

**DRAFT**

## Standard Environmental Operating Procedure Patch Lake Abandonment and Restoration Management Plan

MHBLNV-PLKARP-SEOP-06-2005



Patch Lake, south looking north, 2004

MIRAMAR HOPE BAY LIMITED

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Senior Environmental Coordinator



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## 1 INTRODUCTION

### 1.1 General

#### 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.

There is no sewer system installed at Patch Lake as occupancy is only during the day. Combustible wastes generated at the Shop together with lunch packages are disposed off in the incinerator located at Patch Lake. Wood and metal wastes are stored in the far most northern area of the Shop. Occasional burning of non-recycle timbers and/or plywood takes place in a specially made cut-out 45 gallons 1/2-size drum erected on iron stands.

### 1.2 Purpose and Scope

The purpose of this Management Plan is to describe ways to prepare for the anticipated increase in exploration activities around Patch Lake area during 2005 winter and summer drilling programs. The Plan also into consideration the likelihood if the exploration program at Madrid properties ceased prematurely due to-

- (i) Sudden drop in gold prices to make the project uneconomical;
- (ii) Drop in ore grade than anticipated;

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- (iii) Non compliance to legislative requirements; and
- (iv) Natural disasters.

The Standard Environmental Operating Procedure outlines the responsibilities for various MHBL management personnel, schedule of tasks and a two-step restoration process for short-term shut down of exploration programs (i.e. winter shutdown) and long-term shutdowns through termination of exploration program.

### 1.3 Environmental Aspects and Impacts

Operating and managing an exploration project north of 60° latitude requires a lot of effort from all parties involved. The area (tundra) is environmentally sensitive and all aspects of exploration because of our activities, products or services, it is good management practise to identify all aspects and resulting adverse impacts to the receiving environment. This should cover not only the environmental impacts but include the socio-economy impacts.

The two (2) bullet points inserted below derived from the Environmental Policy, which sets the tone for the Closure Planning process.

- *On a continuous basis, determine the MHBL impact to the environment and through continuous improvement, strive to attain higher level of environmental performance.*
- *Progressively rehabilitate disturbed area, develop closure plans that can be continually improved and incorporate new technologies where practical.*

A copy of the policy is available in Section 1.5 of this document, on Miramar Mining Corporation webpage, and available to interested parties if requested.

Environmental Aspects are those MHBL activities, products or services that interact with the surrounding environment and may produce either a beneficial or an adverse impact. An Environmental Impact is the change that occurs to the receiving environment because of the aspect.

Identifying of every aspect of a project and its subsequent impacts at the early stage of the planning process enables MHBL to be aware of both the long-term and short-term risks and liabilities associated with its exploration programs. The intent is to ensure that all project aspects and impacts are systematically identified; risk assessed, and rank. For significant negative impacts, management protocols are developed, implemented, and communicated to employees, interested parties and suppliers to eliminate or minimize negative impacts to the receiving environment. Measure the effectiveness of the control measures and report feedback for continual improvement of a process.

The information collated from this process is very important and crucial in setting of: -

- priorities in allocating of resources for managing the significant negative impacts using engineered controls or other alternative control measures;
- knowing of long-term risks that may in future develop into significant issues if proper management controls are not in place to mitigate such issues;

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- knowing of long-term liabilities and the associated costs if proper management controls are not in place to mitigate such; and
- provides information required to develop a workable and simplified Abandonment & Restoration (A&R) Management Plan.

The preparation and submission of this A&R is part of a condition for acquiring regulatory permits/license to carryout exploration activities in Nunavut Province, whether on State land or traditionally owned lands.

Miramar Hope Bay Limited will implement this A&R Management Plan as a commitment to its Environment Policy and obligation to its regulative and legislative requirements.

#### 1.4 Abandonment and Restoration Objective

The main objective of the Patch Lake A&R Management Plan is to minimise the long-term impact of petroleum products on the tundra by progressive reclamation of the identified contaminated areas as a result of spills which occurred in 2004.

