Hope Bay Mining Ltd.

Spill Contingency Plan

Hope Bay, Nunavut, Canada

Prepared for:

Hope Bay Mining Ltd.

Prepared by:

SRK Consulting
Engineers and Scientists

Project Reference Number
SRK 1CH008.009.500

September 2009

Hope Bay Project

Spill Contingency Plan

Hope Bay Mining Ltd.

Suite 300 – 889 Harbourside Drive
North Vancouver, BC, Canada, V7P 3S1

SRK Consulting (Canada) Inc.
Suite 205, 2100 Airport Road
Saskatoon, Saskatchewan S7L 6M6

Tel: 306 955 4778 Fax: 306 955 4750
E-mail: Saskatoon@srk.com Web site: www.srk.com

SRK Project Number 1CH008.009

September 2009

Authors
Don Hovdebo

Reviewed by
Mark Vendrig

Quick References

Site Emergency Phone Numbers

	DAY	NIGHT	CAMP ROOM NUMBER
MEDIC FIRST AID ROOM	**604-759-4693**	**604-759-4706**	**C9**
HEALTH & SAFETY	**604-759-4694**	**604-759-4702**	**C1**
EMERGENCY RESPONSE TEAM	**604-759-4700**	**604-759-4707**	**C2**
SITE MANAGER	**604-759-4708**	**604-759-4691**	**C3**
ENVIRONMENT	**604-759-4714 or 604-759-4698**	**604-759-4710**	**C6**
SECURITY	**604-759-4704**	**604-759-4687**	**C10**
SITE SUPERVISOR	**604-759-4684**	**604-759-4689**	**C7**

Site Radio Channels

Channel 1	**Doris Emergency**
Channel 2	Geology/Drilling
Channel 3	Nuna/Doris Camp
Channel 4	Doris Airstrip/Security
Channel 5	Helicopter coordinator
Channel 6	**Boston Emergency**
Channel 7	Boston Camp
Channel 8	Boston Use
Channel 9	Boston Use
Channel 10	Boston Use
Channel 11	Geology
Channel 12	Survey

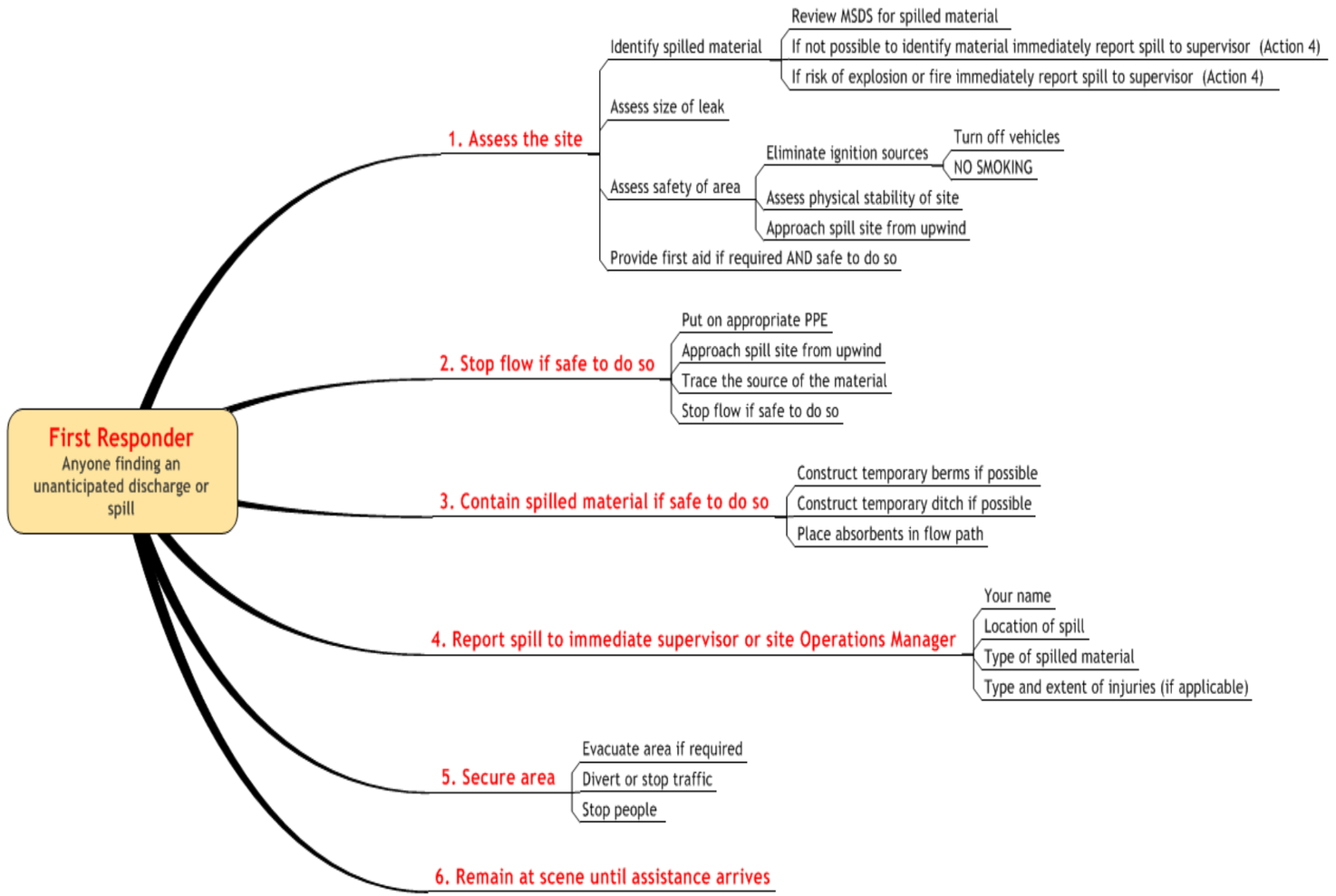
Key Government Contacts

			Telephone	Fax
NWT Spill Centre	24 hour Spill Report Line	Yellowknife	**867-920-8130**	**867-873-6924**
Nunavut Water Board	Executive Director	Gjoa Haven	**867-360-6338**	**867-360-3669**
Kitikmeot Inuit Association (KIA)	Lands Manager	Kugluktuk	**867-928-3310**	**867-982-3311**
DIAND	Water Resource Inspector	Kugluktuk	**867-928-**	
Environment Canada		Iqaluit	**867-975-4639**	
DFO (Fisheries & Oceans)		Iqaluit	**867-979-8007**	**867-989-8039**

Hope Bay Mining Ltd. Spill Response Responsibilities

First Responder

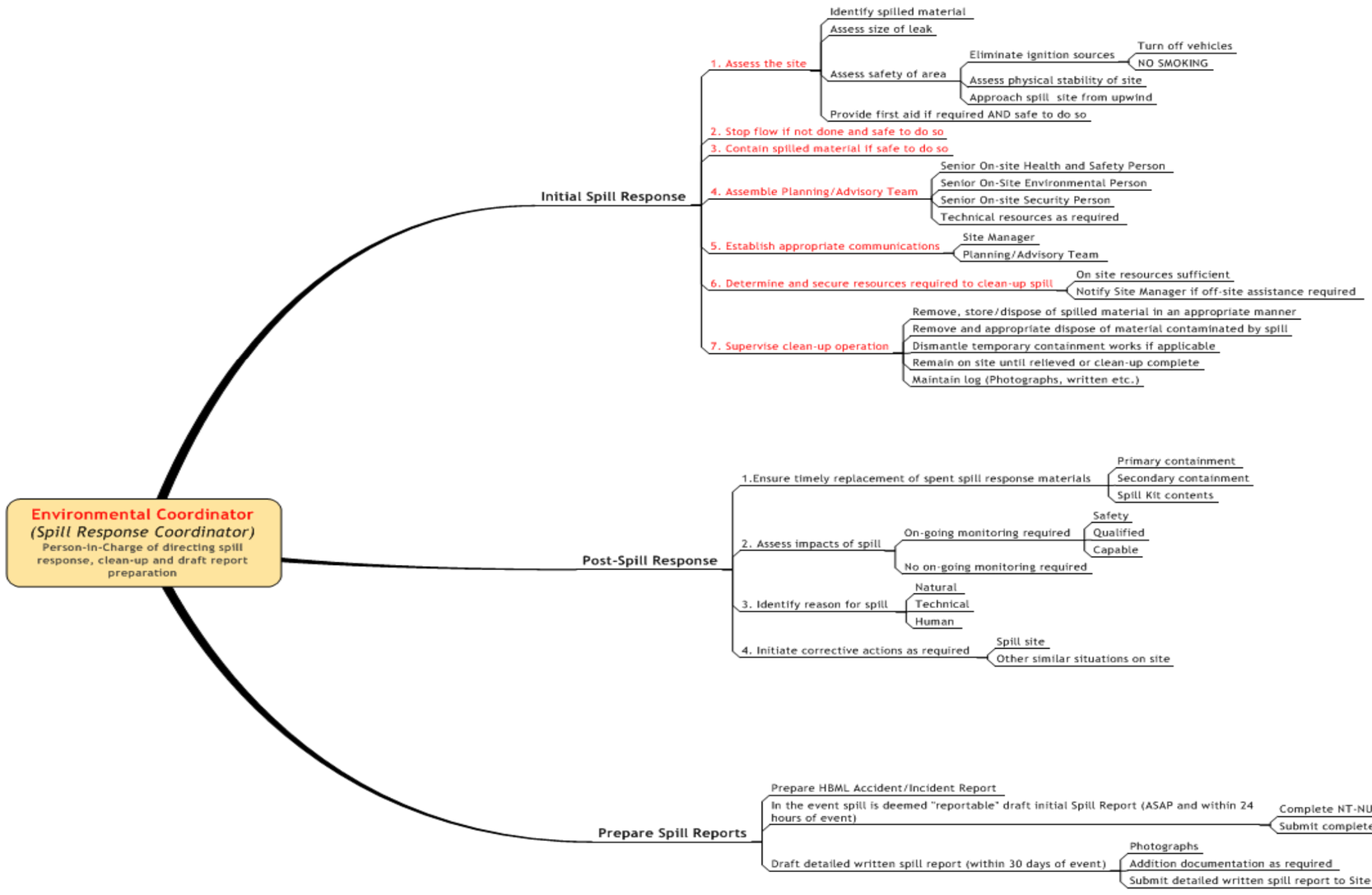
Anyone finding an unanticipated discharge or spill



