CONTINGENCY PLAN

PREPARED FOR
THE
NUNAVUT WATER BOARD

WATER LICENCE NWB1ULU0008
ISSUED JULY 1, 2000

ECHO BAY MINES LTD.

ULU EXPLORATION PROJECT

NUNAVUT

Prepared; October 2001

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1 GENERAL

1.1 PREAMBLE

This Contingency Plan has been compiled with respect to the requirements within Water Licence NWB1ULU0008, Part E, Item 1 renewed on July 1, 2000. This Plan is the first submission under the Licence. The previous requirement for a Contingency Plan was waived upon Echo Bay Mines Ltd.'s suspension of activities at the site. An annual review of the Plan takes place and revisions are usually submitted as necessary with the annual report.

The Ulu Exploration Project Contingency Plan, upon approval by the Board, is to be distributed to all appropriate contacts on the distribution list (Sec. 1.3) and applicable departments at the Lupin Mine to be used in addition to the Lupin Operation's "Emergency Procedures Policy Manual" (or the "Ulu Project Emergency Procedures Policy Manual" upon resuming activities at the site).

The "Guidelines For Contingency Planning, Northwest Territories Water Board, 1987", have been utilized as the guide to the requirements of the manual as per Item 1, Part E. The Plan has been expanded beyond these guidelines where appropriate and as described in Part E.

1.2 CONTACT

Additional copies of this plan may be obtained by writing to:

Echo Bay Mines Ltd.
Lupin Operation
9818 International Airport
Edmonton, Alberta
T5J 2T2
Attn: Mr. B. Danyluk, General Manager,
Mr. H. Ducasse, Manager Loss Control and Environmental Affairs, or
Mr. D. Hohnstein, Environmental Coordinator, Lupin

or by contacting the any of the above at (780) 890-7000

1.3 DISTRIBUTION LIST

Affiliation	Position	Name	Copy #
Echo Bay Mines Ltd.	General Manager	Bill Danyluk	1
Echo Bay Mines Ltd.	Manager, Loss Control & Environmental Affairs	Hugh Ducasse	2
Echo Bay Mines Ltd.	Environmental Coordinator	David Hohnstein	3
Echo Bay Mines Ltd.	Mill Superintendent	Bill McCrank	4
Echo Bay Mines Ltd.	Maint. Superintendent	Rick O'Neill	5
Nuna Logistics	Contractor - Surface Lead Hand	Kirk Keller Reg Brand	6
Nunavut Water Board	Executive Director	Philippe di Pizzo	7
DIAND	Water Resources Manager	David Milburn	8
Environment Canada	Environmental Protection	Dave Tilden	9
Inactive			10
Inactive			11
Inactive			12

1.4 PURPOSE

This Contingency Plan is designed to provide the necessary background information and plans of action in the event of a failure at the facility or an incident within the Ulu Exploration Project resulting in a spill of fluids (fuel, oil, sewage line) or of explosives. It is intended to outline the means for responding to failures and material spills within these systems in a way that will minimize potential health hazards, environmental damage and clean up costs.

The objectives of the Plan are to:

- Define the reporting procedures and communication network to be used in the event of a system failure or material spill.
- Define procedures for the safe and effective containment and cleanup/disposal of a system failure or material spill.
- Define specific individuals and their responsibilities.

This site plan is limited to the Ulu Exploration Project and is not intended to cover, but may assist, the response action plans for winter road transportation.

1.5 POLICY

Environmental Policy

Echo Bay Mines Ltd. is committed to good stewardship in the protection of the environment during its conduct of business.

As a member of the Mining Association of Canada, Echo Bay Mines Ltd. supports the MAC Environmental Policy which addresses all aspects of Environmental Management, Risk Management, Communications, Research, Technology Transfer, Closure priorities and Continual Improvement of Environmental Performance. As well, Echo Bay Mines subscribes to the principles of the Gold Institute (USA) and has incorporated aspects of both into its Company's Environmental Policy. For reference, a copy of the Environmental Policy is attached in Appendix II.

