

# Standard Environmental Operating Procedure

## Patch Lake Spill Contingency Management Plan

MHBLENV-PLKSCP-SEOP-03-2005



MIRAMAR HOPE BAY LIMITED

Prepared by: Matthew H Kawei  
Senior Environmental Coordinator



Document # MHBLENV-PLKSCP-SEOP-03-2005  
March 2005

|                |  |           |                 |       |           |
|----------------|--|-----------|-----------------|-------|-----------|
| Document No:   | MHBLNV-PLKSCP-SEOP-03-2005   | Revision: | R.01            | Date: | Mar 19 05 |
| Authorised By: | Scott Stringer   | Author:   | Matthew H Kawei | Page: | 2 of 17   |
| Title:         | Patch Lake Spill Contingency Management Plan, March 2005 – SEOP – Spill Management |           |                 |       |           |

### Approved By:

| Position                     | Name           | Signature | Date |
|------------------------------|----------------|-----------|------|
| Manager, Northern Operations | Scott Stringer |           |      |
| Quality Assurance            |                |           |      |

### Document Control Record

The re-issue of this document, listed below, have been reviewed and approved by Management and are authorised for use within the Miramar Hope Bay Ltd. The footer “**Control Document**” is in red.

| DOCUMENT CONTROL REVISION HISTORY |         |                   |                 |         |             |
|-----------------------------------|---------|-------------------|-----------------|---------|-------------|
| Rev No                            | Page No | Details of Issue  | Authorisation   |         |             |
|                                   |         |                   | Name            | Initial | Date        |
| 0                                 | All     | Original Document | Matthew H Kawei | hmk     | Feb 21 2005 |
| 1                                 | All     | Revised all pages | Matthew H Kawei | hmk     | Mar 19 2005 |
|                                   |         |                   |                 |         |             |
|                                   |         |                   |                 |         |             |
|                                   |         |                   |                 |         |             |
|                                   |         |                   |                 |         |             |
|                                   |         |                   |                 |         |             |
|                                   |         |                   |                 |         |             |

### Distribution List

| Date          | Copy # | Name    | Department/Location                      | Type                  |
|---------------|--------|---------|--|-----------------------|
| Original copy | 0      | Library | Z:....\EMS\Environment Files - Vancouver | Electronic, pfd & doc |
|               | 1      |         | Patch Lake (Major) – Site Supervisor     |                       |
|               | 2      |         | Patch Lake – Exploration Manager         |                       |
|               | 3      |         | Kitikmeot Inuit Association              |                       |
|               | 4      |         | Nunavut Water Board                      |                       |
|               |        |         |  |                       |

|                |  |           |                 |       |           |
|----------------|--|-----------|-----------------|-------|-----------|
| Document No:   | MHBLNV-PLKSCP-SEOP-03-2005   | Revision: | R.01            | Date: | Mar 19 05 |
| Authorised By: | Scott Stringer   | Author:   | Matthew H Kawei | Page: | 3 of 17   |
| Title:         | Patch Lake Spill Contingency Management Plan, March 2005 – SEOP – Spill Management |           |                 |       |           |

## Table of Contents

|     |  |    |
|-----|--|----|
| 1   | INTRODUCTION .....   | 5  |
| 1.1 | General Description of Property .....                                    | 5  |
| 2   | PURPOSE AND SCOPE.....   | 5  |
| 3   | ENVIRONMENTAL POLICY.....  | 6  |
| 4   | Fuel Storage Facility.....   | 6  |
| 4.1 | Existing Facilities.....   | 6  |
| 4.2 | Plan.....  | 6  |
| 4.3 | Rationale .....  | 7  |
| 4.4 | Fuel Storage Quantity .....  | 7  |
| 5   | Responsibility and Authority .....                                       | 8  |
| 5.1 | Manager, Northern Operations.....  | 8  |
| 5.2 | Section Managers (Site Supervisor and Site Exploration Manager) .....    | 8  |
| 5.3 | Senior Environmental Coordinator .....                                   | 8  |
| 6   | Reporting Spills Contact Numbers (Within hours of a reported spill)..... | 9  |
| 7   | Procedure.....   | 9  |
| 7.1 | First Responders.....  | 9  |
| 7.2 | Fuel Spill .....   | 10 |
| 7.3 | Action for fire: .....   | 11 |
| 7.4 | Recovery: .....  | 11 |
| 7.5 | Disposal: .....  | 12 |
| 7.6 | Containers:.....   | 12 |
| 7.7 | Reporting: .....   | 12 |
| 7.8 | Long-term Monitoring and Closure.....                                    | 12 |
| 8   | Response Equipment.....  | 12 |
| 8.1 | General Equipment.....   | 12 |
| 8.2 | Locations of Spill Kits .....  | 12 |
| 8.3 | Spill kit House Keeping.....   | 12 |
| 8.4 | Material Safety Data Sheets (MSDS) .....                                 | 12 |
| 9   | Training and Spill Exercises.....  | 13 |
| 9.1 | Spill Training .....   | 13 |