#### 1.5 Abandonment and Restoration Target

This will be achieved by identifying all the contaminated sites around Patch Lake area, and reclaiming 50% of all the sites identified by the end of summer of 2005.

#### 1.6 Miramar Hope Bay Limited 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 will 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 MHBL project areas.
- *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 MHBL projects.
- Train all employee and contractors to understand their environmental responsibility related to MHBL.



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## 1.7 Legal Requirements

Under the terms of KIA Land Use License (KTL304C004), and the NWB Water Use License (NWB2HOP0207), MHBL is obligated to rehabilitate Patch Lake as per Clause Part G; sub clause five (5) *“All disturbed areas shall be stabilized and re-vegetated as required, upon completion of work and restore to pre-disturbed state.”* as stated in the NWB2HOP0207. Clause Part G of the licence – Conditions applying to abandonment and Restoration outlines five-(5) sub clauses to which MHBL has to comply with legislative requirements. The Standard Environmental Operating Procedure (MHBLNV-LEGAL-SEOP-05-2005) lists all legal requirements applicable to MHBL exploration activities along Hope Bay Belt.

## 2 RESPONSIBILITIES

Senior MHBL personnel responsibility for exploration and support operations at the Madrid properties are responsibility for the implementation of this Plan at Patch Lake. Shown in Figure 3, are the four (4) stages of responsibilities and a systematic accountability process. Every employee, contractor or a visitor (s) arriving to Patch Lake has a responsibility to ensure they adhered to the MHBL environmental policy, objectives and targets contained in this Plan. Site Induction is the main vehicle for communicating the environmental information to all employees, contractors and visitors during their stay at Patch Lake.

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

- The Section Managers are responsible for developing daily work plan procedures, coordinating and supervising all clean up, training, document preparation and reporting, as they relate to activities cited in this Management Plan.

### 2.2 Senior Environmental Coordinator

- Research, develop, implement, review and report long-term and short-term progressive restoration progress to senior MHBL personnel and regulatory authorities on an annual basis;
- Consider risk management and identify liability issues when considering environmental objectives;
- Develop, implement, review, and report environmental objectives and targets on an annual basis; and
- Submit updated A&R Plan to regulatory authorities for approval.

### 2.3 General Manager, Northern Operations

- The incumbent is responsible for reviewing and approving the Environmental Objectives, Targets, and Plans contained in this Management Plan;
- Consider risk management, liabilities issues and include Abandonment and Restoration planning process and costs in the operation, maintenance, and closure phase of a project;

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- Plan and provide resources on an annual basis for the implementation of this Plan; and
- Review restoration progress in accordance with MHBL Standard Operating Procedure.

#### 2.4 Vice President, Operations

- The incumbent is responsible for reviewing restoration activities have complied with the MMC environmental policy and regulatory requirements as outlined in this Management Plan;
- Periodically, informs the CEO on the status of progressive restoration progress at each of the MHBL properties; and
- Consider risk management, liabilities issues and include Abandonment and Restoration planning process and costs in the early planning and construction process of a project.

#### 2.5 Chief Executive Office (CEO), Miramar Mining Corporation (MMC)

- The incumbent is responsible for the development, commitment to, final approval and review of the MMC Environmental Policy. The policy should be reviewed on an annual basis, signed and distributed to all MHBL properties; and
- Accept responsibilities relating to the final acceptance of the Abandonment and Restoration documentation and land relinquishment of a property as outlined in this Management Plan.

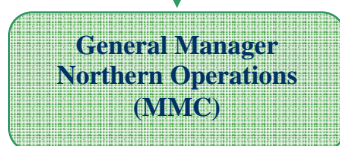
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Figure 1. Flowchart for the implementation of Patch Lake Abandonment & Restoration Plan