2.0 Reporting Procedures

2.1 Initial Reporting/Action

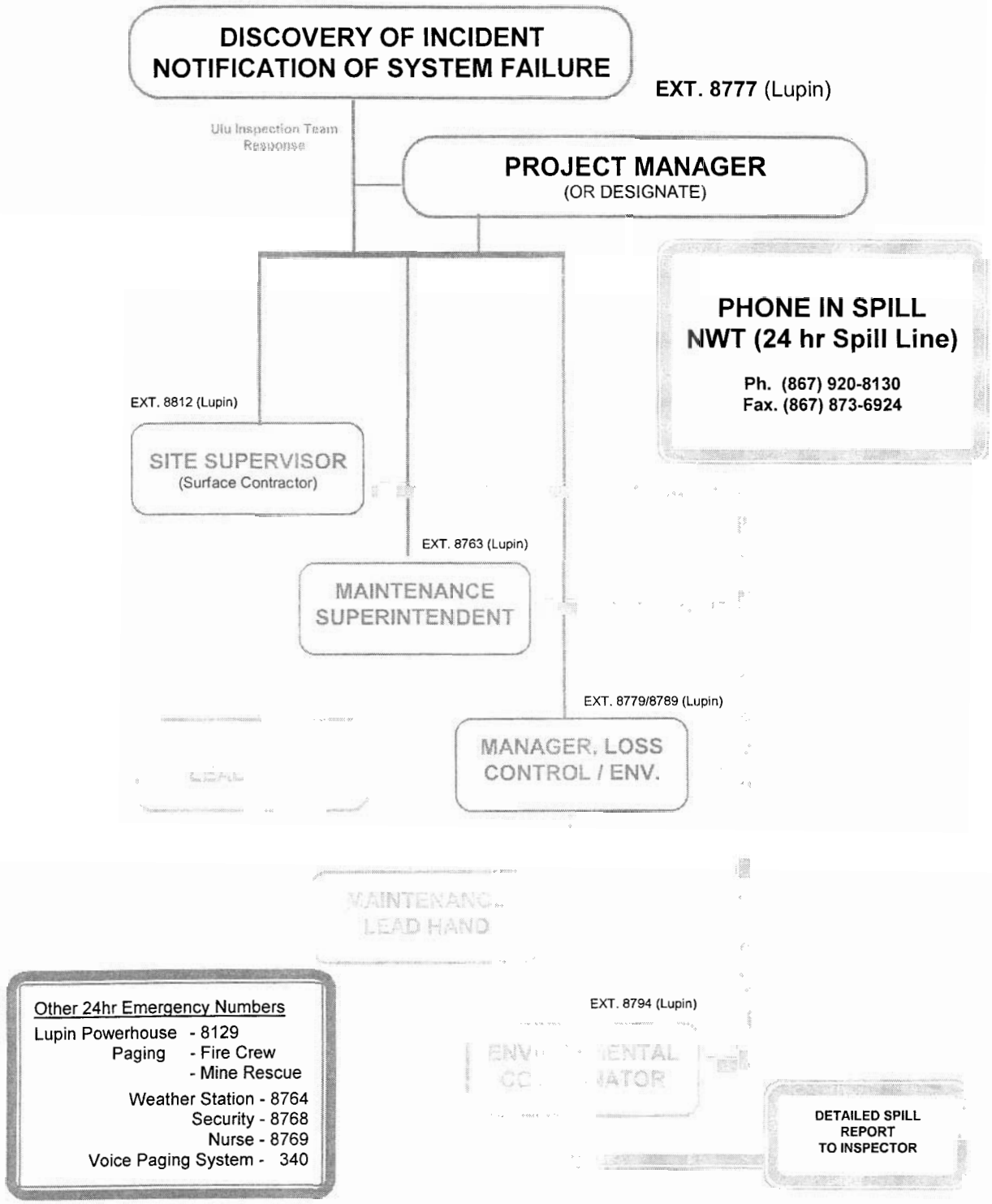
Upon encountering a failure within a disposal system (sewage or mine sump) or a petroleum/chemical spill, every Echo Bay Mines Ltd. employee/contractor is responsible for **immediately reporting** the situation to their supervisor, or if unavailable, report directly to the Project Manager. A telephone listing of department management is included in the Appendix.

An assessment of the spill or potential spill should be made, regarding identification of material, risk to personnel safety and the environment, cessation, control and containment. If you are **SURE it is SAFE** to do so, an attempt should be made to control the spill. Otherwise, after reporting the incident to a supervisor, you should **REMAIN CLEAR** and prevent others from accidentally entering the area.

