weight – lb/kg	Weight - kN	Required Fresh-Water Ice Thickness (m/in)
10 000/4 545	44.5	0.33/13
30 000/13 640	133.5	0.58/23
67 000/30 400	300.0	0.90/35.5
135 000/61 360	600.0	1.27/50
800 000/364 000	3 570.0	3.20/126

*(Source: Winter Operations Report 1995/96, Kennecott/Aber, Lac de Gras, by 669107 Alberta Ltd.)*

### **TABLE 3**

#### **CONTENTS OF SPILL KITS – SPRING 2004**

##### **DRILLSITE – KNIFE LAKE**

###### **Drillshack – Spill-Kit Drums -- 1**

*Location: Moves with drillshack: 136L CanRoss #90-06200 Oil-Specific Spill Kit drum with the following contents: 5 large-capacity printed disposal bags; 2 pairs – disposable gloves; 4 oil-only socks (7cm x 3m long); 50 oil-only absorbent pads, double weight (42cm x 47cm); 1 bag of Peat Sorb PS2 (0.6m<sup>3</sup>, loose filled); 454g pre-mixed plugging compound; 1 instruction book.*

###### **Fuel Storage Area – Spill-Kit Drums – 1**

*(Same 136L CanRoss kit and contents as above).*

###### **Movable Small Spill Kits – 2**

*Location: Can be deployed, where required: 22L CSKU5 Custom Kit (plastic removable-head pail) with the following contents: 10 absorbent pads (42cm x 47cm); 2 all-purpose socks (7cm x 3cm long); 1 pair goggles; 1 pair – disposable gloves; large-capacity disposal bag.*

### **TABLE 4**

#### **GENERAL RESPONSE INVENTORY – KNIFE WORKSITE – SPRING 2004**

- Fire extinguishers (valid/recharged) in each structure: Survival tents, drillshack.
- Water pump and spare at drillshack; hoses and fittings
- Hammers, assorted weights, at drillshack
- Assorted 10L-20L plastic pails; galvanised metal pails (approx. 10L each)
- Ice auger (gas-powered) c/w extensions
- 127L plastic garbage bags (boxes of 20 each) – Survival tents
- Plastic tarps – assorted sizes
- Extra bundles of absorbents
- Fuel-transfer pump at survival tents, and 1 at drillshack

### **3.0 GENERAL RESPONSE AND MAINTENANCE INFORMATION**

#### **3.1. GENERAL EQUIPMENT AND PROXIMITY**

Equipment available to aid in spill response and remediation includes:

1. A helicopter, which can be dispatched to a drillsite from the survival tents/coreshack within minutes, or in approximately 1 hour from the programme's base in Kugluktuk. Contractors ready to assist with aircraft are: Great Slave Helicopters (867-873-2081), who have a pilot and engineer attached to the programme and based in Kugluktuk, or, for fixed wing, Air Tindi (867-669-8200), based in Yellowknife.
2. Spill-response equipment is available from Kugluktuk, 1 hour away by air, or from Yellowknife, 2 hours away by air. Miscellaneous equipment at the Knife worksite (*cf. Table 4 above*) also will be made available for spill response and cleanup, including hand tools, shovels (earth and snow), fire extinguishers, fuel transfer pumps, water pumps, miscellaneous hoses and fittings.
3. Because there is no camp associated with the current 6-week spring drill programme – only a drillshack and several temporary survival tents and temporary fuel storage areas for diesel and Jet-B (limited to approximately 25 drums of the former and 15 drums of the latter per week) – the opportunity for a spill is greatly reduced; daily maintenance checks are conducted by the pilot (there also is an engineer attached to the programme), as well as by DBCE personnel and drilling personnel. Should a camp be erected and operational in future, a team of experienced personnel, comprised of several of the following (a Camp Manager/Project Manager, Lands Manager, Camp Attendant/Handyman, a First-Aid Attendant/Cook and potentially one or more field personnel) will reopen and inspect the camp, check inventories, effect any repairs, and replace and order any parts or safety supplies that may be required. At demobilisation, a similarly-qualified team will clean up and secure the camp, complete a final inventory check, drain lines (fuel and water), shut off/disconnect/disengage fuel and power sources and file a final inventory list. Further cleanup/repairs would occur in summer, if necessary.