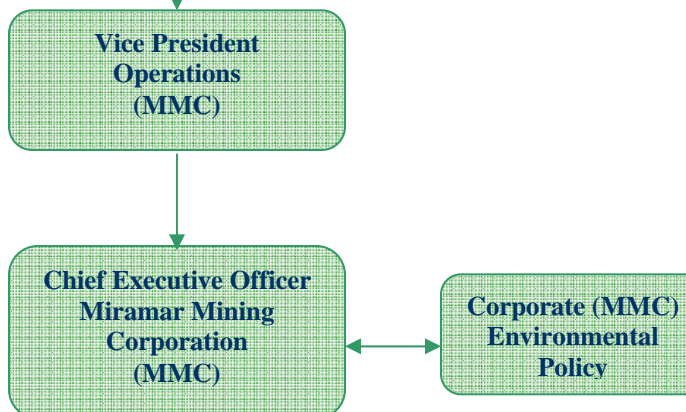
### 1. Implementation Phase - Daily Work Plan and Supervision



### 2. Review Progress - Compliance to Miramar's Standard



### 3. Review & Advice - Compliance to MMC Policy & Legislative Requirements



### 4. Acceptance & Land Relinquishment

## 3 SCHEDULE OF TASKS

For each exploration season, the A&R Management Plan of Patch Lake should take approximately 14-21 days to complete. This restoration program will take place after all exploration activities have ceased. The increase in number of days allows for changes in weather in a given day. If exploration activities dictate the finalisation of the exploration program for the season, conduct the restoration program from the 15 to 30 of September each year and no later than October 31.

The Madrid property Exploration Manager and Windy Lake Site Supervisor will implement this A&R Management Plan. The Senior Environmental Coordinator will oversee other legal responsibilities associated with the Management Plan. Section 2 outlines the responsibility and accountability flowchart.

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### 3.1 List of Infrastructures at Patch Lake

- 1 Maintenance Shop
- 1 Generator shack
- 1 helipad
- 1 Solid Waste lay down area
- 1x Waste Incinerator
- 7 x 70,000 ULC approved AST Tanks
- 1 lined secondary containment berm – (once built in 2005)

### 3.2 Progressive Reclamation and Waste Management

MHBL has embarked on progressive reclamation at Patch Lake. Progressive restoration will be ongoing during the height of its exploration program thereby reducing the need for a full-scale restoration program at the closure of each exploration season.

#### 3.2.1 Contaminated Area or Products Reclamation

##### 3.2.1.1 *Recycle of Contaminated Fuel*

The contaminated fuels are recycled primarily as an accelerant in the garbage incinerator. If present in sufficient quantities, contaminated fuel will be recycled for heating purposes at the Patch Lake Major Shop.

##### 3.2.1.2 *Contaminated Top Soil*

Petroleum contaminated soils are removed then transported to approved Land Treatment Areas (LTA) located at Boston Camp or Windy Lake Camp for treatment. In areas, where it is difficult to remove the top soil or by removing the top soil will pose other hazards, peat moss flakes are spread over areas that are contaminated by either directly or indirectly by spillage. The objective is to utilize other products that have been environmentally proven in such a clean up to absorb petroleum products still trapped in the soil particles where absorbent pads are no longer effective. Once individual grain is saturated, new peat moss flakes are applied until the peat moss flakes are visibly not saturated anymore. Contaminated peat moss flakes are then disposed of in the approved incinerator installed at Patch Lake.

##### 3.2.1.3 *Non Combustible Solid Waste placement*

Solid wastes; from batteries, metal scraps, iron rods to household items are continuously relocated to a designated area northeast of the Major Shop. Arrange the items in such a way that helps ease the transfer process from property during winter months to an approved designated landfill areas on the Belt or in Yellowknife.

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#### 3.2.1.4 *Drilling Sumps*

Collect all drilling sumps in a secured container. Recycle the wastewater as per the drilling procedure. Remove all drilling sumps immediately to the designed lay down area. When drilling on ice, secure all filled sump bags into another secured container. Place no sump bags on ice.

#### 3.2.1.5 *Non-Combustible and Combustible Solid Waste on Ice*

Remove all non-combustible and combustible solid wastes generated during a drilling operation on ice. Place the non-combustible wastes in a designed areas as outlined in Section 3.2.1.4 of this Management Plan. The combustible wastes are gathered and disposed of in the approved incinerator installed at Patch Lake.