Hope Bay Mining Ltd. Spill Response Responsibilities

Environmental Coordinator
(Spill Response Coordinator)

Person-in-Charge of directing spill response, clean-up and draft report preparation



Hope Bay Mining Ltd. Spill Response Responsibilities

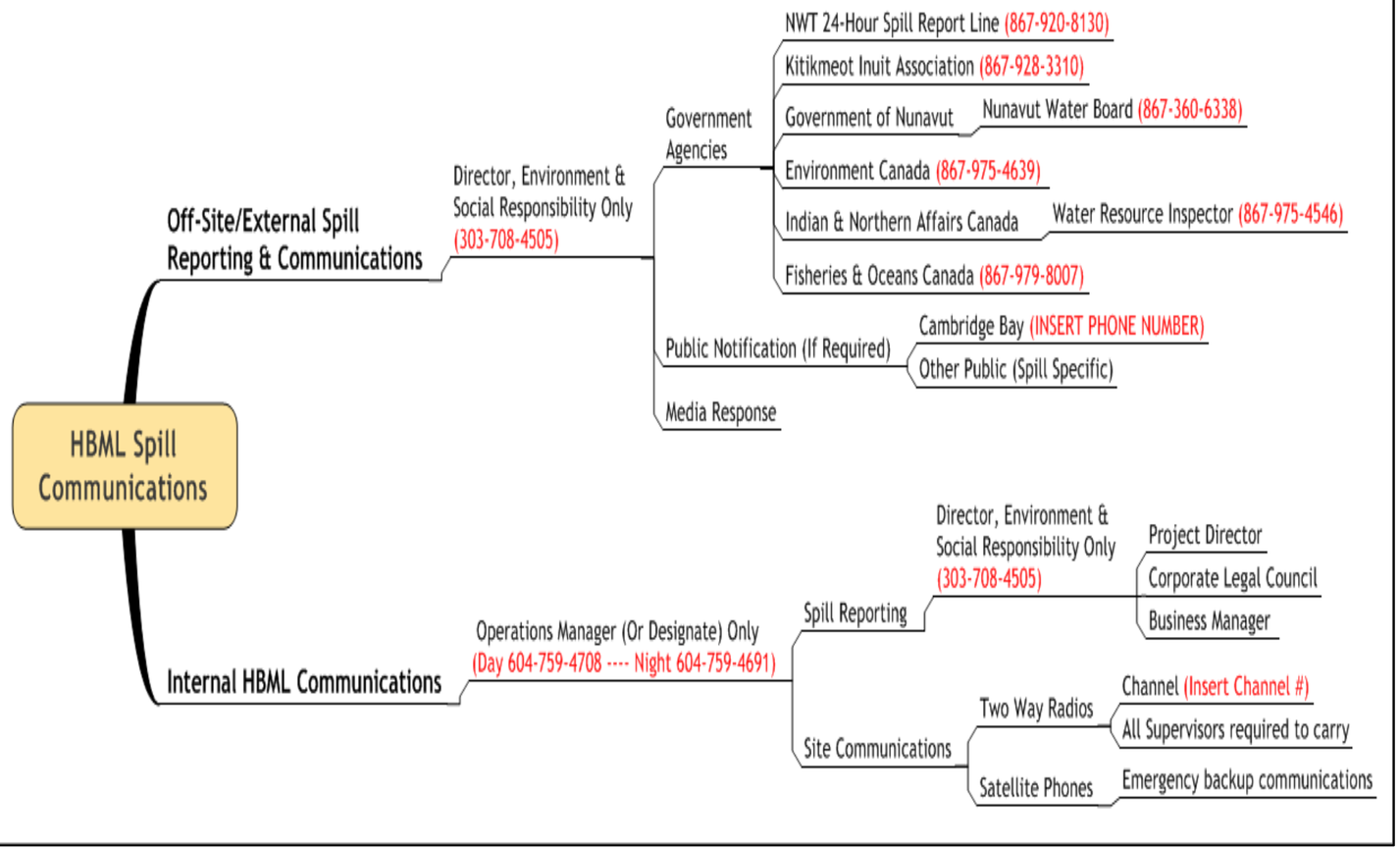
Operations Manager

Operations Manager
(or Designate)
(Day 604-759-4708 ---- Night 604-759-4691)

- **1. Monitor Spill response and clean-up activities**
- **2. Maintain a written log of all communications**
  - External
  - Internal
- **3. Inform and update HBML Management**
  - Initiate Newmount Rapid Response
  - Director, Environment & Social Responsibility (303-708-4505)
    - Project Director
    - Corporate Legal Council
  - Business Manager
- **4. Review completed spill report forms**
  - HBML Accident/Incident Report
  - In the event spill is deemed "reportable" review draft NT-NU initial Spill Report (ASAP and within 24 hours of event)
- **5. In the event spill is deemed "reportable" submit completed NT-NU Spill Report Form (ASAP and within 24 hours of event)**
  - Director, Environment & Social Responsibility (303-708-4505)
    - Spill Reporting
      - NWT 24-Hour Spill Report Line (867-920-8130)
      - Kitikmeot Inuit Association (867-928-3310)
      - Government of Nunavut
      - Nunavut Water Board (867-360-6338)
      - Environment Canada (867-975-4639)
      - Indian & Northern Affairs Canada
      - Water Resource Inspector (867-975-4546)
      - Fisheries & Oceans Canada (867-979-8007)
    - Public Notification (If Required)
      - Cambridge Bay (INSERT PHONE NUMBER)
      - Other Public (Spill Specific)
    - Media Response
- **6. Inspect site**
  - Clean-up
  - Disposal of clean-up material
  - Remediation activities
  - Corrective actions taken
- **7. Review detailed spill report**
  - Environmental Compliance Manager
  - Director, Environment & Social Responsibility
  - Corporate Legal Council
- **8. Submit detailed written spill report (within 30 days of event)**
  - Director, Environment & Social Responsibility
  - Appropriate Agencies/Associations

Hope Bay Mining Ltd.

Spill Response Communications & Reporting SOP



Hope Bay Mining Ltd.

Spill Response - Summary of Responsibilities

Spill Response
Summary of Responsibilities

- **First Responder**
  1. Assess the site
  2. Stop flow if safe to do so
  3. Contain spilled material if safe to do so
  4. Report spill to immediate supervisor or Site General Manager
  5. Secure area
  6. Remain at scene until assistance arrives
- **Environmental Coordinator** *(Spill Response Coordinator)*
  - Initial Spill Response
    1. Assess the site
    2. Stop flow if not done and safe to do so
    3. Contain spilled material if safe to do so
    4. Assemble Planning/Advisor Team
    5. Establish appropriate communications
    6. Determine and secure resources required to clean-up spill
    7. Supervise clean-up operation
  - Post-Spill Response
    1. Ensure timely replacement of spent spill response materials
    2. Assess impacts of spill
    3. Identify reason for spill
    4. Initiate corrective actions as required
  - Prepare Spill Reports
    - Initial Spill Report
    - Detailed written spill report (within 30 days)
- **Operations Manager (or Designate)**
  1. Monitor spill response and clean-up activities
  2. Maintain log of all communications
  3. Inform and update HBML Management
  4. Review completed NT-NU Spill Report Form
  5. Submit completed NT-NU Spill Report Form
  6. Review/Inspect site
  7. Review detailed spill report
  8. Submit detailed written spill report (within 30 days)

Table of Contents

Quick References i

1 Introduction 1
1.1 Reason for Document 1
1.2 Hope Bay Project Operator 8
1.3 Spill Contingency Plan Objectives 8
1.4 Spill Response Resource Inventory 9
1.4.1 On - Site Resources 9
1.4.2 Spill Kit Inspections 12
1.4.3 Off - Site Resources 12
1.5 Spill Contingency Plan Review and Revision 12
1.6 Plan Review and Revision Responsibility 13