## **4.0 TRAINING AND PRACTICE**

### **4.1. TRAINING AND PRACTICE DRILLS**

All members of the Knife programme response team – as well as members of the general Northern team, such as the Lands Manager and DBCE Expeditor – will be familiar with the spill-response resources at the Knife worksite (including their location and how to access them), this Contingency Plan, and appropriate spill-response methods. Involvement of other personnel may be required, from time to time. This familiarity will be acquired through:

1. Initial or refresher training (practice drills), as appropriate, provided once per field season.
2. Regular inventory updates, provided in list form to all team members and to the Yellowknife office. 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, if any).

## **5.0 RESPONDING TO FAILURES AND SPILLS**

### **5.1. SPILL-RESPONSE TEAM**

Following is a list of personnel trained to respond to spill incidents, and their respective responsibilities:

<b>Project Manager</b>	Paulo Pereira Knife Worksite - 67° 0' 47" N and 113° 9' 23" W (Zone 12) MSAT Telephone (600) 700-3100 Globalstar Telephone (403) 987-0805 Coppermine Inn (867) 982-3333 DBCE phone (867) 766-7350 (Yellowknife) DBCE FAX (867) 766-7351 (Yellowknife) DBCE Temp. Office-Kugluktuk (867) 982-5866
<b>Responsibilities</b>	Assume authority over the spill scene and personnel involved. Activate the Contingency Plan. Report, or direct Response Co-ordinator (if a different individual) to report, the spill to the NWT 24-Hour Spill Report Line <b>(867) 920-8130</b> . Report to Regional Manager, provide recommendations on resource requirements (e.g., additional personnel or equipment in order to complete cleanup, if required).



<b>Response Co-ordinator</b>	<p>Project Manager or his designate</p> <p>Knife Worksite - 67° 0' 47" N and 113° 9' 23" W (Zone 12)</p> <p>MSAT Telephone (600) 700-3100</p> <p>Globalstar Telephone (403) 987-0805</p>
<i>Responsibility</i>	Assume all duties of co-ordinating on-site response, including mobilisation of additional personnel, equipment and materials, as delegated by the Project Manager.
<b>(Alternate) Project Manager</b> (when on site)	<p>Gabrièle Lemieux – Spring 2004</p> <p>Knife Worksite - 67° 0' 47" N and 113° 9' 23" W (Zone 12)</p> <p>MSAT Telephone (600) 700-3100</p> <p>Globalstar Telephone (403) 987-0805</p> <p>DBCE phone (867) 766-7350 (Yellowknife)</p> <p>DBCE FAX (867) 766-7351 (Yellowknife)</p> <p>DBCE Temp. Office-Kugluktuk (867) 982-5866</p>
<i>Responsibility</i>	Perform response duties of Project Manager, in his absence.
<b>Regional Manager</b>	<p>Peter Holmes</p> <p>DBCE phone (867) 766-7350 (Yellowknife)</p> <p>DBCE FAX (867) 766-7351 (Yellowknife)</p> <p>Cell phone (867) 873-1597 (Yellowknife)</p>
<i>Responsibilities</i>	Occasionally, Regional Manager may fill in for Project Manager on site. In such case, assumes all responsibilities of that role. Co-ordinates Yellowknife office involvement. Acts as chief spokesperson with government agencies, media and public, as appropriate; government contact delegated to Lands Manager. Ensures documentation of cause of the spill and effectiveness of the cleanup, and ensures implementation of the appropriate measures to prevent a recurrence.
<b>Lands Manager</b>	<p>Shirley Standafer-Pfister <i>shirley.standaferpfister@ca.debeersgroup.com</i></p> <p>DBCE direct-line (867) 766-7356 (Yellowknife)</p> <p>DBCE FAX (867) 766-7351 (Yellowknife)</p> <p>Cell phone (867) 444-1239 (Yellowknife)</p>
<i>Responsibilities</i>	Co-ordinates with regulators, environmental advisers, aboriginal communities, and may order/organise response, as required, to ensure compliance with regulatory requirements. Advises on land-use matters.