|                |  |           |                 |       |           |
|----------------|--|-----------|-----------------|-------|-----------|
| Document No:   | MHBLNV-PLKSCP-SEOP-03-2005   | Revision: | R.01            | Date: | Mar 19 05 |
| Authorised By: | Scott Stringer   | Author:   | Matthew H Kawei | Page: | 4 of 17   |
| Title:         | Patch Lake Spill Contingency Management Plan, March 2005 – SEOP – Spill Management |           |                 |       |           |

|     |   |    |
|-----|---|----|
| 9.2 | Spill Exercises .....   | 13 |
| 10  | Emergency Contract Information .....  | 13 |
| 11  | References .....  | 13 |
| 12  | Appendixes .....  | 14 |
|     | 12.1 Patch Lake Site layout.....  | 14 |
| 13  | Locations of spill kits.....  | 15 |
|     | 13.1 Spill kits contents.....   | 15 |
|     | 13.2 List of relevant Government department emergency contact information ..... | 16 |
|     | 13.3 List of relevant Additional assistance emergency contact information ..... | 16 |
| 14  | Material Data Sheets .....  | 17 |

|                |  |           |                 |       |           |
|----------------|--|-----------|-----------------|-------|-----------|
| Document No:   | MHBLNV-PLKSCP-SEOP-03-2005   | Revision: | R.01            | Date: | Mar 19 05 |
| Authorised By: | Scott Stringer   | Author:   | Matthew H Kawei | Page: | 5 of 17   |
| Title:         | Patch Lake Spill Contingency Management Plan, March 2005 – SEOP – Spill Management |           |                 |       |           |

## 1 INTRODUCTION

### 1.1 General Description of Property

#### 1.1.1 Site Location and Description

Patch Lake is located (UTM 433740 E and 7551980 N) approximately 2 km east of Windy Lake. Its location is within the zone of continuous permafrost on the Hope Bay Belt. Table 1 provides geo-reference coordinate for Patch Lake.

Table 1 shows the geo-reference points on Patch Lake, Hope Bay, Nunavut.

| Reference: Grid NAD83               | Latitude         | Longitude         |
|-------------------------------------|------------------|-------------------|
| DMS                                 | 68°4'26.8" N     | 106°35'24.8" W    |
| MinDec                              | 68°4.446666      | 106°35.413333     |
| DegDec                              | 68.074111        | -106.590222       |
| Universal Transverse Mercator (UTM) |                  |                   |
| Zone                                | Easting (meters) | Northing (meters) |
| 13                                  | 433740           | 7551980           |

The Major Shop is located above the high water mark on the south bank slope of Patch Lake. The Shop provides support services directed towards exploration activities, in particular servicing of all the drills operating within the Madrid property.

The lakeshore is approximately 60 m in distant toward the north, over 200 meters towards east and the regional gradient surrounding the proposed lined secondary containment berms ranges from approximately 2% to 6% towards the east. The Shop and surrounding facilities is approximately 200 metres (m) in length from east to west and 100 m wide from north to south, covering an area of 20,000 m<sup>2</sup>. The Shop is located on natural tundra underlain by approximately 15 cm organic layer overlying silt-sand parent material.

Spills of hydrocarbons may occur as isolated events or they may occur with other emergencies such as fire, explosion, natural causes, or an accident.

The likelihood of such an incident happening at Patch Lake fuel farm is very low. The facilities proposed to be constructed in 2005 and the management procedures will surely aid in the elimination of such an incident. However, if such an incident happens due to human error, the Standard Environmental Operating Procedure outline below will be implemented at Patch Lake.

## 2 PURPOSE AND SCOPE

This Standard Environmental Operating Procedure (SEOP) is specific for use at MHBL Patch Lake. All employees should familiarise themselves with this procedure.

An abbreviated version of the SEOP will be posted for all exploration staff and visitors to Patch Lake as part of MHBL's field orientation program. New employees, visitors, or contractors are inducted within 24 hours of their arrival to site. The SEOP will be reviewed on an annual base.

|                |  |           |                 |       |           |
|----------------|--|-----------|-----------------|-------|-----------|
| Document No:   | MHBL-ENV-PLKSCP-SEOP-03-2005   | Revision: | R.01            | Date: | Mar 19 05 |
| Authorised By: | Scott Stringer   | Author:   | Matthew H Kawei | Page: | 6 of 17   |
| Title:         | Patch Lake Spill Contingency Management Plan, March 2005 – SEOP – Spill Management |           |                 |       |           |

### 3 ENVIRONMENTAL POLICY

Miramar Hope Bay Limited is committed to maintaining sound environmental practices in all of its activities from exploration through to closure and land relinquishment.