2 Applicable Legislation, Licensing and Guidelines 14

3 Project Description 15
3.1 Project Location 15
3.2 Project Operator 15
3.3 Project Setting 16
3.4 Project Activities 19
3.5 Onsite Hazardous Materials 20
3.5.1 Flammable Immiscible Liquids 20
3.5.2 Flammable Compressed Gasses 21
3.5.3 Other Products 21
3.6 Inventory of Fuel Storage Facilities 21
3.7 Potential for Spills 22

4 Spill Response Organization 27
4.1 Summary 27
4.2 Spill Response Organization 28
4.2.1 First Responder 29
4.2.2 Supervisors (All) 31
4.2.3 Environmental Coordinator (Spill Response Coordinator) 31
4.2.4 Spill Response Planning/Advisory Team 34
4.2.5 Operations Manager 35
4.3 Spill Response Communications 36
4.3.1 On - Site Communications 36

5 Spill Response Actions 37
5.1 Fuel Spills on Land 38
5.2 Fuel Spills on Fresh Water 39
5.3 Fuel Spills on Snow 39
5.4 Fuel Spills on Ice 40
5.5 Spills in a Marine Environment 41
5.6 Spill Response in a Marine Environment 42
5.6.1 General Guidelines 42
5.6.2 Response Strategies and Methods 43
5.6.3 Containment and Recovery 43
5.6.4 Shoreline Treatment 46
5.7 Disposal of Materials 48

6 Spill Reporting 49
6.1 Summary 49
6.2 On - Site Communications 50
6.3 Internal HBML Spill Reporting 50
6.4 External Spill Reporting 50
6.5 Reporting to the Public 53

7 Spill Response Training 54

8 Document Control Record 55

List of Tables

Table 1: Hope Bay Project Spill Contingency Plan History of Revisions 13
Table 2: Hope Bay Project Permanent Petroleum Storage Facilities 22
Table 3: Definitions of Sea Conditions 42
Table 4: Open-water Response at Sea or in Costal Waters 43
Table 5: Recommended Initial Treatment 47
Table 6: Reproduction of Schedule B (Spill Reporting Regulations) 51

List of Figures

Figure 1: Hope Bay Project Site Location 2
Figure 2: Roberts Bay Site Layout 3
Figure 3: Doris Camp Site Layout 4
Figure 4: Patch Lake Facilities Site Layout 5
Figure 5: Windy Camp Site Layout 6
Figure 6: Boston Camp Site Layout 7
Figure 7: Barge to Bulk Fuel Tank Transfer SOP 24
Figure 8: Bulk Fuel Transfer SOP 25
Figure 9: Refuelling SOP 26
Figure 10: Spill Response Responsibilities 27
Figure 11: Spill Response Organization 28
Figure 12: First Responder SOP 30
Figure 13: Environmental Coordinator SOP 34
Figure 14: Operations Manager SOP 36
Figure 15: Spill Reporting SOP 49

List of Appendices

Appendix A: Spill Kit Insert
Appendix B: HBML Accident/Incident Report Form
Appendix C: NT-NU Spill Report Form
Appendix D: HBML Rapid Response System

1 Introduction

1.1 Reason for Document

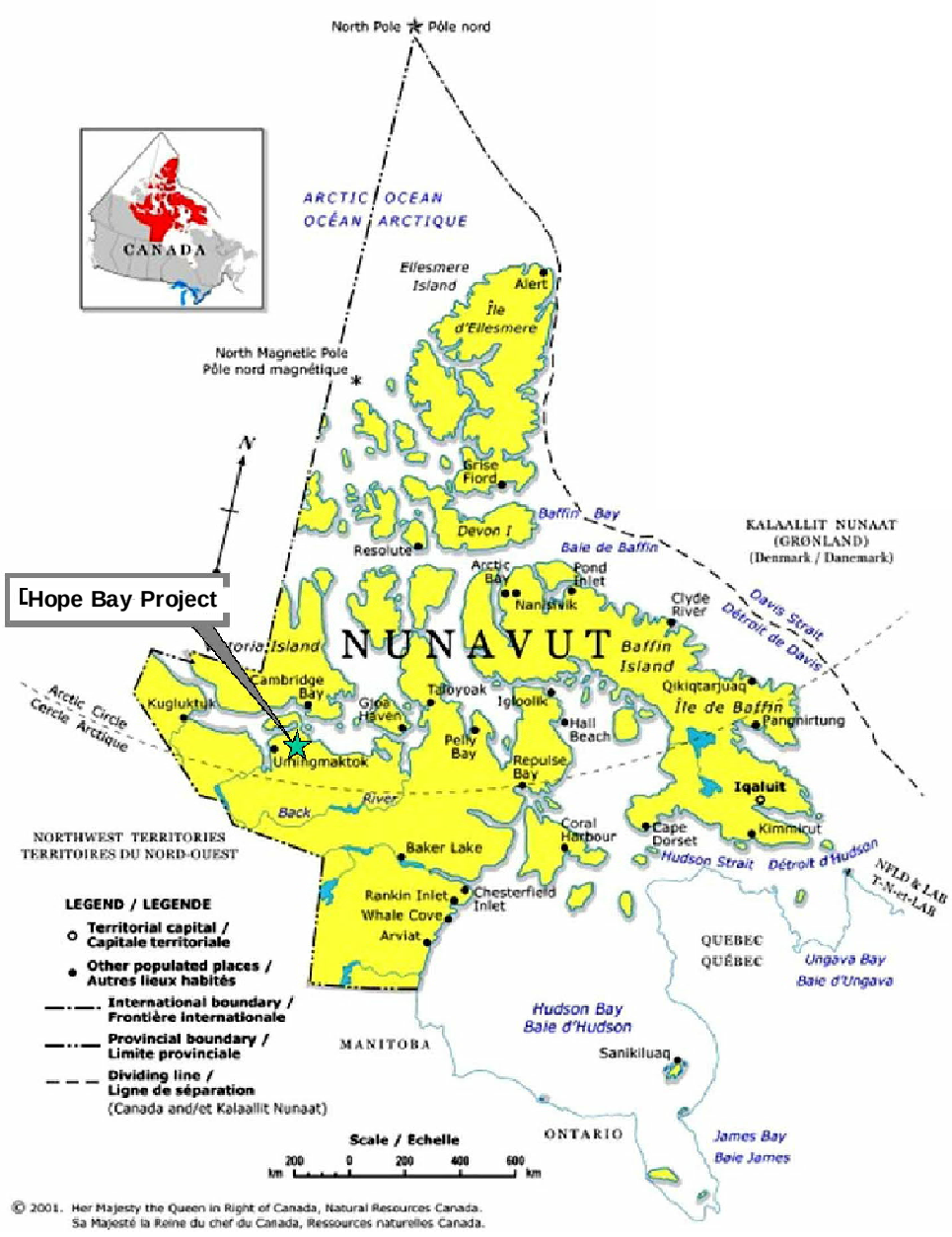
Hope Bay Mining Limited (HBML) is conducting advanced exploration and developing the infrastructure for the Hope Mining Project in Hope Bay, Nunavut, Canada. The Hope Bay Project is located on Inuit Owned Land in the West Kitikmeot region of Nunavut approximately 125 km southwest of Cambridge Bay and 75 km northeast of Umingmaktok (Figure 1). Part of this drilling program and infrastructure development is to ensure the prompt, effective and organized response to an unanticipated discharge or spill of any materials on site.

The Hope Bay mineral exploration rights property comprises an area of 1,078 km^2 and forms a contiguous block that is approximately 80 km long by up to 20 km wide and consists primarily of the Roberts Bay area (Figure 2), the Doris camp (Figure 3), a fuel storage and re-fuelling facility at Patch Lake (Figure 4), the Boston and Windy Camps (Figure 5 and Figure 6). The property is maintained in good standing by Hope Bay Mining Limited of Vancouver, British Columbia.

