



Environmental Management Plan

Roche Bay PLC

January 2011

Table of Contents

1. Introduction
2. Planning
3. Stakeholders
 - Archaeology*
4. Flora and Fauna
 - Disturbance*
 - Wildlife Protection*
 - Human Safety*
5. Land Disturbance
6. Drilling Operations
7. Waste Management
8. Hazardous Materials
9. Rehabilitation

Appendices

- Appendix I) Wildlife Emergency Contacts
- Appendix II) Hazardous Wastes Contacts

Environmental Operation Procedures

1. Introduction

Roche Bay PLC is committed to high standards in environmental practice and will ensure its exploration activities have minimal impact on the environment.

2. Planning - Environmental Protection

The Exploration program activities will be assessed for environmental impacts and risks and all measures will be taken to ensure the protections and preservation of the natural environment.

During the life of the program mapping and photographing of sensitive areas will be conducted to comply with environmental due diligence. All field employees and contractors will be subject to environmental training, relevant regulations and given an environmental responsibilities. The Program Supervisor will hold the primary responsibility for environment protection from impacts related to the program activities. The program budget includes the cost of environmental training, rehabilitation and site clearance surveys which will minimize the environmental damage. Preference will be given to those contractors that exhibit high standards of environmental management and practice. In the event of a natural or exploration-resultant emergency, Roche Bay PLC has prepared a Spill Response Plan to be located on-site.

When conducting all activities the Terms and Conditions of each of these authorizations are rules that Roche Bay PLC must abide by. The following Acts, Regulations, Guidelines and Recommendations will also be abided:

- *Fisheries Act*
- *Department of Fisheries and Ocean Operational Statements and Guidelines*
- *Caribou Protection Plan/Caribou Protection Measures*
- *Nunavut Waters and Nunavut Surface Rights Tribunal Act*
- *Territorial Lands Act*
- *Nunavut Land Claims Agreement*
- *Environmental Protection Act*
- *Canadian Environment Protection Act*
- *Species at Risk Act*
- *Territorial Wildlife Act*
- *Guide to Spill Contingency Planning and Reporting*
- *Public Health Act*

3. Stakeholders

Stakeholders will be identified and kept in communication for the duration of the program; they may be individuals or groups concerned or possibly affected by exploration activities. Relevant approvals from stakeholders and regulatory authorities will be obtained.

Archaeology

With Respect to culture and cultural, heritage archeological or paleontological sites or fossils encountered, the Department of Culture, Language, Elders and Youth (CLEY) will be contacted

immediately, and a report will be prepared documenting the discovery and sent to the Government of Nunavut (CLEY), the Inuit Heritage Trust and the Regional Inuit Association.

The contact number for the Department of Culture, Language, Elders and Youth is:

- 1-867-934-2046 or 1-867-975-5500 or 1-866-934-2035

4. Flora and Fauna

Unnecessary impacts and interference with the native flora will be avoided. Fauna sightings will be recorded on the wildlife sheets provided and reported to the appropriate agencies. **Approaching, disturbing and feeding wildlife is to be prohibited**, as Roche Bay PLC respects the natural environment and also adheres to the Terms and Conditions provided by regulatory authorities. Any individuals conducting business on behalf of Roche Bay PLC who do not respect the prohibition will be penalized.

Disturbance

Airborne support is required to carry out operations and possible disturbances that may arise are petroleum product spill, potential clearance of flora for a safe helicopter pad, and disturbance of fauna and people from frequent low flying altitudes. Low level helicopter flights will make efforts to avoid crucial wildlife nests and dwellings and will not land where wildlife is present unless in an emergency situation. If any emergency landing occurs in the presence of wildlife it will be documented and submitted as part of the annual report and regulatory agencies will be notified.

Wildlife Protection

Any bears, or nuisance wildlife will be reported to the Camp Manager and to the respective authorities immediately. If any Caribou come in to the vicinity of operations Roche Bay PLC will follow the DIAND Caribou Protection Measures and be certain to stop operations and not disturb the animals until migrating or calving herds have moved out of the operations vicinity.