To achieve this, MHBL in working with its employees and contractors will:

- Examine the potential impact to the environment of all proposed activities and take steps to minimize or where possible eliminate the impact.
- Ensure all activities are in compliance with all environmental legislation and regulations.
- On a continuous basis, determine the MHBL impact to the environment and through continuous improvement, strive to attain higher level of environmental performance.
- Maintain a high level of environmental protection by applying practices and technologies that minimise impacts and enhance environmental quality.
- Maintain dialogue with communities and other stakeholders within the area of influence of the Hope Bay Project.
- Progressively rehabilitate disturbed area, develop closure plans that can be continually improved and incorporate new technologies where practical.
- Encourage cooperative research programs with government and other stakeholders to better understand and monitor impacts associated with the Hope Bay Project.
- Train all employee and contractors to understand their environmental responsibility related to MHBL.

### 4 Fuel Storage Facility

#### 4.1 Existing Facilities

Diamond drill contractor, Major Drilling's maintenance shop is located approximately 2 km east of Windy Lake Camp on Patch Lake. Currently, there are two ULC approved 70,000 L double walled ASTs stationed at Patch Lake.

Due to the anticipated increase in exploration activities around Madrid area in 2005 and beyond, MHBL is considering relocating additional five (5) 70,000 L double walled AST within a lined secondary containment berm at Patch Lake in 2005, pending approval from KIA during the winter of 2005 using winter roads. A 50,000 L AST tanks will be relocated to Patch Lake from Windy Lake during the winter of 2006. This will bring the total number of AST tanks in the lined fuel farm to 8 tanks by 2006.

#### 4.2 Plan

The Plan is to have a centralised lined secondary containment storage area for petroleum products to be used in support of exploration activities in and around Madrid properties. This will involve (i) constructing a lined secondary containment berm and (ii) relocating AST tanks from Windy Lake (1), Doris North (2), and Roberts Bay (2) during the winter of 2005. A 50,000 L AST tank currently stationed at Windy Lake will be moved to Patch Lake in the winter of 2006.

|                |  |           |                 |       |           |
|----------------|--|-----------|-----------------|-------|-----------|
| Document No:   | MHBLNV-PLKSCP-SEOP-03-2005   | Revision: | R.01            | Date: | Mar 19 05 |
| Authorised By: | Scott Stringer   | Author:   | Matthew H Kawei | Page: | 7 of 17   |
| Title:         | Patch Lake Spill Contingency Management Plan, March 2005 – SEOP – Spill Management |           |                 |       |           |

### 4.3 Rationale

MHBL hopes to eliminate or minimise-

- the risks of accidental spills; and
- Increase the type and level of resources necessary to respond to and mitigate emergencies.

MHBL currently have ULC approved AST tanks located at Windy Lake (2 x 70,000 L & 1 x 50,000 L); Patch Lake (2 x 70,000 L); Doris Lake (2 x 70,000 L) and Roberts Bay (2 x 70,000 L). None of these storage facilities is contained in an engineered secondary containment berm.

### 4.4 Fuel Storage Quantity

Diesel fuel is required to generate power on-site, heat buildings and to fuel mobile equipment. The diesel fuel storage requirement for the continuation of exploration program in 2005 is 518,500 L. However, the amount planned to be stored at Patch Lake during 2005 exploration operation is approximately 416,500 L. The storage amount will increase in 2006 to approximately 459,000 L. The increase is due to the re-location of a 50,000 L AST tank from Windy to Patch Lake in the winter of 2006. Windy Lake will have approximately 59,500 L stored in a single double walled 70,000 L AST tank in 2006.

Table 1 provides details on the location of each AST tank and the remaining fuel not used during the 2004 exploration season. It also provides details of the amount to be stored if approved at Patch Lake in 2005.

In addition to diesel fuel mentioned above, Jet-B fuel and gasoline are stockpiled in 205 litre barrels at Windy Camps, and is relocated to activity areas as required. A separate SCP will be developed for Windy Lake Camp.