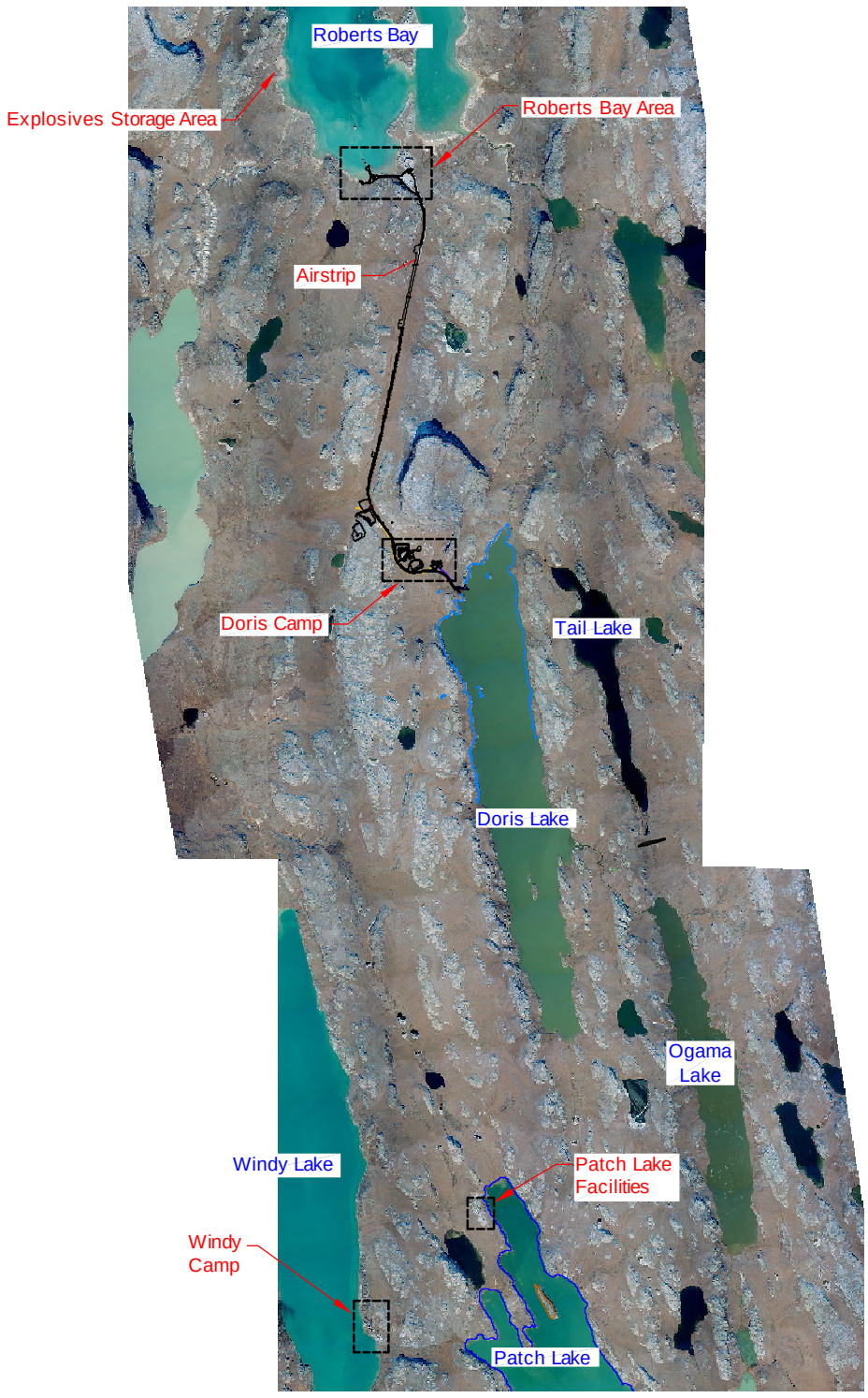
The purpose of this document is to act as a general resource for every employees of the Hope Bay Mining Ltd. Hope Bay Project to enable them to react in an effective and responsible manner to the unanticipated discharge or spill of regulated materials at the Hope Bay Project site (Hope Bay). The plan is intended as a tool to facilitate the immediate and effective handling of any unanticipated discharges or on-site spill of various materials present on the site.

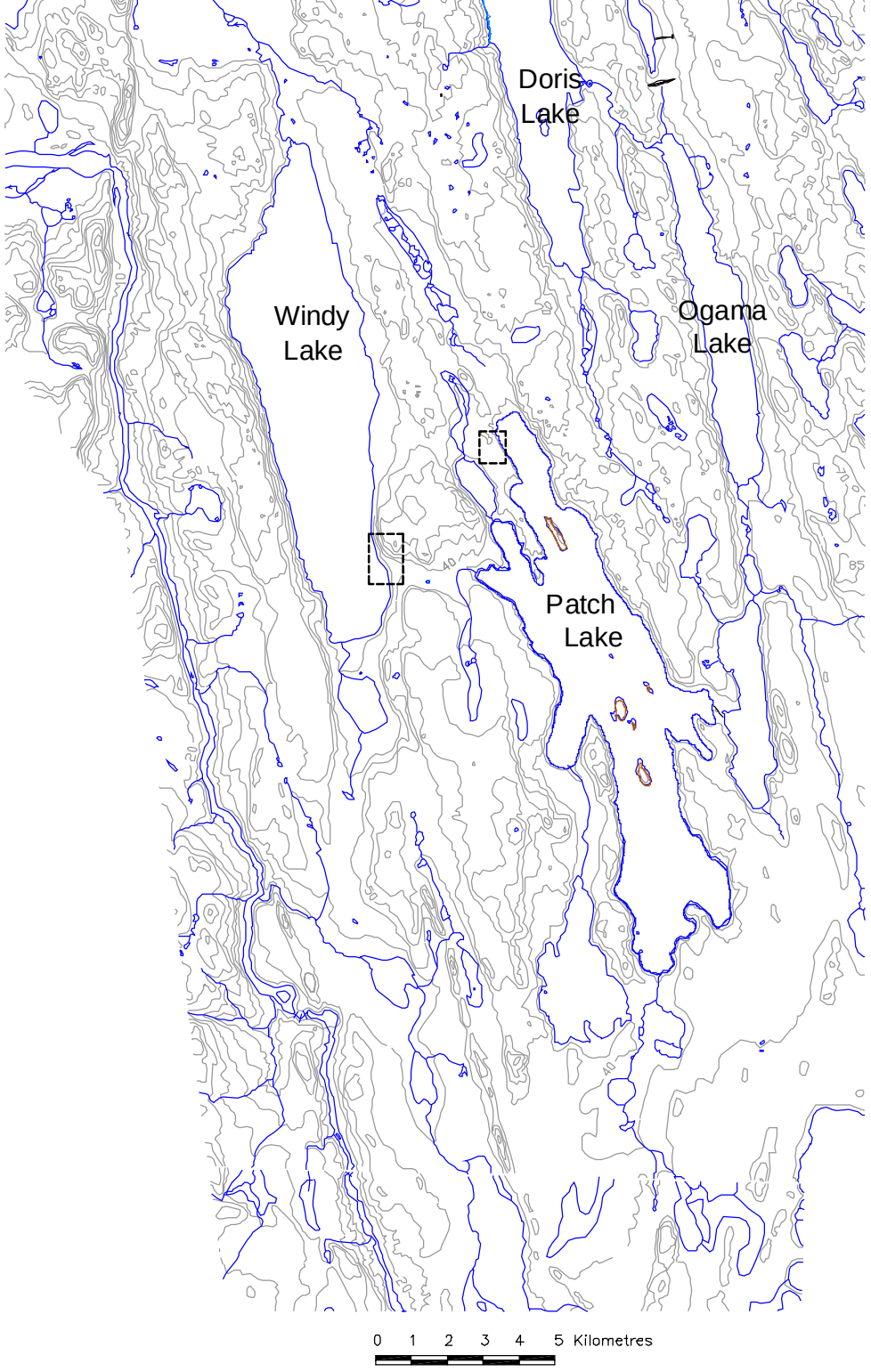
This Hope Bay Project *Spill Contingency Plan* has been prepared by Hope Bay Mining Ltd. in accordance with Water Licence No: 2BE-HOP0712, Water License 2BB-BOS0712 and Water Licence No: 2AM-DOH0713 issued to HBML by the Nunavut Water Board (NWB).

J:\01_SITES\Hope Bay\IACAD\2009 Drawings\Incin Management Plan Overview.dwg



LOCATION MAP





Topographic Information Supplied by BHP World Minerals Inc.
National Topographic Series (NTS) Maps
North American Datum (NAD) 1927

SRK Consulting
Engineers and Scientists
Vancouver

SRK JOB NO.: 1CH008.010-300

FILE NAME: Incin Management Plan Overview.dwg

HOPE BAY MINING LTD.

Hope Bay Project

Spill Contingency Plan

Hope Bay Project Location

DATE:	APPROVED:	FIGURE:
Aug. 2009	MV	1

Tank Farm
5 Million Litres Tank
Fuel Pipe
Fuel Transfer Station
Fuel Store
Fuel Drum Storage
Seacans with Marine Spill Kit
Jetty
Fisheries Compensation
Roberts Bay Offices and Facilities
Beach Laydown Area
Incerator
Nuna Equipment Area
Drilling Equipment
Roberts Bay Laydown Area
Drilling Cold Storage
Cylinder Parts
Nuna Storage Area
Storage Seacans
Genset Shack
Seacan Area
Nuna Equipment Area
Shop Storage Seacans
Storage Seacans & Bbe Inventory Storage
Hydraulic Oil Storage
Oil Containers and Waste Bins
Ammonium Nitrate Storage
Waste Storage Area

LEGEND

- Potential Hydrocarbon Contamination
- Spill Kit Locations
- Proposed Fire Management Kits

0 20 40 60 80 100
Scale in Metres

SRK Consulting
Engineers and Scientists
Vancouver B.C.