2.2 Internal Reporting

Once the incident has been reported to the supervisor and an assessment has been made, the spill reporting will be handled as an incident through the Loss Control Department and its accident/incident investigations. Upon proper notification of the personnel in the "Response Team Flowsheet" (Fig.1), remedial action can commence in accordance with the corresponding response plan. The immediate reporting of the spill to the **N.W.T. Spill Line (1-867-920-8130)** will be carried out by either the Site Supervisor, Environmental Coordinator at Lupin, the Manager of Loss Control and Environmental Affairs or if unavailable, the appropriate Department Head or designate at the Lupin Mine.

FIG. 1 RESPONSE TEAM FLOWSHEET



2.3 External Reporting

The Site Supervisor (or designate), upon receiving a report, will follow through with the "Response Team Flowsheet" (Fig. 1) and its first line of authority.

The Response Team shall then:

- Proceed to the failure/spill location and assess the situation;
- **DO NOT TAKE ANY UNNECESSARY RISKS**
- make arrangements for first-aid and removal of injured personnel;
- co-ordinate equipment support and mobilize to location;
- liaison with Emergency Response personnel regarding containment, clean up and disposal procedures.
- when an unauthorized discharge of waste occurs or *where there is a reasonable likelihood* of a spill, **REGARDLESS OF QUANTITY**, fill out as complete as possible, a formal Spill Report Form (Fig. 2 and Appendix) and contact the **24 HOUR SPILL REPORT LINE immediately at (867) 920-8130**, giving notification of the spill.
- retain the original and deliver one copy to:

    - General Manager (Lupin) - Attention B. Danyluk
    - Manager, Loss Control and Environmental Affairs (Lupin)
    - Env. Coordinator, Lupin - Attention D. Hohnstein

- The Environmental Coordinator or designate shall complete a **Detailed Spill Report** and submit to an Inspector no later than 30 days after the initial report of the spill. Submit to:

    Water Resources Officer
    DIAND, Nunavut District, NU
    Baffin Region
    P.O. Box 100
    Iqaluit, NU
    X0A 0H0

Several Government departments are available with expert advice to assist in decision making where there are environmental concerns. A telephone listing of these departments is also included in the Appendix.

Where there is a concern for the general health and safety of the public, every effort should be made to contact local communities and hunters and trappers associations. See the Appendix for current contacts and phone numbers.

SPILL REPORT FORM

Northwest Territories

N.W.T. SPILL REPORT (Oil, Gas, Hazardous Chemicals or other Materials)

ᓄᓇᕗᑦ ᑯᐃᓕᒥ ᐅᓂᒃᑳᖅ (ᐅᖃᐅᓯᓕᐅᑦ, ᓴᓇ, ᐊᑦᑕᓐᓇᖅᑐᑦ ᐃᓚᖓᑦ ᐅᑦᓯᓕᒃ ᐊᒻᒪᓗᑦ)

24-Hour Report Line
24-ᓄᑦ ᐃᑲᖅᓗᑦ ᐅᓂᒃᑳᖅᐳᑎᓐᓄᑦᑐᖅ ᐅᖅᑎᑦ
Phone/ᐅᖅᑎᑦ (867) 920-8130
Fax/ᓱᑲᑐᒃᑯᑦ (867) 873-6924