### 4 **WINTER SHUTDOWN RESTORATION PLAN**

The winter restoration plan is a short-term abandonment of Patch Lake, normally takes places after summer drilling is over. The tasks involved are important to the success of the next exploration program but requires less effort.

#### 4.1 Buildings and Content

##### *Plan*

Secure the Shop complex for the winter. Winterize all shop equipment and other mobile heavy equipment and left secured on site.

#### 4.2 Portable Water Pumps

##### *Plan*

Portable water pumps, water lines and any other equipment associated with the water pumping system must be drained, winterised, and secured.

#### 4.3 Waste Incinerator

##### *Plan*

Drain and secure the incinerator fuel tank. Store the remaining fuel in an approved container, label with an appropriate WHMIS label and stored together with all other petroleum products for future use. Disconnect the power source, cord rolled up and stored in the workshop. Secure the incinerator, remove all the ash, and disposed them in the LTA at Windy Lake for further treatment. Inspect the area for petroleum spills or contamination. If contamination is evident, spread peat moss flakes over the impacted area.

#### 4.4 Electrical System

##### *Plan*

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Inspect the generator shed and the surrounding area for signs of hazardous spills and remaining wastes such as oil and grease. If topsoil is contaminated, apply peat moss flakes over the area to absorb the remaining hazardous wastes trapped in the soil particles. Drain the generator of its remaining fuel. Store the remaining waste fuel, oil and grease in approved storage containers, labelled for reused during summer operations. Label the containers with appropriate WHMIS labels. Secure the shed for winter. Electrical wires, plugs and sockets will remain in their installed locations. Unplug all electrical cords temporarily connected to a building or machinery during summer work program, roll and store in the workshop.

#### 4.5 Workshop Heating System

##### *Plan*

Secure the Tidy tank connected to the workshop. Allow the remaining fuel in the line to burn out. Secure the fuel line and close the valve on the lead line. Get the final dip reading of the tank. Count and secure all full propane cylinders with a chain. Stack and secure all empty propane cylinders for despatch to Yellowknife for recycle.

#### 4.6 Petroleum Products and Storage Facilities

##### *Plan*

Of great importance is the care involved in reducing the onsite fuel cache to a minimal level during non-exploration operations over the beginning of winter months. Section Managers determines the minimum level for Jet B and diesel fuel required for emergencies and the coming year's start up. Make an inventory list of the remaining fuel. Inspect all storage containers and secured during winter. Fly all empty fuel containers at remote drill sites back to Patch Lake. Count and secured empty drums for despatched to Yellowknife for recycle.

Lined fuel farm secondary containment area will be cleared of any debris and decanted of any water. The decanted water will be pumped into a lined pond, tested for BTEX and F1 (C6-C10) and F2 (>C10-C16), benzene, toluene, ethyl benzene, and xylene. Once the analytical data confirms that the water is safe, it is release onto the tundra.

Document all spills and reported any spill equal to or greater than 25 litres to the Spill Center 24 hours Spill line @ phone # (867) 920-8130.

#### 4.7 Chemicals

##### *Plan*

Chemicals stored at Patch Lake consist of drill additives, oil, grease, drill salt and household biodegradable cleaners. Count and store all drill additives and the remaining salt in designated areas of the property. Drill salt is in impermeable bags and stored on pallets. Empty bags will be disposed

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with combustible garbage. Inspect the area will be inspected for spills and contamination. Document all spills and reported to the Spill Center 24 hours Spill line @ phone # (867) 920-8130.

#### 4.8 Spill Response Kits

##### *Plan*

Carry out an inventory list of all the Spill kits and their contents at Patch Lake. Relocate all kits into the workshop, except for kits designated for the remaining petroleum areas over the winter months.

#### 4.9 Transportation

##### *Plan*

Inspect all transport landing areas for possible soil contamination. This includes the helipad and areas around the stationary mobile equipment. If contamination is evident, spread peat moss flakes over the impacted area.