Table 1 Details of fuel storage facility and volume of diesel fuel at each location in litres.

| Location   | Tank Type    | Fuel Quantity @ 85% capacity | Remarks                             |
|--|--------------|------------------------------|-------------------------------------|
| Windy Lake   | 2 x 70,000 L | 119,000 L                    | Remaining fuel                      |
|  | 1 x 50,000 L | Nil                          | Empty                               |
| Patch Lake   | 2 x 70,000 L | 119,000 L                    | Remaining fuel                      |
| Doris Lake   | 2 x 70,000 L | Nil                          | Both empty                          |
| Roberts Bay  | 2 x 70,000 L | Nil                          | Both empty                          |
| <b>Total 2004</b>  |              | <b>238,000 L</b>             | 2004 remaining fuel                 |
| <b>Anticipated re-location of AST tanks, 2005 – Madrid properties – Actual March 24 2005</b> |              |                              |                                     |
| Patch Lake   | 7 x 70,000 L | 416,500 L                    |                                     |
| Windy lake   | 1 x 70,000 L | 59,500 L                     | Used for building of secondary berm |
|  | 1 x 50,000 L | 42,500 L                     | Used for heating purposes           |
| <b>Total 2005</b>  |              | <b>518,500 L</b>             | 2005 exploration fuel requirement   |
| <b>Anticipated re-location of AST tanks, 2006 – Madrid properties - Projected</b>            |              |                              |                                     |
| Patch Lake   | 7 x 70,000 L | 416,500 L                    | Exploration program                 |
|  | 1 x 50,000 L | 42,500                       | Exploration program                 |
| Windy lake   | 1 x 70,000 L | 59,500 L                     | Used for heating purposes           |
| <b>Total 2006</b>  |              | <b>518,500 L</b>             | 2005 exploration fuel requirement   |

|                |  |           |                 |       |           |
|----------------|--|-----------|-----------------|-------|-----------|
| Document No:   | MHBLNV-PLKSCP-SEOP-03-2005   | Revision: | R.01            | Date: | Mar 19 05 |
| Authorised By: | Scott Stringer   | Author:   | Matthew H Kawei | Page: | 8 of 17   |
| Title:         | Patch Lake Spill Contingency Management Plan, March 2005 – SEOP – Spill Management |           |                 |       |           |

## 5 Responsibility and Authority

### 5.1 Manager, Northern Operations

- The incumbent is responsible for reviewing and approving all emergency procedures prior to their being used in the establishment of emergency action plans.
- In an event of an emergency, the incumbent is the spokes person for the property.
- Other responsibilities during an emergency include - (i) contacting regulatory authorities; (ii) contacting emergency agencies; (iii) provide resources for clean-up, ongoing monitoring, long-term management, and regulatory reporting.
- Reports spill to the NWT 24-Hour Spill Report Line at **(867) 920-8130** and to DIAND Water Resource Inspector at **(867) 975-4298**.
- Submit a report to DIAND within 30 days of the reported spill.

### 5.2 Section Managers (Site Supervisor and Site Exploration Manager)

- The Section Mangers are responsible for developing emergency procedures, coordinating all clean-up, training, drill activities, document preparation and reporting, as they relate to activities cited in this procedure.
- Provide resources to assist with the spill clean-up process.

### 5.3 Senior Environmental Coordinator

- Assess the initial severity of the spill and any safety concerns. For effective strategic management, the issues need to be classified, ranked, and communicated to senior MHBL management.
- Initiate the in-house accident/incident report form immediately and forward report to Manager, Northern Operations.
- Completes the spill report and forwards the report to Manager, Northern Operations for distribution within 30 days of the spill to DIAND.
- Conduct environmental monitoring as required.
- Develop and implement long-term environmental monitoring program relating to the reported spill. Submit monitoring findings to regulatory authorities.
- Update Spill Contingency Plan based on lessons learnt from the incident and communicate the changes to all employees through respective department safety meetings.
- Submit Updated Spill Contingency Plan to regulatory authorities for approval.



|                |  |           |                 |       |           |
|----------------|--|-----------|-----------------|-------|-----------|
| Document No:   | MHBLNV-PLKSCP-SEOP-03-2005   | Revision: | R.01            | Date: | Mar 19 05 |
| Authorised By: | Scott Stringer   | Author:   | Matthew H Kawei | Page: | 9 of 17   |
| Title:         | Patch Lake Spill Contingency Management Plan, March 2005 – SEOP – Spill Management |           |                 |       |           |

## 6 Reporting Spills Contact Numbers (Within hours of a reported spill)

The key personnel involved during a spill occurrence and the reporting responsibilities are listed the Tables below. The responsibilities of each of these positions are discussed in Section 5 of this Plan. Names and contact numbers are kept current at all times at the project site.