A Report date and time ᐅᑦᓄᖅ ᐊᒻᒪᓗᒃᓴᓄ ᖃᓄᐃᓕᖅᑐᓄᑦ ᐅᓂᒃᑳᑎᑎᒃᓴᐃᑦ	**B** Date and time of spill (if known) ᐅᑦᓄᖅ ᐊᑎᑎᑦᓄᑕ ᖃᓄᐃᓕᖅᑐᓄᑦᑕ (ᖃᐃᑲᓇᕐᓂᖅᐸᑦ)	**C** ☐ Original report ᓯᓚᑦᓯᒪᓕᒃ ᐅᓂᒃᑳᑎᑎᒃᓴᖅ ☐ Update no. ____ ᐅᓂᒃᑳᑎᑎᒃᓴᑐᒥ ᓇᒃᑲᓕ ___	Spill number ᐊᑎᑦ ᓇᒃᑲᓕ
D Location and map coordinates (if known) and direction (if moving) ᓇᓂ ᐊᐃᑦ ᑭᒪᓗ ᓇᓇᕐᓗᑦ ᓇᒃᑎᑎᒍᑦ (ᖃᐃᑲᓇᕐᓂᖅᐸᑦ) ᑭᒪᓗ ᓇᒧᐊᑉᓯᓚᐅᑎᒪᓕᒃ (ᐃᑐᖏᑦᑐᑦ)			
E Party responsible for spill ᑭᒃᑯᑦ ᐊᐃᑎᒋᑎᑦ			
F Product(s) spilled and estimated quantities (provide metric volumes/weights if possible) ᑭᓯᑦ ᑭᓯᓚᐅᓂᑦ ᐊᐃᑦ ᖃᓄᐃᑎᓗ ᑐᖁᓂᖃᖅᑐᑦ (ᐃᑐᖁᓂᓐᓄ ᐅᑭᐅᑦᓂᖅᓯᓚᐅᓂᑦ ᑯᓛᓇᕐᑐᑦ)			
G Cause of spill ᑭᓯ ᐊᐃᑦᑦᑕᑦ			
H Is spill terminated? ᐊᐃᑦᓂ ᓄᖅᑎᑎᑕᐅᑦ? ☐ yes/ᐃ ☐ no/ᑌᒃ	**I** If spill is continuing, give estimated rate ᓯᓚ ᐊᐃᑦᑦ ᖃᓄᐃᑎᓗ ᓯᖃᑎᒋᓂᖅᓯᒪᓂᑦ	**J** Is further spillage possible? ᐊᐃᖃᓗᓐᓄᐃᓐᓇᓂᖅᓂᑦ? ☐ yes/ᐃ ☐ no/ᑌᒃ	**K** Extent of contaminated area (in square metres if possible) ᖃᓄᖅ ᑐᖁᑎᑎᑦ ᐊᐃᑦᐃᑎᓂᖅ (ᐅᐱᐃᓂᖅᓱᒪᓗᒍ ᑐᖁᓂᓐᓄᑦᑐᑦ)
L Factors affecting spill or recovery (weather conditions, terrain, snow cover, etc.) ᑭᓯᑦ ᐱᓵᓕᑎᑦ ᐊᐃᑦᓯᒃ ᐅᑦᓯᓐ ᑐᖅᑭᑎᑕᐅᓂᖅᓗᒍ ᐊᓯᑦ ᖃᓄᐃᓕᓐᓂᖅᓄᑦ ᑐᖅᓴᐅᓱᒪᓂᖅᓄᓐ, ᐊᓯᑭᓗᓴᓐᓂᒍ)		**M** Containment (natural depression, dykes, etc.) ᐅᖅᑯᓗᖃᖅᐸᑦ ᑭᓪᓕᑦ ᐃᓅᓐᓂᓱᓚᑦ (ᓇᓂᒃ ᐃᓅᓐᓄᐊᑦ, ᑲᓱᓕᔪᓐᓇᖅᑐᓂᒍ)	
N Action, if any, taken or proposed to contain, recover, clean up or dispose of product(s) and contaminated materials ᖃᓄᐃᓕᓴᐅᑦ, ᖃᓄᐃᓕᓴᐅᓂᑎᑐᓂᑦ ᐅᑦᓯᓐ ᖃᓄᐃᓕᓴᐅᓂᑎᑐᓂᑦ ᐊᑕᐅᓯᕐᑎᑎᑕᐅᓇᓂᑦ, ᓄᓇᖅᑎᑎᑕᐅᓇᓂᑦ, ᓴᓐᓴᒥᓐᑕᐅᑦ ᐅᑦᓯᓐ ᐃᑎᑕᐅᓇᓂᑐᓂᑦ ᐊᐃᑦᓂ (ᐊᐃᑦᓯᒃᓴᑦ) ᑭᒪᓗ ᐊᐃᑦᐃᑎᐅᑦ. ᐃᓅᓐᓄᐊᑦ ᐅᑦᓯᓐ ᓂᓴᐊᑎᓂᖅ			
O Do you require assistance? ᐃᑲᓂᑕᑎᓇᖅᑐᓂᑦ? ☐ no ᑌᒃ ☐ yes, describe: ᐃ - ᓄᓪᓕᐃᑦᓴᓄ	**P** Possible hazards to persons, property, or environment; eg: fire, drinking water, fish or wildlife ᖃᑦᑕᓄᐃᓐᓄᖅᑐᓂᑦ ᐃᓄᓐᓄᑦ, ᐱᖓᑎᖅᑐᐅᓂᑦ ᐅᑦᓯᓐ ᖃᐅᑎᒪᓕ ᓯᓗ - ᐃᓕᓐᓄᓂ, ᐃᓕᓴᓗ ᓂᐅᖅᑯᑕᐅᓯᓗᓂᑦ, ᐃᖅᓗᓂᓂᑦ ᐅᑦᓯᓐ ᓂᐊᑎᓂᑦ		
Q Comments and/or recommendations ᐅᖅᑐᑎᓯᐃᑦ ᑭᒪᓗ ᐅᑦᓯᓐᓂᑦ ᖃᓄᐃᓕᑎᖅᑐᐅᑦ			FOR SPILL LINE USE ONLY ᐊᑯᑕᐅᓯᖅ ᐊᐃᑦᓂᑦ ᐅᖃᓕᓄᑦᑐᓄᓗᑕᖅ Lead Agency ᐃᖅᑲᐃᓐᓇᓕᖅᓯᐃᑦ ᐊᐃᑎᑦ ᑲᒪᓂᖅᑐᑦ- Spill significance ᐊᐃᑦ ᖃᓄᐃᓕᓐᓂᖅ- Lead Agency contact and time ᐃᖅᑲᐃᓐᓇᓕᖅᓯᐃᑦ ᐊᐃᑎᑦ ᑲᒪᓂᖅᑐᑦ ᖃᐅᔨᓴᖅᑐᓂᑦ ᑭᒪᓗ ᖃᓄᖅ Is this file now closed? ᒥᓂ ᐅᑦᓂᓗᑎᑦ ᒪᑐᐅᑦ?
Reported by ᐅᑦᓂᖅᑐᑦ	Position, Employer, Location ᖃᓄᐃᑐᑎᑦ ᐃᖅᑲᐃᓐᓇᓕᖅᓯᐃᑦ, ᐃᖅᑲᐃᓐᓇᓕᖅᑎᑦᓂᖅ, ᓇᒥ	Telephone ᑭᖅᑎᑦ	
Reported to ᑭᓱᓕᑦ ᐅᑦᓂᖅᑕᐅᑦ	Position, Employer, Location ᖃᓄᐃᑐᑎᑦ ᐃᖅᑲᐃᓐᓇᓕᖅᓯᐃᑦ, ᐃᖅᑲᐃᓐᓇᓕᖅᑎᑦᓂᖅ, ᓇᒥ	Telephone ᑭᖅᑎᑦ	