#### 4.10 Drill Sites

##### *Plan*

Dismantle the drill into its main components as per the drilling contractor procedure, packaged and secured along with its ancillary equipment and rods. Move the drills by helicopter over the tundra and left on designated areas on property until the next drilling season. Inspect all drill sites for soil contamination. If contamination is evident, spread peat moss flakes over the impacted area. Once peat moss flakes have absorbed the remaining petroleum products, removed flakes and disposed-of in approved facilities on property. Remaining solid wastes brought back to Patch Lake and disposed of accordingly. Drill site restored immediately after the drill relocated to the next site. Drill sumps, when dry are level off to follow the surrounding landscape. Catalogued drill cores and core boxes are stored at a designated area on property.

#### 4.11 General Workshop Area

##### *Plan*

Carry out a general inspection of the camp area with intent to identify and reclaim areas contaminated by petroleum products and have gone unnoticed before abandonment. Peat moss will spread over the impacted area to absorb the remaining contaminants trapped in the soil particles.

#### 4.12 Final Documentation

##### *Plan*

Carry out an inventory of all equipment and buildings left on site prior to leaving site. Ensure to take photographs of the camp and drill lay down storage area. Complete final site inspections and collect

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water samples as required by regulative requirement. Submit report to regulative authorities as required per conditions in operating permits.

## **5 FINAL ABANDONMENT AND RESTORATION PLAN**

### **5.1 Administration**

#### **5.1.1 Buildings Structures**

##### *Plan*

All the reusable, metal frames, wooden structures and other building structure will be dismantled and where possible be recycled for use at another exploration site on the Belt.

Other combustible building structures not worth recycling will be incinerated onsite. Non-combustible structures or materials such as nails, screws, bent metal frames will be recovered, packed and transported out to an approved land fill on the Hope Bay Belt or an approved municipal land fill in Yellowknife.

#### **5.1.2 Portable Water Supply System**

##### *Plan*

Dissemble water pumps, filtering systems, water lines and any other equipment associated with the water supply system, lines drained, packed and transported out of Patch Lake for use at other exploration camps on the Belt or to Yellowknife.

Water lines that are not usable will be disposed off at an approved facility on the Belt or at Yellowknife.

#### **5.1.3 Waste Incinerator**

##### *Plan*

Once the camp is entirely dismantled to the satisfaction of the supervisor in-charge, all remaining combustible waste stored will be burnt. Dismantle the incinerator, pack and shipped to another exploration camp on the Belt or to Yellowknife for disposal in an approved facility.

#### **5.1.4 Electrical System**

##### *Plan*

Remove all electrical wires from the workshop and another other installation on property. Dispatch extensions cords and other electrical fittings to other exploration camps on the Belt for re-use. Other used electrical wires will be packed and transported to Yellowknife for recycling. Unused bulbs and fluorescent tubes will be packed and relocated to other camps on the Belt.

Inspect the generator shed and the surrounding area for visual signs of hazardous spills and remaining wastes such as oil and grease. If topsoil is contaminated, apply peat moss flakes over the area to absorb remaining hazardous wastes trapped in the soil particles. Dispose the peat moss flakes in incinerator or the approved LTA at Windy Lake.



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Drain the generator of its remaining fuel. Store the remaining waste fuel, oil and grease in approved storage containers, labelled with appropriate WHMIS labels before transporting offsite. Dismantle the generator and transport offsite to another exploration camp on the Belt for use or to Yellowknife for sale. Some of this equipment may be donated to the local community if no further exploration program is anticipated in the area.

#### 5.1.5 Workshop Heating System

##### *Plan*

Dismantle the Tidy tank attached to the workshop. Allow the remaining fuel in the line to burn out. Record the final fuel dip reading for the tank. Drain, disconnect and pack all fuel lines for use in other camps on the Belt or transported to an approved landfill offsite. Inspect the area around each installation for visual contamination. If spill or contamination is evident, reclaim the area as per the procedures outlined in the Patch Lake Spill Contingency Plan. Count and secure all full propane cylinders with a chain. Stack and secure all empty propane cylinders for despatch to Yellowknife for recycle.