Human Safety

Registered firearms must be carried to ensure safety of persons on the property but must receive the clearance of the Project manager before leaving camp. **Any hunting while conducting business on behalf of Roche Bay PLC is forbidden.** Following legislation, a secure lock and key firearms storage case, will be used to be managed by the Project Manager. Any firearm discharges will be reported to the Project and Camp Managers.

**See Wildlife contacts in the Appendix of this plan*

5. Land Disturbance

All necessary permits and permissions will be obtained before any land disturbance is conducted. Earthmoving, vegetation clearing, and any other land disturbances will kept to a minimum or at best avoided when possible.

- Earth may be moved to construct small pits or sumps or when taking soil or till samples, however natural depressions and areas free of vegetation will be used when possible. Any topsoil moved will be collected to be used in re-vegetation efforts. If the sump is excavated it will be barricaded until back-filled.
- Vehicle Access may require the removal of trees or some of their branches if natural clear pathways are not present. Large trees will be avoided in clearing actions and all paths will be kept to a minimum width. Clearing on steep slope, side hills and drainage banks will be avoided.

- When traversing; foot accessible grid lines for geosciences will be at minimal width; branches may be cut; temporary stakes will be wooden and removed at the completion of exploration; flagging tape and spray paint will be used sparingly.

6. Drilling Operations

Exploration drilling service contracts will be awarded to companies that exhibit high standards of environmental practice and will adhere to the environmental protection plan; penalties will ensue for non-compliance. Any removal of top soils or organic layers will be stockpiled and used for back filling and/or re-vegetation. All Waste will be disposed of according to regulation and land use permits

Drilling

- Sites will include enough area for fire protection but be as small as possible
- Bio-degradable drilling fluids will be used when possible and will be contained in sumps (or tanks), to be positioned down slope of drill collars with run-off flow into the sump
- A tarp or something similar will be placed around the hole to prevent drill cuttings from contact with the ground surface; any cuttings not used in analysis will be poured back down the hole or disposed of and the hole will be plugged, the casing cut to the ground and capped.
- Any artesian water flow will be reported to the INAC Water Resource Officer and be controlled to prevent erosion; these holes will be permanently sealed.
- Temporary emergency shelters and supplies including a radio will be located at each drill site

7. Waste Management

Any materials brought to the site by employees or contractors will be removed to a landfill; combustible wastes will be sealed and shipped to the nearest appropriate disposal site.. All disposals will comply with Federal and Territorial legislation and the Terms and Conditions provided in the water license and land use permits.

- Litter is prohibited; receptacles will be provided for garbage at drill sites and food wastes will be daily removed.
- Combustible wastes will be sealed and shipped to appropriate disposal facilities. Untreated wood and large pieces of cardboard will be burned in an open and controlled burn according to the GN Municipal Solid Wastes Suitable for Open Burning Guidelines.
- Scrap metals and non-combustible waste oil and rags in sealed drums will be removed from the property and taken to an appropriate municipal disposal site such as Rankin Inlet, Churchill, or similar for disposal or further shipment to an approved disposal site.
- Grey and black water will be collected into sumps which will be filled and leveled as required.

**See Appendix I for garbage burning Guidelines*

8. Hazardous Materials

All fuel and lubricant handlers will be expected to be familiar with MSDS, WHMIS, Spill and Emergency Responses and protocols for the transportation of dangerous goods. Materials Safety Data Sheets (MSDS) will be available for all hazardous materials on site (See Appendix in Spill Response Plan). All storage areas for chemicals, hazardous materials and fuels will be inspected daily; hazardous wastes include used oil, oil filters, paint, chemicals, batteries, and used grease. Other pertinent factors Roche Bay PLC will ensure with regards to hazardous materials are:

- Disposal of hazardous materials will occur off-site at an approved licensed disposal facility.