The following MHBL emergency response personnel and regulatory authority personnel are listed in Tables 2 & 3 have to be contacted immediately when a significant fuel spill ( $\geq 25$  litres) has occurred on property.

Other personnel to be contacted within 24 hours of a reported spill are listed in Appendix....

Table 2 MHBL management personnel

| Responsible Personal /Agency     | Personnel      | Location    | Information         |
|----------------------------------|----------------|-------------|---------------------|
| <b>On site Contacts</b>          |                |             |                     |
| Manager, Northern Operations     | Scott Stringer | Yellowknife | Tel: (867) 766-5311 |
| Senior Environmental Coordinator | Matthew Kawei  | Yellowknife | Tel: 604-677-0675   |
| Exploration Manager              | Darren Lindsay | Windy Lake  | Radio Channel: 1    |
| Site Supervisor                  | Mike Cripps    | Windy Lake  | Radio Channel: 1    |

Table 3 Regulatory authority personnel

| Responsible Personal /Agency                    | Personnel                | Location    | Information                                 |
|---|--------------------------|-------------|---|
| <b>Government Agency</b>                        |                          |             |   |
| Northwest Territories 24-Hour Spill Report Line | Spill Centre             | Yellowknife | Tel: (867) 920-8130;<br>Fax: (867) 873-6924 |
| Nunavut Water Board                             | Philippe di Pizzo        | Iqaluit     | Tel: (867) 360-6338;<br>Fax: (867) 360-3669 |
| Dept of Indian Affairs Northern Development     | Water Resource Inspector | Iqaluit     | Tel: (867) 975-4546                         |
| Kitikmeot Inuit Association                     | Jack Kaniak              | Kugluktuk   | Tel: (867) 982-3310;<br>Fax: (867) 982-3311 |
| Environment Canada                              | Colette Meloche          | Iqaluit     | Tel: (867) 975-4639                         |
| Department of fisheries and Oceans              | Tania Gordanier          | Iqaluit     | Tel: (867) 979-8007;<br>Fax: (967) 989-8039 |

## 7 Procedure

### 7.1 First Responders

In the event of any leak, spill, or system failure, initial steps taken by employees at the spill site are as follows:

- Be alert, ensure your safety and the safety of others first.
- Assess the hazard to persons in the vicinity of the spill, leak, or failure system. If the risk of gas fumes exits or if fire or explosion hazards are perceived, leave the area immediately and warn co-workers to leave also.
- Assess nature and status of the spill, leak or system failure and measures to be taken to bring the situation under control and remove any source of ignition.
- Notify your Supervisor immediately on **Radio channel 1**.
- When safe to do so, stop the flow of the spilled material immediately.
  - CONTAIN flow of petroleum products by dyking, barricading, or blocking flow by any means available. Use earth-moving equipment if practical.

|                |  |           |                 |       |           |
|----------------|--|-----------|-----------------|-------|-----------|
| Document No:   | MHBLNV-PLKSCP-SEOP-03-2005   | Revision: | R.01            | Date: | Mar 19 05 |
| Authorised By: | Scott Stringer   | Author:   | Matthew H Kawei | Page: | 10 of 17  |
| Title:         | Patch Lake Spill Contingency Management Plan, March 2005 – SEOP – Spill Management |           |                 |       |           |

- ELIMINATE, open flame ignition sources
- If flow has reached any natural stream, mobilize team to
  - Deploy river boom, and sorbent booms
  - If possible, pump fuel into other appropriate containers.
- If warranted, notify on-site Medic to administer First Aid as per Hope Bay Project Employee Handbook (Medical Emergency Procedures – page 23) protocols.

## 7.2 Fuel Spill

Fuel spills, leaks at storage facilities or vehicle accidents will be handled by following these steps:

- Identify the source of the leak or spill.
- Contact the Site Supervisor.
- Stop leaks from a tank or barrel by:
  - Turning off valves.
  - Utilizing patching kits to seal leaking containers.
  - Spread peat moss flakes over the absorbent pads placed at the foot of the tank or barrel to prevent seepage into the ground.

### 7.2.1 Fuel Spills on Land

Fuel spills on land (gravel, rock, soil, vegetation) can be contained by:

- Constructing temporary berms and deploying absorbents pads and peat moss flakes.
- Stains on rock can be soaked up with absorbent mats and peat moss flakes. The soaked mats should be placed in empty drums in order for the fuel to drain off prior to incineration.
- Contaminated soil and vegetation, where appropriate, be disposed of at an approved facility on property.