<b>Environmental Advisers</b>	EBA Engineering Ltd. EBA phone (867) 920-2287 (Yellowknife) EBA FAX (867) 873-3324 (Yellowknife) Contact Brent Murphy or John Clark.
<b>(Alternate)</b>	Jacques Whitford Environment Limited JW phone (867) 873-8296 (Yellowknife) JW FAX (867) 669-6394 (Yellowknife) Contact Nick Lawson
<b>Responsibilities</b>	Adviser provides expert advice on environmental/logistical cleanup requirements.  Each/both may provide assistance in developing any required testing or monitoring programme, or in activating an existing programme. Each/both may recommend preventive measures.
<b>Project Personnel</b>	(Field Geologists – Unnikrishnan Purushothaman, Gus Fomradas and Jason Cameron; 1 Great Slave Helicopters pilot and 1 engineer; 2 Boart Longyear drillers on shift; 1 Boart Longyear foreman, Jacques Rousseau, or 4-6 persons on hand during shift.  Knife Worksite-67° 0' 47"N 113° 9' 23" W (Zone 12) MSAT Telephone-DBCE (600) 700-3100 Globalstar-Boart Longyear (403) 997-8301
<b>Responsibility</b>	Assume response duties, as assigned by Project Manager, Alternate Project Manager and/or the Response Co-ordinator.

## 5.2. SPILL-RESPONSE TEAM OBLIGATIONS

The obligations and responsibilities of Contingency Plan awareness, maintenance and preparedness begin with the arrival of DBCE employees and contractors. Particularly in the case of new arrivals, the supervisor is obliged to acquaint programme staff with Company policies and procedures as enshrined in the De Beers Canada Environment Policy (Figure 2) and detailed in the DBCE Environmental Management System (EMS), kept in CD-ROM format and/or hard copy in the site office, and also available on-line, whenever remote-access internet is available. Material Safety Data Sheets (MSDS) on hazardous products also are kept available on site. In addition, all DBCE supervisors are required to have successfully completed the Mine Safety Supervisor Level I course (as a minimum), whether employees of the contractor (such as a drilling company) or DBCE.

**POLICY STATEMENT****ENVIRONMENTAL MANAGEMENT**

De Beers Canada\*, active in diamond exploration and mining, is committed to the concept of sustainable development, which requires balancing good stewardship of the natural environment with economic growth.

Accordingly, De Beers Canada will:

- Conduct all activities in compliance with applicable legislation, and other requirements, providing for the protection of the environment, employees and the public;
- Apply appropriate good management practices in the absence of legislation or where De Beers believes more stringent criteria than those required by law are needed to advance environmental protection and to minimize environmental risks;
- Integrate the management of environmental, social, cultural and economic issues into company business and planning;
- Protect the environment through the wise use of resources and prevention of adverse environmental impacts;
- Implement, maintain and improve appropriate management systems and programmes to achieve environmental objectives, and to continually improve environmental performance through a process of regular review;
- Ensure awareness among employees and contractors of this environmental policy, promote shared responsibility and accountability for environmental obligations, and provide the support and training necessary to achieve these objectives; and
- Communicate openly with governments, employees, local communities and the public to sustain mutual understanding of environmental, social and economic issues.

*\*Unless otherwise stated, the term De Beers Canada means De Beers Canada Corporation, De Beers Canada Mining Inc. and De Beers Canada Exploration Inc.*

<b>PS.01.02</b>	<b>President and Chief Executive Officer</b>  <b>R.G. Molyneux</b>	<b>Date:</b>  <b>June 1, 2002</b>	<b>Page 1 of 1</b>
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<b>Prepared By:</b>	<b>J. Fowler</b>	<b>Approved By:</b>	<b>J. Joyce</b>	<b>Date Issued:</b>	<b>May 25, 2001</b>
<b>Form No.:</b>	<b>Env Policy</b>	<b>Revision No.:</b>	<b>02</b>	<b>Date of Revision:</b>	<b>June 1, 2002</b>