SRK JOB NO.: 1CH00B.010-700
FILE NAME: Incin Management Plan.dwg

HOPE BAY MINING LTD

HOPE BAY PROJECT

Spill Contingency Plan

Roberts Bay Site Layout

DATE: Aug. 2009
APPROVED: MV
FIGURE: 2

J:\01_SITES\Hope Bay\MCMD\2009 Drawings\Incin Management Plan.dwg

To Airstrip
(see inset)

Crusher Pad

Camp Unit
Sub-station

Utilidor

Camp

Quarry

Construction Powerhouse

Sewage Treatment Plant
(STP Treatment Chemicals)

Permanent
Gensets

Firewater Tank And Pumphouse

75,000 Litres Capacity
Enviro Tank

Muster Station

Heliport

Fuel Tank

Cookhouse/Rec Room

Cold Storage Building

Till Area

Fuel Bund

Power Supply Gensets

Aviation Fuel

Heliport

Doris Lake

Gen Set
Fuel Tank

Marine Spill Kit Required

Airstrip

Crusher Pad

Airstrip Inset

LEGEND

- Potential Hydrocarbon Contamination
- Spill Kit Locations
- Proposed Fire Management Kits

0 50 100 150 200 250
Scale in Metres

SRK Consulting
Engineers and Scientists
Vancouver B.C.

SRK JOB NO.: 1CH00B.010-700

FILE NAME: Incin Management Plan.dwg

HOPE BAY MINING LIMITED

HOPE BAY PROJECT

Spill Contingency Plan

Doris Camp Site Layout

DATE:	APPROVED:	FIGURE:
Aug, 2009	MV	3

J:\01_Sites\Hope Bay\MCMD\2009 Drawings\Incin Management Plan.dwg

LEGEND

- Potential Hydrocarbon Contamination
- Spill Kit Locations
- Proposed Fire Management Kits

NOTE

Areas with buildings, tents, and store containers will require physical stabilization to repair damage done to tundra, and to remediate permafrost damage.

0 10 20 30 40 50

Scale in Metres

SRK Consulting
Engineers and Scientists
Vancouver B.C.

HOPE BAY MINING LTD

HOPE BAY PROJECT

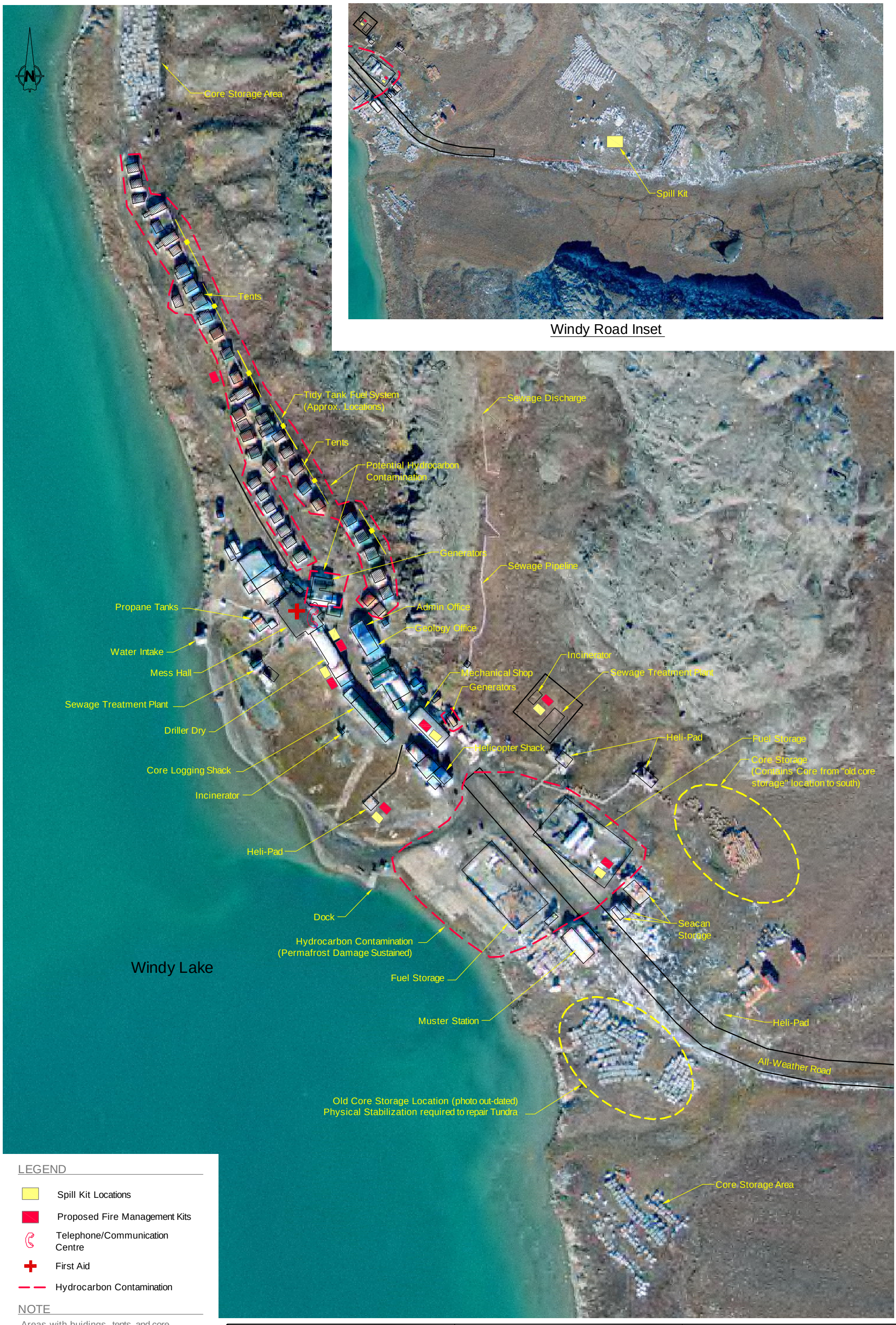
Spill Contingency Plan

Patch Lake Facilities
Site Layout

SRK JOB NO.: 1CH008.010-300			
FILE NAME: Incin Management Plan.dwg	DATE: Aug. 2009	APPROVED: MV	FIGURE: 4

J:\01_SITES\Hope Bay\ACAD\2009 Drawings\Incin Management Plan.dwg

J:\01_SITES\Hope.Bay\IACAD\2009 Drawings\Incin Management Plan.dwg



Windy Road Inset

LEGEND

- Spill Kit Locations
- Proposed Fire Management Kits
- Telephone/Communication Centre
- First Aid
- Hydrocarbon Contamination

NOTE

Areas with buidings, tents, and core storage will require physical stabilization to repair damage done to tundra, and to remediate permafrost damage.

0 10 20 30 40 50

Scale in Metres

SRK Consulting
Engineers and Scientists
Vancouver B.C.