### 7.2.2 Fuel Spills on Snow

Snow can be an effective natural absorbent for spilled fuel:-

- Temporary berms can be made from snow by compacting it and spraying with water to create an ice barrier or lining the snow-berm with plastic;
- The snow-fuel mixture can be scraped up and stored in a lined area or in drums for treatment before disposal; and
- Mark or stake the area impacted by the spill so that the site can be revisited and re-evaluated once the snow has melted.

|                |  |           |                 |       |           |
|----------------|--|-----------|-----------------|-------|-----------|
| Document No:   | MHBLNV-PLKSCP-SEOP-03-2005   | Revision: | R.01            | Date: | Mar 19 05 |
| Authorised By: | Scott Stringer   | Author:   | Matthew H Kawei | Page: | 11 of 17  |
| Title:         | Patch Lake Spill Contingency Management Plan, March 2005 – SEOP – Spill Management |           |                 |       |           |

### 7.2.3 Fuel Spills in Waterways and Lakes

It is important to immediately limit the area of the spill on water. Booms can be drawn in to encircle spilled fuel. The absorbent mats are hydrophobic (absorb hydrocarbons and repel water).

- Deploy booms to contain the spill area.
- In drains and waterways, spread sufficient layer of peat moss flakes to cover the spill.
- Apply more peat moss if need be. Use a rake or a suction pump to suck saturated peat moss flakes.
- Use absorbent mats and similar materials to capture small spills on water.
- Use a skimmer to skim fuel from the surface of the lake.

### 7.2.4 Fuel Spills on Ice

Where a spill occurs on ice, snow can be compacted around the edge of the spill to serve as a berm. The ice provides a good barrier to any seepage of fuel into the water, but the contaminated snow/ice must be scraped up as soon as possible.

- Permission may be given from the government to burn off fuel (contact the NWT 24 Hour Spill Line).
- Remaining contaminated snow can be placed in drums or in a lined berm (on land).

### 7.3 Action for fire:

- Use carbon dioxide, dry chemical, foam, or water spray (fog), although water may spread the fire
- Use fog streams to protect rescue teams and trapped people
- Use water to cool surface of tanks
- Divert the diesel fuel to an open area and let it burn off under controlled conditions.
- If the fire is put out before all diesel fuel is consumed, beware of re-ignition
- Where diesel fuel is running downhill, try to contain it as quickly as possible
- Rubber tires are almost impossible to extinguish, have affected vehicles removed from the danger area.

### 7.4 Recovery:

- Unburned diesel fuel can be soaked up by absorbent pad, booms, and peat moss flakes.
- If practical, contaminated soil should be excavated immediately.
- Diesel fuel entering the ground can be recovered by digging sumps or trenches.
- Diesel fuel on a water surface should be recovered by using skimmers or sorbent booms.

|                |  |           |                 |       |           |
|----------------|--|-----------|-----------------|-------|-----------|
| Document No:   | MHBLENV-PLKSCP-SEOP-03-2005  | Revision: | R.01            | Date: | Mar 19 05 |
| Authorised By: | Scott Stringer   | Author:   | Matthew H Kawei | Page: | 12 of 17  |
| Title:         | Patch Lake Spill Contingency Management Plan, March 2005 – SEOP – Spill Management |           |                 |       |           |

## 7.5 Disposal:

- All absorbent booms and pads should be disposed off in an appropriate and approved manner. After removal of fuel, where possible, used absorbent pads should be re-used in the ongoing clean-up operation.
- Incineration under controlled conditions.
- Burial at an approved site.

## 7.6 Containers:

- Use appropriate containers to stored contaminated fuel products. Label all containers with appropriate WHMIS labels.

## 7.7 Reporting:

- Report and document all spills.
- Report all fuel spills  $\geq 25$  litres to the NWT 24-Hour Spill Report Line at **(867) 920-8130** and to DIAND Water Resource Inspector at **(867) 975-4298**.

## 7.8 Long-term Monitoring and Closure

- Develop a long-term follow-up monitoring plan and submit the proposal to regulatory for approval. Depending on where and when the incident occurred, the recovery, monitoring, reporting process might take longer than expected.

# 8 Response Equipment

## 8.1 General Equipment

Heavy mobile vehicles used in exploration drilling operations will be available on-site for emergency use. Helicopters and fixed-wing aircraft could also be available if requested by the Spill Coordinator. Presently, the facilities are well equipped to respond to emergencies or spills.

## 8.2 Locations of Spill Kits

Complete spill kits are located in various potential high-probability spill areas are tabulated in Section 13. The spill kits will be checked on a regular basis to ensure all its contents have not been tempered with. Proper signage will be placed at respectively areas indicating the exact placement of the kit.