#### 5.1.6 Petroleum Products and Storage Facilities

##### *Plan*

##### *5.1.6.1 Empty 45 Gallons drums*

The fuel storage area will consist of segregated groups of drums with empties apart from the full drums. Carry out an inventory of remaining fuel and full drums. Attach approximate WHMIS labels to the drums, before transporting offsite. Label the remaining waste fuel drums with approximate WHMIS label and transport them to another camp for heating purposes. If that is not possible, then transport the waste fuel to Yellowknife for disposal in an approved facility. Label all empty drums accordingly and transport them offsite for recycle purposes.

Relocate all unused Jet B fuel to other exploration camps on the Belt for use in further exploration program. Inspect the areas around the drums for visual signs of contamination. If spill or contamination is evident, reclaim the area as per the procedures outlined in the Patch Lake Spill Contingency Plan.

##### *5.1.6.2 Tidy Tanks*

Disconnect all Tidy tanks from the workshop and other facilities. Allow the remaining fuel in the line to burn out. Record the final fuel dip reading for each tank. Drain, disconnect and pack all fuel lines for use in other camps on the Belt or transported to an approved landfill offsite. Inspect the area around each installation for visual contamination. If spill or contamination is evident, reclaim the area as per the procedures outlined in the Patch Lake Spill Contingency Plan. Count and secure all Tidy tanks with a chain. Secure all tanks for despatch to Yellowknife for recycle or sale.

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#### 5.1.6.3 *Above Ground Storage Tanks (AST)*

Disconnect all installations on respective tanks. Inspect and lock all hatched. Carry out an inventory of the remaining fuel in each tank and record the findings. Relocate the AST tanks to another exploration camp on the Belt or using winter road to a designated area on the coast and loaded onto a barge for transportation to Yellowknife during summer months. Relocate the AST tanks during to another exploration on the Belt during winter months.

#### 5.1.6.4 *Lined Fuel Farm*

Inspect the area for visual sign of soil contamination. If contamination is evident, then apply procedures outlined in the Patch Lake Spill Contingency Plan to reclaim the impacted area. If contamination is not evident, remove the lined hydrocarbon resistant high-density polyethylene (HDPE) liner using a CAT. Roll and pack the liner for transport offsite to an approved landfill for disposal. With a front loader, push the berms inward and levelled to cover exposed area. Contour the area to match the surrounding landscape. Seed the area with native species. Level and re-fill the trenches dug around the farm with local top soil then seeded with native species.

#### 5.1.7 Chemicals

##### *Plan*

Upon workshop closure, relocate any unused reagents to the other camps on the Belt. If this is not possible, dispose general household cleaners in approved facility offsite. Dispose empty containers with regular garbage.

#### 5.1.8 Transportation

##### *Plan*

##### 5.1.8.1 *Helipad*

Clear the helipad of any debris. Inspect the area for soil contamination. If contamination is evident, then employ procedures outlined in the Patch Lake Spill Contingency Plan, MHBLNV-PLKSCP-SEOP-03-2005 to reclaim the impacted area.

##### 5.1.8.2 *Vehicles (CAT)*

Inspect the area around stationary vehicles for fuel/oil leaks by using prepared checklist. If contamination is evident, then employ procedures outlined in the Patch Lake Spill Contingency Plan, MHBLNV-PLKSCP-SEOP-03-2005 to reclaim the impacted area.

#### 5.2 Exploration

##### *Plan*

##### 5.2.1 Drill Sites Management

Dismantle the drill into its main components as per the drilling contractor procedure, pack and secure along with its ancillary equipment and rods. Move the drills with a helicopter over the tundra and left on designated areas on property before transporting offsite. Inspect all drill sites for visual

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contamination. Apply peat moss to the areas contaminated with petroleum products. Fly all wastes generated at the drill sites to Patch Lake and dispose of accordingly. Restore as much as possible, the drill sites immediately after the relocating of the drill to the next site. Remove the sumps to the designated area on the property. Level the area conforming to the surrounding landscape profile. Seed the area with native plant species.