SRK JOB NO.: 1CH008.010-400

FILE NAME: Incin Management Plan.dwg

HOPE BAY MINING LTD

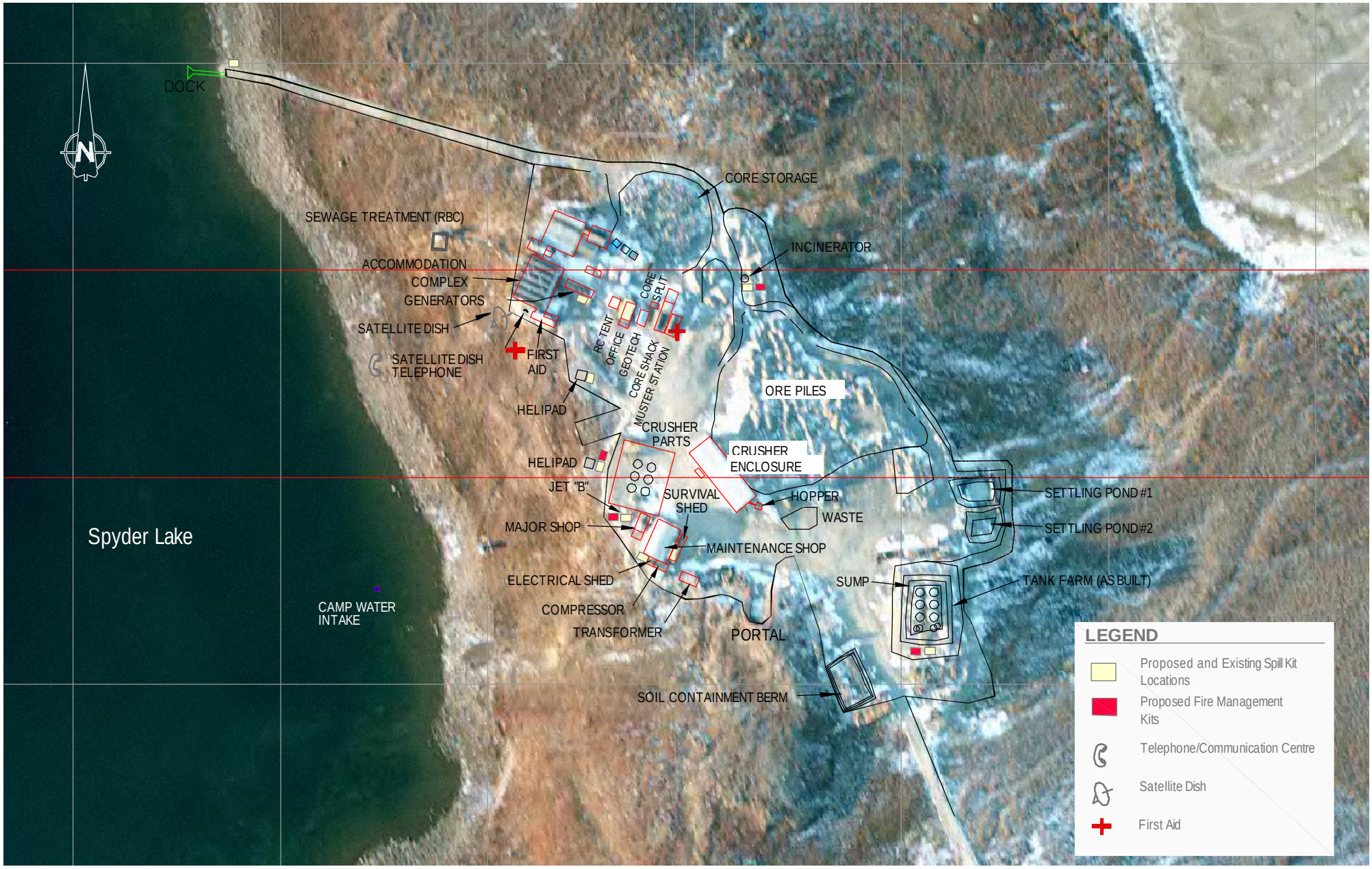
HOPE BAY PROJECT

Spill Contingency Plan

Windy Camp Site Layout

DATE:	APPROVED:	FIGURE:
Aug. 2009	MV	5

J:\01_SITES\Hope_Bay\IACAD\2009 Drawings\Incin Management Plan-Boston.dwg



0 20 40 60 80 100

Scale in Metres

SRK Consulting
Engineers and Scientists
Vancouver B.C.

SRK JOB NO.: 1CH008.010-300

FILE NAME: Incin Management Plan-Boston.dwg

HOPE BAY MINING LTD

HOPE BAY PROJECT

Spill Contingency Plan

Boston Camp
Site Layout

DATE:	APPROVED:	FIGURE:
Aug. 2009	MV	6

1.2 Hope Bay Project Operator

The Hope Bay Project is owned and operated by:

Project Operator: Hope Bay Mining Ltd.
Suite 300 -899 Harbourside Drive
North Vancouver, B.C. V7P 3S1

Parent Company: Newmont Mining Corporation
1700 Lincoln Street
Denver, Colorado
USA 80203

1.3 Spill Contingency Plan Objectives

This *Hope Bay Spill Contingency Plan* (Plan) is intended to provide all Hope Bay Project operating staff with a summary of spill response procedures for the sites. It also provides a summary of the same to the regulatory agencies and to the land owners who have regulatory interest over the site, its facilities and operations.

In general terms, the principles of this *Spill Contingency Plan* are to insure that:

- Human life is protected and the potential for injury is minimized to the extent possible
- All adverse environmental impacts are kept to a minimum
- Resources are used effectively and efficiently
- All required corporate and regulatory reporting is completed on time and in the prescribed manner.

The focus of this Spill Contingency Plan is to provide:

- A framework to be followed to ensure that accountability for the performance of the spill response activities are defined and communicated to site staff before an event occurs
- A clear set of procedures for every employee should he/she identify an unanticipated discharge or spill (i.e. First Responder procedures)
- A clear chain of command, contacts and reporting procedures to be followed for all responses to spills
- A defined list of responsibilities to be followed in conducting spill clean up activities and ensure that the list is communicated to site staff before an event occur

- Information on available resources and potential operational hazards/risks that may be encountered during spill response activities
- Reporting and record keeping requirements for spills and spill response activities to facilitate tracking of response progress, incident investigation and mitigation planning after the event
- A defined method to review all spill events and implement initiatives to reduce repeat occurrences
- A plan to ensure the regular review and update of the *Hope Bay Project Spill Contingency Plan* and to complete two annual inspection of all spill kit (location and inventory) and to inventory all on-site hazardous materials.

Prompt, effective and organized response to an unanticipated discharge or spill by the company and all site personnel will enhance the health and safety of all employees, serve to minimize, to the extent possible, the potential adverse environmental impacts resulting from such an event and ensure effective communication with the appropriate regulatory agencies and the general public.

1.4 Spill Response Resource Inventory

This following section provides a description of the resources available on the Hope Bay Project site for responding to spills.

1.4.1 On - Site Resources

Spill Response Kits (Spill Kits) are in place at the following locations on the Hope Bay Project area:

- Robert's Bay jetty area
- Robert's Bay 5M litter tank
- Robert's Bay Fuel transfer facility
- Roberts's Bay incinerator
- Nuna maintenance shop
- Doris Airstrip
- Doris power generating facility
- Doris freshwater intake
- Doris helicopter pads
- Doris maintenance sho
- Doris float plane landing dock area
- Patch Lake fuel storage area and refuelling station
- Boston incinerator
- Boston maintenance shop

- Boston winter airstrip
- Boston power generating facility
- Boston freshwater intake
- Boston float plane landing dock area
- All refuelling stations (regardless of location)
- All fuel storage tanks over 410 litters.

Each of these spill kit is clearly labelled and contains, but may not necessarily be limited to:

- 1 roll absorbent
- 2 plug and dyke kits
- 1 – 3 m x 4 m tarpaulin
- 2 pairs of disposable coveralls
- 4 mini booms
- 25 spill pads
- 2 pair of neoprene gloves [i.e. POL (petroleum/oil/lubricants) resistant]
- 2 sets of splash proof POL resistant goggles
- 1 collapsible shovel
- 10 disposable waste bags and ties
- A copy of the Spill Kit First Responder Insert (see Appendix A).

The Hope Bay Project also maintains separate, marine focused spill response equipment within a moveable container (Seacan) which is designed to be located in close proximity to the jetty during the unloading of the fuel barge (and on the perimeter of the bulk fuel storage tank containment at all other times). That spill kit is composed of, but may not necessarily be limited to, the following:

- 450 feet of 24" Solid Floatation Boom
- 34 lb Grapnel Anchors
- 4 Norwegian Anchor Buoys
- Anchor lines
- 150 feet Towline
- 1TDS-118 Drum Skimmer
- 1 P10E Power Pack
- 1 Pump
- 175 L Drum Response Kits c/w lids

- 4 pairs of disposable coveralls (i.e.Tyvek suits)
- 4 pairs POL (petroleum/oil/lubricants) resistant gloves
- 4 pairs POL resistant goggles
- Toolbox c/w assorted tools
- 2 - 6.5 Gallon (25 L) containers c/w lids
- 300 foot Nylon rope (3/8)
- Bags of Oclansorb Peat Moss or crushed corn cobs
- Bundles of Oil Sorbent Pads
- 20 Oil Sorbent Mini Booms
- 2 Rolls of Geotextile (12 ft length)
- 12 Boxes of Sorb Sox
- A 20 foot Response boat, c/w 80 HP outboard motor
- An 8 foot Zodiac.

All fuel transfer vehicles on site are also equipped with a “trucker” spill kit designed to absorb up to approximately 10 gallons of oil, coolants, solvents or water as well as other hazardous fluids.

Each exploration drilling rig will maintain a spill kit containing, but not necessarily limited to, a minimum of:

- 1 roll absorbent
- 2 plug and dyke kits
- 1 3m x 4m tarpaulin
- 4 mini booms
- 25 spill pads
- 2 pair of neoprene gloves [i.e. POL (petroleum/oil/lubricants) resistant]
- 2 sets of splash proof POL resistant goggles
- 10 disposable waste bags and ties
- A copy of the Spill Kit First Responder Insert (see Appendix A).

In addition, the Hope Bay Project site maintains a significant on-site inventory of roll, pad and map absorbents, plug and dyke kits, mini booms, absorbent socks, peat moss, crushed corn cobs, coconut mats, hand tools, and various heavy equipment (including two trucks equipped with vacuum pumps and tanks) all of which can be easily mobilized to respond an unanticipated discharge or spill.

1.4.2 Spill Kit Inspections

All Spill Kits will be inspected at least twice per calendar year to ensure that each kit is appropriately located, sound and contains the requisite material in a usable condition. The responsibility for the conduct of such inspections will be vested in the Senior Environmental Coordinator on site and the results of each inspection will be provided to the Director, Environmental & Social Responsibility (ESR) and the Manager, Compliance ESR.

1.4.3 Off - Site Resources

The Hope Bay Project is a remote location that is essentially only accessible by plane. As the most effective mitigation of a spill condition is rapid and effective mobilization, the Hope Bay Project Spill Contingency Plan does not rely on off-site resources to successfully respond to anticipated upset conditions. The Plan has been developed and the resources required to respond to spills have been positioned on site, therefore it is anticipated that the Hope Bay Project and its on-site contractors have sufficient resources and personnel to respond to all types/sizes of spills that could potentially occur on site.