## 8.3 Spill kit House Keeping

Contents of each spill kit will be regularly checked for durability. A checklist will be placed in each kit indicating the date of the last inspection. Equipment found in undesirable condition shall be replaced immediately.

## 8.4 Material Safety Data Sheets (MSDS)

Material Safety Data Sheets (MSDS) will be collected and kept current at the site for all chemicals and fuel products brought on-site. Appropriate storage and handling of these products will be

|                |  |           |                 |       |           |
|----------------|--|-----------|-----------------|-------|-----------|
| Document No:   | MHBLNV-PLKSCP-SEOP-03-2005   | Revision: | R.01            | Date: | Mar 19 05 |
| Authorised By: | Scott Stringer   | Author:   | Matthew H Kawei | Page: | 13 of 17  |
| Title:         | Patch Lake Spill Contingency Management Plan, March 2005 – SEOP – Spill Management |           |                 |       |           |

undertaken. The action plans for spills of diesel fuel, lubricating and hydraulic oils, and ethylene glycol are also included at the end of this Plan. The MSDS sheet for combustibles and hazardous products can be found in Section 14 of this Plan.

## 9 Training and Spill Exercises

### 9.1 Spill Training

All members of the Spill Response Team will be trained and be familiar with the spill response equipment, including their location and access, the Spill Contingency Plan and appropriate spill response methodologies. During 2000, the onsite training program for Windy Camp personnel was initiated at the start of the field program. The training program includes the dissemination of information regarding the Spill Contingency Plan, the NT Environmental Protection and Spill Regulations, the viewing of RWED spill response videos, and the field application of suitable techniques.

All MHBL personnel will be familiar with spill reporting requirements.

Fuel handling crews will be fully trained in the safe operation of these facilities; spill prevention techniques and initial spill response. Similarly, the staff involved in wastewater treatment operations will be trained in the safe and effective operation of these facilities.

### 9.2 Spill Exercises

MHBL will conduct regular spill exercises to test the response of the Spill Response Team to manage fuel and other system failure spills.

Reports will be made by the Site Supervisor or designate, noting the response time, personnel, and problems or deficiencies encountered. These reports will be used to evaluate the ability to respond to spills and determine areas necessary for improvement.

## 10 Emergency Contract Information

Section 13.2 – 13.3 summarizes personnel that must be contacted in case of a spill, fire, or injury, as well as additional resources that may be able to provide information or assistance.

## 11 References

- MHBL, 2004, *Hope Bay Project Employee Handbook, Miramar Hope Bay Ltd.* – in house document
- MHBL, June 2004. *'Spill Contingency Plan, June 2004.'* - in house document
- MHBL SEOP, *'Identification and Assessment of Environmental Aspects/Impacts and Significant Aspects'* - in house draft document
- MHBL SEOP, March 2005. *'Legal and Other Requirements Management Plan, MHBLNV-LEGAL-SEOP-05-2005.'* - in house document.

|                |  |           |                 |       |           |
|----------------|--|-----------|-----------------|-------|-----------|
| Document No:   | MHBLNV-PLKSCP-SEOP-03-2005   | Revision: | R.01            | Date: | Mar 19 05 |
| Authorised By: | Scott Stringer   | Author:   | Matthew H Kawei | Page: | 14 of 17  |
| Title:         | Patch Lake Spill Contingency Management Plan, March 2005 – SEOP – Spill Management |           |                 |       |           |

## 12 Appendixes

### 12.1 Patch Lake Site layout

|                |  |           |                 |       |           |
|----------------|--|-----------|-----------------|-------|-----------|
| Document No:   | MHBLNV-PLKSCP-SEOP-03-2005   | Revision: | R.01            | Date: | Mar 19 05 |
| Authorised By: | Scott Stringer   | Author:   | Matthew H Kawei | Page: | 15 of 17  |
| Title:         | Patch Lake Spill Contingency Management Plan, March 2005 – SEOP – Spill Management |           |                 |       |           |

### 13 Locations of spill kits

| Camp Site  | Location                             | Full Kit |
|------------|--------------------------------------|----------|
| Patch Lake | Generator shack                      | Yes      |
|            | Operational drill site caches        | Yes      |
|            | Drillers workshop and equipment area | Yes      |
|            | Operating drill rigs                 | Yes      |
|            | Fuel storage area                    | Yes      |