#### 5.2.2 Drill holes Management

##### 5.2.2.1 *Drill sump*

Collect all drill sumps and disposed off in permitted locations on property. Re-cycle containers used to capture drill sumps. Level the sumps, when dry to match the contour of the surrounding landform during winter months.

##### 5.2.2.2 *Iron Casing Management*

Cut all case protruding above ground to a level that will not pose a hazard. The cut portion will be disposed off in an approved landfill in Yellowknife. Plug drill holes that encounter artesian water flow or those drilled under the lake with cement. Ensure record GPS positions for all holes.

#### 5.2.3 Chemicals associated with Drilling operations

##### 5.2.3.1 *Drill Additives, Cement and Salt Management*

Carry out an inventory for all remaining drill additives and salt. If required on another exploration property on the Belt, pack and dispatch. If not required, pack or dispatch to Yellowknife for re-sale or disposed off. Dispose empty containers with regular garbage.

#### 5.2.4 Drill Core

Count drill cores and properly secure for long-term storage at a designated area on property.

### 5.3 Environmental

#### *Plan*

#### 5.3.1 Long-term Monitoring

To ensure the area been cleared of any hazards that may cause significant adverse impact to the receiving environment, long-term environmental monitoring will continue during summer months, with results submitted to regulatory authorities. This monitoring will continue until advised by regulating authorities to cease monitoring.

#### 5.3.2 Documentation and Final Inspection

Take photographs of the camp, drill sites at every stage of the decommissioning process. Document what the objectives were, what is being one, what is the outcome, recommend, and develop objectives for the next phase. Document environmental information and other information as required. Collated information forms the bases for land relinquishment final submission.

#### 5.3.3 Land Relinquishment

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Once the reclamation process is accepted and approved as per Section 2 of this Management Plan, the permit holder will invite and organise a final site inspection visit with community representatives, Land Inspectors, Nunavut Water Board and Kitikmeot Inuit Association. Visits by Environment Canada and the Department of Fisheries and Oceans personnel are welcome. A written submission will be send to the regulatory authorities asking to relinquish the land.

#### 5.4 Abandonment & Restoration Cost Estimates

The known minimum value cost estimation for Patch Lake A&R Plan is approximately \$200,000 given the anticipated increase in exploration activities within the area. The monetary cost and liability for environmental significant issues costing, such as the expected value, most likely value, and range of value have not been determined in this document. Further work is required to determine these values. However, the known minimum value will be reviewed annually depending very much on the long-term exploration strategy. The cost structure will be itemised as listed below.

##### 5.4.1 Infrastructure Demolition Cost

##### 5.4.2 Transportation – (Labour, equipment, recycle, relocation of waste etc)

##### 5.4.3 Labour Cost

###### 5.4.3.1 *Offsite Administrative Cost*

###### 5.4.3.2 *Contractor*

##### 5.4.4 Rehabilitation Cost

###### 5.4.4.1 *Site Supervision - (MHBL)*

###### 5.4.4.2 *Remedial supplies*

###### 5.4.4.3 *Native species supplies*

###### 5.4.4.4 *Contractor*

##### 5.4.5 Environmental Monitoring Cost

###### 5.4.5.1 *Labour - (MHBL or Contractor)*

###### 5.4.5.2 *Transportation – (Field sampling)*

###### 5.4.5.3 *Analytical Cost – (External Lab)*

###### 5.4.5.4 *Reporting – (MHBL or Contractor)*

##### 5.4.6 Final Documentation – (Labour Cost – MHBL or Contractor)

##### 5.4.7 Land Relinquishment – (Travel, Reports, Site Visits, Meetings etc)

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## 6 REVIEW OF THE PLAN

Review the Patch Lake Abandonment & Restoration Management Plan on an annual base. Next review will be in January 2006.

## 7 REFERENCE

- MHL SEOP, March 2005. *Legal and Other Requirements Management Plan, MHBL ENV-LEGAL-SEOP-05-2005.* - in house document.
- MHL SEOP, March 2005. *Patch Lake Spill Contingency Management Plan, MHBL ENV-PLKSCP-SEOP-03-2005.* - in house document.