Notwithstanding this, off –site resources are available in the unlikely event that they are required. During the transport and transfer of material from the barge to site, Northern Transportation Company Ltd. (the major Hope Bay Project shipping contractor) will provide additional spill response capability as well as additional spill response materials and experience.

All other contractors employed with the Hope Bay Project are required to maintain an up-to-date Spill Response Plan and spill response materials relevant to their activities. These resources could potentially be mobilized in the unlikely event that off-site resources are required to respond to a spill on the Hope Bay Project site. All such resources can be notified by phone however, would likely have to be mobilized to site by plane.

1.5 Spill Contingency Plan Review and Revision

This *Hope Bay Spill Contingency Plan* is considered an “active” document. It is anticipated that the plan will undergo an annual review and be revised as necessary as the project proceeds. The level of detail within the document will continue to increase with subsequent revisions as each revision will incorporate the lessons learned at each stage of the process and will reflect input from the Kitikmeot Inuit Association (KIA), as representative of the land owner (the Inuit beneficiaries of the Nunavut Land Claims), local communities, Nunavut Tunngavik Incorporated whom, along with INAC, hold subsurface mineral rights in the Hope Bay Belt, and other stakeholders who have an interest in how the Hope Bay Project is ultimately operated.

Each revision will be recorded in Table 1.

Table 1: Hope Bay Project Spill Contingency Plan History of Revisions

Revision Number	Revision Date	Description of Revisions	Revised By	Approved By
1	August 2009	Hope Bay Project Spill Contingency Plan, August 2009	SRK Consulting	

1.6 Plan Review and Revision Responsibility

The *Hope Bay Spill Contingency Plan* will be reviewed at least once per calendar year and revised as required. Responsibility for the regular review and updating of the Plan is vested in the Director, Environmental & Social Responsibility (ESR), Manager, Compliance ESR, and the on-site Senior Environmental Coordinator. Revisions will be made to the procedures where necessary to reflect changes in site conditions and any new applicable legislation or regulations. The document will then be submitted from review and approval by the Project Director and Director, Environment & Social responsibility of Hope Bay Mining Ltd. and, once approved, all relevant personnel will be notified in the event that the Plan is revised. If a revision is necessary the revised Spill Contingency Plan all relevant personnel on site will be provided with at least on hard copy of the revised document.

2 Applicable Legislation, Licensing and Guidelines

Part I of Water Licence No: 2AM-DOH0713 and Part H of Water Licence No: 2BE-HOP0712 and 2BB-BOS0712 issued to HBML by the Nunavut Water Board (NWB) specify that the operator shall prepare and provide a Spill Contingency Plan in "accordance with the Spill Contingency Planning and Reporting Regulations developed under Section 34 the Environmental Protection Act *(Nunavut).* In Water Licence No: 2BE-HOP0712, "Spill Contingency Plan" is defined as "a Plan developed to deal with unforeseen petroleum and hazardous materials events that may occur during operations conducted under the license'. A single *Hope Bay Project Spill Contingency Plan* has been developed to address the requirements of Water Licence No: 2AM-DOH0713, 2BE-HOP0712 and 2BB-BOS0712 in order to ensure that the Hope Bay Project has a consistent spill response framework that ensure all site personnel understand and can effectively and efficiently respond to a spill of petroleum products and/or hazardous materials regardless of where on the Hope Bay Project site they are encountered.

This *Hope Bay Project Spill Contingency Plan* has been developed to meet the requirements of Part I in the Type A Water Licence No: 2AMDOH0713 and Part H of the both Water License No. 2BE-HOP0712 and 2BB-BOS0712. It has also been based on the specifications provided in the *Consolidation of Regulations R-068-93 Spill Contingency Planning and Reporting Regulations* developed under the Environmental Protection Act *(Nunavut).* In addition, the Plan was prepared to meet the specifications provided in the *Guidelines for Spill Contingency Planning*, prepared by Water Resource Division, Indian and Northern Affairs Canada (April 2007).

3 Project Description

3.1 Project Location

The Hope Bay Project is currently an advanced exploration project located on Inuit Owned Land in the West Kitikmeot region of Nunavut approximately 125 km southwest of Cambridge Bay and 75 km northeast of Umingmaktok (Figure 1). The various elements of the Hope Bay Project are centred at approximately N 68^0 09' and W 106^0 40' and extend from the head of Roberts Bay (an extension of Melville Sound) in the north to the Boston site located approximately 70 km to the south (Figure 1).

3.2 Project Operator

The Hope Bay Project is owned and operated by:

Project Operator: Hope Mining Ltd.
Suite 300 -899 Harbourside Drive
North Vancouver, B.C. V7P 3S1

Parent Company: Newmont Mining Corporation
1700 Lincoln Street
Denver, Colorado
USA 80203

Hope Bay Project Contacts:

Corporate: **Mr. Chris Hanks**
Director Environmental and Social Responsibility
Hope Bay Mining Ltd.
Tel. 303 708 4505

&/or

Mr. Bill Patterson, Manager
Compliance, Environmental and Social Responsibility
Hope Bay Mining Ltd.
Tel. 303 708 4505

Hope Bay Site: **Mr. Fred Penner**
Operations Manager
Hope Bay Mining Ltd.
Tel. 604 985 2572 / Fax 604 980 0731

&/or

Mr. Glen Winfor
Operations Manager
Hope Bay Mining Ltd.
Tel. 604 985 2572 / Fax 604 980 0731

3.3 Project Setting

The Hope Bay mineral exploration rights property comprises an area of 1,078 km^2 and forms a contiguous block that is approximately 80 km long by up to 20 km wide. The property is maintained in good standing by Hope Bay Mining Limited of Vancouver, British Columbia.

The Hope Bay Project and all components of the supporting infrastructure, with the exception of the jetty, have been constructed and are being operated on Inuit owned land. The jetty, which extends into Roberts Bay, is located on the foreshore Crown Land.

The Hope Bay Project is a remote site in an Arctic setting. Pre-development land use can be classified as wildlife habitat with occasional use by Inuit people for subsistence hunting and fishing. HBML's closure objectives are to return the land after reclamation has been completed to healthy, self-sustaining wildlife habitat suitable for use by Inuit people for subsistence hunting and fishing.

Climate

The Hope Bay Belt has a low arctic eco-climate with a mean annual temperature or –12.1°C with winter (October to May) and summer (June to September) mean daily temperature ranges of - 50°C to +11°C and -14°C to +30°C, respectively. The mean annual precipitation ranges from 94 mm to 207.3 mm. Annual lake evaporation (typically occurring between June and September) is estimated to be 220 mm. The average monthly air temperature is typically above 0°C between June and September with the peak in July, and below freezing between October and May with the coldest temperatures usually occurring in February. The mean annual precipitation adjusted for under-catch is approximately 207 mm with 41% occurring as rain between May and October and 59% as snow through the remainder of the year.

Surficial Geology and Permafrost Conditions

The Project area is coastal lowland with numerous fresh water lakes and ponds separated by glacial landforms and parallel running geological intrusions of diabase dykes and sills. The drainage basins are generally long and narrow and predominantly oriented along the north-south axis.

The local topography ranges from sea level at Roberts Bay to 158 m at the summit of Doris mesa, 3 km inland.

Bedrock ridges, oriented north-south parallel with the dominant strike of bedrock units, show the erosive effects of the northward flowing Pleistocene (Keewatin Lobe) continental glacier ice over 10,000 years ago. The surficial active layer over continuous permafrost is approximately 2 m thick. Drill core results indicate soils below the active layer contain interstitial and segregated ground ice. Most of the soils are of marine origin and include clay, silt and some sand. Surface materials include frost-churned mineral and organic soils mantled by a thin cover of tundra vegetation. Patterned ground masks the underlying soils. Small, frost-heaved clay-silt polygons are common. Linear frost cracks occur in raised marine spit deposits. Ice wedge polygons are common. The entire area lies below the post-glacial marine limit of 200 masl. Pleistocene deposits, including till, are buried beneath Holocene marine sediments deposited during the post-glacial marine emergence. Some glacial deposits show evidence of alterations by marine wave action.

Continuous permafrost extends to -560 m. (Heginbottom *et. al*., 1995). Ground temperature measurements in the Project area indicate an active zone thickness ranging between 1.5 to 2.6 m and the depth of zero annual amplitude varying between 11 and 17 m (Golder 2001; EBA 1996). The geothermal gradient measured at the Boston Camp is approximately $18_{o}C\ km^{-1}$, which also indicates a depth of continuous permafrost of approximately –560 m.

Groundwater movement will only occur in the shallow active layer (to a depth of between 1.5 to 2.6 m) during its seasonal thaw period. The permafrost underlying the area is generally impervious to groundwater movements.

Aquatic Ecosystems

The Project area drains to the North into the Arctic Ocean at Roberts Bay. Peak flows typically occur in June during snowmelt. A second smaller peak may occur from rainfall in late August or early September. The streams in the study area are usually frozen with negligible flow from November until May.