- All hazardous materials will be stored in a clear dry areas at least 31 metres away from high water marks and have clear labeling .
- A waste manifest form will accompany all hazardous waste in transit and all parties will be properly registered as per the Environmental Protection Service (EPS) of the Department of Sustainable Development of the Government of Nunavut.
- All hazardous materials and their volumes will be tracked at the office on site.
- The *Transportation of Dangerous Goods Act and Regulations* is administered by the Government of Nunavut and requires personnel involved with handling hazardous materials to be trained in the application of the act.

Other Federal and Territorial legislation regarding storage, handling and transport of hazardous materials includes in:

- National Fire Code of Canada
- Fire Prevention Act (Territorial)
- Federal Aboveground Storage Tank Technical Guidelines
- CCME Environmental Codes of Practice for Underground and Aboveground Storage Tank Systems
- Nunavut "Guideline for the General Management of Hazardous Waste", see Appendices
- The *Mine, Health and Safety Act and Regulations (Nunavut)*
- The *NWT and Nunavut Safety Act, the Occupational Health and Safety Regulations*
- The Workplace Hazardous Materials Information System (WHMIS)
- Governments of the Northwest Territories and Nunavut Worker's Compensation Board
Tel.: 1-800-661-0782 or 1-867-669-4407
<http://www.wcb.nt.ca/>
- Environmental Guideline
- The *Federal Explosives Act and Regulations*
- *Canadian Environmental Protection Act*
- *Public Health Act*
- *Fisheries Act*
- *Nunavut Waters Act*
- *Nunavut Surface Rights Tribunal Act*
- *Environmental Protection Act*

Contacts for Hazardous Waste Issues – see Appendix III of this plan

9. Rehabilitation

Upon completion of exploration activities on the property Roche Bay PLC will conduct an investigation to ensure all wastes have been removed, all drill holes have been capped and any excavations back-filled. Roche Bay PLC will promote the restoration of the land surface to its original form and encourage re-vegetation growth on areas that may have become disturbed by exploration activities by spreading stockpiled top soils and applying fertilizers where needed. Photographs should be taken before, during and after exploration activities to document any surface disturbance.

Appendix I

Wildlife Emergency Contact Information

Name	Position	Contact #
Drikus Gissing	GN Wildlife Regional Manager	867-899-8034
Chris Hotson	GN Wildlife Officer II (Hall Beach)	867-928-8507
Joel Rose	GN Wildlife Officer II (Igloolik)	867-934-8999
John Amagoalik	Qikiqtani Lands Department Director	867-975-8417
Andrew Turner	Project Manager	1-780-439-5380
Benjamin Cox	Roche Bay Preseident	1-503-381-4955

Appendix II

Hazardous Waste Management Contacts

- 1. Environment Protection Service**
Department of Sustainable Development
P.O. Box 1000, Station 1145
Iqaluit, Nunavut, X0A 0H0
Phone: 867-975-5900; Fax: 867-975-5990
- 2. Motor Vehicles Division**
Department of Community Government and Transportation, Headquarters Government of Nunavut
P.O. Box 207
Gjoa Haven, Nunavut, X0E 1J0
Phone: 867-979-4614; Fax: 867-3604519
- 3. Prevention Services Division**
Worker's Compensation Board
P.O. Box 669
Iqaluit, Nunavut, X0A 0H0
Phone: 867-979-8500; Fax: 867-979-8501
867-873-7468 (accident report); Fax: 867-873-0262
1-800-661-0792
- 4. Office of the Fire Marshall (Nunavut Emergency Services Division)**
Department of Community Government and Transportation
P.O. Box 1000, Station 700
Iqaluit Nunavut, X0A 0H0
Phone: 867-975-5315; Fax: 867-979-4221
- 5. Indian and Northern Affairs Canada**
P.O. Box 2200
Iqaluit, Nunavut, X0A 0H0
Phone: 86-975-4500; Fax: 867-975-4560
- 6. Environment Protection Branch**
Environment Canada
P.O. Box 1870
Iqaluit, Nunavut, X0A 0H0
Phone: 867-979-3660; Fax: 867-975-4645