NWT 1752/0593

Figure 2

2.4 Response Team Organization

The response team organization has been summarized in the Response Team Flow Sheet (Figure 1). Within this team there are key personnel which will respond to all spills and assist in the implementation and coordination of the respective response plans. The titles and roles of these individuals include, but are not limited to those outlined below. Due to the rotational schedule of many individuals, there is the possibility of one or more being off site at any one time. The alternate person(s) responsible for the specific role will be the designate identified below.

General Manager (during suspended program)

Through the Company's Policies and the Emergency Procedures Manual, ensure that the Plan is properly distributed to those supervisory personnel most likely to encounter a spill or unauthorized release during normal operations.

Ensure that all personnel are adequately trained in the safe working procedures and have access to the proper personal protection for handling hazardous material spills **PRIOR TO** an incident occurring.

Ensure that all equipment is properly designed and maintained, and is available for an emergency situation to minimize the risk during response.

All Media Relations should be carried out by the General Manager or his designate.

ALTERNATE; Chief Mine Engineer, Chief Geologist or other as designated from time to time.

Site Supervisor (Lupin)

Responsible for ensuring that adequate precautions are taken during normal operations in association will the Advanced Exploration Project.

Provide all necessary personnel and equipment to contain, mitigate and clean-up the spill as required.

If additional supplies are required, initiate the relocation of the "Emergency Spill Response Trailer" to the spill location for immediate access.

ALTERNATE; In the absence of the Site Supervisor, the Ulu Project Shift Supervisor (or designate) shall assume the responsibilities.

Manager, Loss Control and Environmental Affairs, Lupin

Provide technical support and advice on personnel safety during control and clean-up operations. Ensure all safety practices are in place and that the activity

is performed according to standard safety procedures.