#### 13.1 Spill kits contents

| Stocked Response Equipment                                    | Quantity |
|---|----------|
| 45 gal, 16-Gauge Open Top Drum, c/w Bolting Ring & Gasket     | 1        |
| Short Pig Putty Epoxy Sticks                                  | 20       |
| PVC Oil Resistant Gloves                                      | 2        |
| Shovel (Spark Proof)  | 1        |
| Universal Absorbent Mats, 161/2 " x 20", 100 Mats per Package | 1 Pkg    |
| 48" x 48' x 1/1 6" Neoprene Pad (Drain Stop)                  | 1        |
| Splash Protection Goggles                                     |          |
| Polyethylene Disposable Bags (5 ml) 10 per Package            | 1        |
| Case T- 1 2 3" x 1 0' Absorbent Boom, 4 Booms/Case            | 1 Pkg    |
| Roll, Oil Only Absorbent Mats, 150'x 33"                      | 1        |

|                |  |           |                 |       |           |
|----------------|--|-----------|-----------------|-------|-----------|
| Document No:   | MHBLNV-PLKSCP-SEOP-03-2005   | Revision: | R.01            | Date: | Mar 19 05 |
| Authorised By: | Scott Stringer   | Author:   | Matthew H Kawei | Page: | 16 of 17  |
| Title:         | Patch Lake Spill Contingency Management Plan, March 2005 – SEOP – Spill Management |           |                 |       |           |

### 13.2 List of relevant Government department emergency contact information

| Responsible Personal /Agency                             | Personnel                         | Location      | Information                              |
|--|-----------------------------------|---------------|--|
| <b>Government Agencies</b>                               |                                   |               |  |
| Resource Management Officer                              |                                   | Cambridge Bay | Tel: (867) 983 7314                      |
| Resources, Wildlife & Economic Development (RWED)        | Environmental Protection Services | Nunavut       | Tel: (867) 873-7654                      |
| RWED Regional Superintendent                             | Larry Adamson                     | Yellowknife   | Tel: (867) 920-6134                      |
| RWED   | Grant Corey                       | Cambridge Bay | Tel: (867) 983-7315; Fax: (867) 983-2802 |
| RWED   |                                   | Kugluktuk     | Tel: (867) 982-7251, Fax: (867) 982-3701 |
| Dept Sustainable Development                             | Gord MacKay                       | Iqaluit       | Tel: (867) 979-5715                      |
| Workers Compensation Board                               |                                   | Yellowknife   | Tel: (867) 920 3888                      |
| Director Prevention Services                             | Sylvester Wong                    | Yellowknife   | Tel: (867) 669-4408                      |
| Municipal and Community Affairs, Office of Fire Marshall | Bruce Stebbing                    | Yellowknife   | Tel: (867) 873-7030                      |

### 13.3 List of relevant Additional assistance emergency contact information

| Responsible Personal /Agency   | Personnel                  | Location    | Information         |
|--|----------------------------|-------------|---------------------|
| <b>Additional assistance may be obtained as necessary from the following organisations</b> |                            |             |                     |
| Discovery Mining Services  | Rod Brown                  | Yellowknife | Tel: (867) 920-4600 |
| Shell Canada, Mobile Environmental Response  | Steve Bassett              |             | Tel: (867) 874-2562 |
| Major Midwest Drilling   | Gordon Cyr                 |             | Tel: (204) 885-7532 |
| Kinuna   | Wilf Wilcox                |             | Tel: (867) 983-2331 |
| Nuna Logistics Ltd   | Court Smith/John Zigarlick |             | Tel: (604) 682-4667 |
| <b>Local Air Charter</b>   |                            |             |                     |
| Air Tindi, Dispatch  |                            |             | Tel: (867) 669-8218 |
| NWT Air (First Air), Dispatch  |                            |             | Tel: (867) 669-6645 |
| First Air, Dispatch  |                            |             | Tel: (867) 669-6682 |
| Nunasi Helicopters   | Martin Knutsen             |             | Tel: (867) 873-3306 |
| Kitikmeot-Great Slave Helicopters  |                            |             | Tel: (867) 873-2081 |
| <b>Equipment and Material Supply</b>   |                            |             |                     |
| Dupont (Fuel Dye)  | Ray Buckland               | Toronto     | Tel: (905) 821-5660 |
| Frontier Mining (Sorbents)   |                            |             | Tel: (867) 920-7617 |
| Acklands (Sorbents)  |                            |             | Tel: (867) 873-4100 |



|                |  |           |                 |       |           |
|----------------|--|-----------|-----------------|-------|-----------|
| Document No:   | MHBLNV-PLKSCP-SEOP-03-2005   | Revision: | R.01            | Date: | Mar 19 05 |
| Authorised By: | Scott Stringer   | Author:   | Matthew H Kawei | Page: | 17 of 17  |
| Title:         | Patch Lake Spill Contingency Management Plan, March 2005 – SEOP – Spill Management |           |                 |       |           |

## 14 Material Data Sheets

(check data convert top pdf)