Ensure through regular training programs that all personnel involved in the response are capable of dealing with the identified spills as provided in the contingency manual. As well, that they are fully aware of their responsibilities in preserving the health, safety and the environment with regard to equipment/ component failures and spills.

In the event of a petroleum spill, mobilize the Fire Crew to stand-by as there may also be a need for controlled burning.

ALTERNATE; In the absence of the Loss Control Superintendent, the Loss Control Coordinator (or designate) shall assume the responsibilities.

Environmental Coordinator

Through evaluating the initial report and assessing the magnitude/potential impacts of the incident, provide direction and technical advice on the containment, clean-up and disposal procedures activated through the Plan.

Liaison with Company Management and Government Agencies.

Submit the spill report via the 24 hour Emergency Spill Line and follow-up with the formal written "Detailed Spill Report".

ALTERNATE; In the absence of environmental staff, spill reporting shall be the responsibility of the respective Shift Supervisor (or alternate) responsible for initial spill discovery and response.

2.5 Response Team Role

Following consultation between the Site Supervisor, Shift Supervisor and other necessary Lupin personnel; The role of the Team(s) upon arrival at a failure, petroleum or chemical spill are as follows:

a) assemble the necessary personnel and equipment required to contain the spill;

b) proceed to the scene with the Response Team and co-ordinate the overall containment/clean up and/or repairs;

c) assess the possibilities of any danger to life, property or equipment;

d) determine if any product is escaping;

e) take necessary action required to stop/reduce/contain any further product from escaping;

f) attempt to determine the extent of the damage and if it extends beyond an original containment area;

g) if contained within a berm (fuel/oil), pump out that which is recoverable, then remove and replace the soil within the berm (contaminated soil to be removed to the disposal site and burned);

h) if outside the berm (fuel/oil) attempt to determine whether the cause is from overflow or a damaged berm/liner. Should the cause be a damaged liner, repair or replace it;

i) determine whether it would be safe to burn off the spilled fuel or would the surrounding soil have to be removed to a disposal area and burned. Any burning requires prior approval from regulatory authorities.

j) if chemical, determine extent of spill, whether any material is still escaping and the containment necessary.

k) all contaminated materials are to be removed and disposed of according to individual response plans, or as directed by appropriate regulatory personnel.

3.0 Site Information

3.1 General

Echo Bay Mines Ltd. purchased the Ulu site lease from BHP in 1995 with plans to develop the property into a satellite mine for additional mill feed to the Lupin mill. An underground development, diamond drilling and bulk sample program was initiated in 1996 to provide infill geological information.

The Ulu Project is situated in Nunavut, with the underground exploration site at 100° 58' W longitude and 66° 54' N latitude (Ulu location map and site area map, appendix) . The site is located in the treeless arctic tundra where rock and glacial features dominate the landscape. Located about 12 km north of the Hood River and 150 km north of the Lupin Mine, the site is accessible year round only by aircraft. Bulk items were brought on site via winter road and during exploration activity, day to day supplies are flown to the camp. The area is characterized by severe winter climate and mild summers with an overall temperature range of -50° to +30° Celsius. Permafrost in this area typically extends to several hundred metres.

The Ulu Project site is completely self-contained with the exception of the transportation requirements for materials/supplies and workforce mobilization. There are two main location areas; the Ulu Camp which houses the residential complex consisting of Weatherhaven accommodations, kitchen and recreation area, the ore storage pad and, Camp Three, which is comprised of a maintenance shop and fuel tank farm.

3.2 Site Components (Operations)

The site components are limited to the Project Camp, maintenance shop and fuel storage. Additional components include the water supply pipeline, the sewage treatment plant and associated piping as well as the ore storage pad with runoff collection sumps (incomplete-2001).

3.2.1 Mining and Ore Storage

Upon production mining begins, ore from underground will be brought to the surface and stored on an above ground constructed pad. This pad is designed to store approximately one year's production prior to shipment to the Lupin Mine for processing within the Lupin Mill. As there may be runoff from the storage pad during the spring melt and summer precipitation events, lined catchment areas are to be in place to contain the water for testing prior to release. A lined sump is also located at the entrance to the mine workings (portal). This sump was initially constructed for recycling drill water during portal and ramp development but is available for containment and storage of excess water if encountered during exploration and development.