The lakes in the area are soft water lakes with neutral to slightly acid pH and low to moderate acid sensitivity. Total phosphorous levels were low, indicating oligotrophic to mesotrophic conditions. Chloride, sodium, and potassium concentrations were elevated compared to typical lakes in the Slave Structural Province. Some metal levels (*i.e*., total aluminum, iron, copper, cadmium, chromium, lead and manganese) in certain lakes exceed Canadian Water Quality Guidelines (CWQG) on a seasonal basis. Metal concentrations were generally representative of lakes in undisturbed northern regions. In summer, the lakes were generally well mixed. Wind likely played an important role in maintaining well-mixed conditions. In shallow lakes, wind appeared to cause complete lake turnover. Winter data generally indicated a shallow upper layer of water at or near 0°C, with constant temperatures, not exceeding 2 to 3°C, throughout the remaining water column. The lakes were

typically well aerated during the summer; depressed dissolved oxygen (DO) concentrations were recorded near-bottom in winter.

Marine habitat characterization along the shoreline of Roberts Bay was mapped (based on aerial observations). The southern shoreline around the mouth of Glenn and Little Roberts outflows was classified as good to excellent habitat for andromous fish, such as Arctic char.

The Roberts Bay baseline data indicated a thermally stratified and well aerated water column in shallow water during summer, temperatures near 9^0C and DO concentrations greater than 11 mg/L. Turbidity and total suspended solids (TSS) levels were low during summer (1.4 NTU and 11 mg/L, respectively). Most median total metal concentrations in Roberts Bay were below detection limits and below the CWQG; exceptions were cadmium and chromium (0.0035 and 0.0026 mg/L, respectively).

Vegetation

Vegetation in the Project area is characteristic of sub-arctic tundra vegetation. Three ecosystem units dominate the area: the ocean shoreline association; lowland ecosystems; and the rock outcrop and upland ecosystems. Several plant communities make up each of these ecosystems. Plant species identified include 19 shrubs, 92 herbs, 18 grasses, 32 sedges and rushes, 21 mosses and 8 species and/or genera of lichen. Inuit traditionally use many local plant species and understand the relationship between plants and caribou habitat requirements including the early showing of plants in snow free areas and the importance of such areas to caribou calving locations in the region. None of the local plants identified during the course of baseline studies are designated as endangered or threatened (COSEWIC, 2004).

Land & Water Use

The Hope Bay Project is situated almost entirely on Inuit owned land administered by the KIA with minerals development authority vested within Nunavut Tunngavik Inc. (NTI). Mineral rights are also held by the Crown on select areas of the Hope Bay Belt, which include Boston, part of Windy Lake Camp, the Madrid exploration area and the drill shop.

The Hope Bay Project is a remote site in an Arctic setting. Pre-development land use can be classified as wildlife habitat with occasional use by Inuit people for subsistence hunting and fishing.

Protected Areas

There are no protected areas in, or adjacent to the Project area. The closest designated land use restriction is the Queen Maud Gulf Bird Sanctuary located approximately 40 km east of the Hope Bay Belt.

Archaeological/Special Sites

The West Kitikmeot has a diversity of archaeological and historic resources, and such resources comprise an important aspect of Inuit culture, spirituality and perspectives with respect to relationships with the land. HBML has completed comprehensive baseline surveys for historic and cultural resources in the Project area and has identified over 100 sites with some being in close proximity to Project features.

3.4 Project Activities

The Hope Bay Project is currently an advance mineral exploration project primarily consisting of exploration drilling at various locations within the Project area. The Project includes the Doris Camp located at approximate N 68^{o} 08.298' W 106^{0} 36.612' which was constructed in 2008 and designed to house a maximum of 160 people, as well as the necessary infrastructure to support the camp and the exploration drilling activities currently underway. The major components of this infrastructure include:

- The Roberts Bay jetty to facilitate supply barge loading and unloading
- The Roberts Bay Lay down area
- The Roberts Bay bulk fuel storage located within a purpose built secondary containment facility
- Roberts Bay re-fuelling facility
- Nuna Logistics Inc. maintenance facilities and generator
- A Westland Model CY 100-CA-D-O incinerator
- A gravel airstrip integrated with the road between Roberts Bay and Doris camp
- Crusher and aggregate storage area
- The Doris Camp and generator
- Doris Sewage treatment facility
- Doris Fuel storage and fuelling station
- Doris Helicopter-Pads
- Doris fresh water intake
- A number of functional support buildings at the site of the Doris camp.

In addition, the Hope Bay Project includes the Boston Camp located at approximate N 67^{o} 39.454' W 106^{0} 23.093'and a fuel storage and re-fuelling facility at Patch Lake located at approximately N 68^{o} 04.419' W 106^{0} 35.386'.

The Boston Camp site is currently in care and maintenance but is scheduled for re-opening in 2010 and consists of a camp constructed to house a maximum of 100 people, as well as the necessary

infrastructure to support the camp and the exploration drilling activities in the area. The major components of this infrastructure include:

- The Boston Camp and generator
- Boston Sewage treatment facility
- Boston fuel storage and fuelling station
- Boston fresh water intake
- A contaminated soils facility
- A number of functional support buildings at the site.

The Patch Lake facility consists of a total of six fuel storage tanks housed within a purpose built secondary containment facility.

The Hope Bay Project also includes a second remote exploration camp; the Windy Camp located at approximate N 68^{o} 03.715' W 106^{0} 37.109'. This camp is currently not inhabited and is under "care and maintenance" with regular inspections conducted of each by Hope Bay Project personnel. Although the site does have petroleum fuel storage capabilities and a limited amount of hazardous materials on site, the volumes of both are considered minimal as the site is not active. All residual materials will be removed from this site during its decommissioning, however, notwithstanding this, the Hope Bay Spill Contingency Plan is considered applicable and appropriate for application at the inactive site currently under "care and maintenance".

3.5 Onsite Hazardous Materials

The most prevalent hazardous materials on the Hope Bay Project site are petroleum derived materials. The petroleum derived materials included in this Plan can generally be divided into two categories:

1. Flammable immiscible liquids
2. Flammable compressed gases.

3.5.1 Flammable Immiscible Liquids

Flammable immiscible liquids are all hydrocarbon-based and will ignite under certain conditions. Gasoline and aviation fuel pose the greatest fire (and safety) hazard and usually cannot be recovered when spilled on water. The remaining materials generally do not pose a hazard at ambient temperatures.

All of the hydrocarbon-based materials are insoluble, float unless mixed into the water column and can be recovered when safety allows. They are:

- Gasoline Low Flash Point (burns easily)
- Jet B

- P50 Diesel Fuel
- Lube Oil with a high flash point
- Waste Oil.

3.5.2 Flammable Compressed Gasses

Propane, acetylene and oxygen are the flammable gases common to the Hope Bay Project site. Generally these gases are:

- Usually highly explosive
- May be heavier than air and therefore concentrate in low lying locations
- May be lighter than air and highly noxious or toxic.

3.5.3 Other Products

Because of the nature of the exploration program, there are relatively small amounts (compared to the volume of hydrocarbons on site) chemicals and other reagents that are employed in the drilling process and other site activities. These include:

- Sodium chloride and calcium chloride
- Explosives (ammonium nitrate fertilizer, emulsions and high explosive (stick Powder))
- Sewage treatment plant chemicals (Sodium Hypochlorite Solution/NaCIO, Oxalic Acid $(COOH)^2$ and Citric Acid/$HOOCCH_2C(OH)(COOH)CH_2COOH$ in small volumes
- Domestic sewage
- Petroleum contaminated soil.

Product specific Material Data Safety Sheets (MSDS) and associated spill response procedures are available on site and available for regulatory review.

3.6 Inventory of Fuel Storage Facilities

Table 2 provides a summary of all petroleum storage tanks currently “active” on the Hope Bay Project sites at Robert’s Bay, the Crusher facility, Doris Camp, Patch Lake and the Boston Camp. All of the tanks are above ground and all contain diesel fuel.

Table 2: Hope Bay Project Permanent Petroleum Storage Facilities

Location	Co-ordinates	Type of Facility	Tank Capacity (L)
Robert's Bay	N68º10.594' W106º 36.997'	Storage/Dispensing	5,000,000
Q2- Crusher	N68º08.558' W106º 37.430'	Storage	22,500
Doris Camp	N68º08.244' W106º 36.748'	Storage/Fueling	75,000
Doris Generator	N68º08.247' W106º 36.824'	Storage	3,720
Patch Lake # 6	N68º 04.407' W106º 35.441'	Storage/Fueling	70,000
Patch Lake #5	N68º 04.407' W106º 35.441'	Storage/Fueling	70,000
Patch Lake #4	N68º 04.407' W106º 35.441'	Storage/Fueling	75,000
Patch Lake #3	N68º 04.407' W106º 35.441'	Storage/Fueling	50,000
Patch Lake #2	N68º 04.407' W106º 35.441'	Storage/Fueling	75,000
Patch Lake #1	N68º 04.407' W106º 35.441'	Storage/Fueling	70,000
Boston #1	N 67º 39.444' W 106º 23.008'	Storage/Fueling	50,000
Boston #2	N 67º 39.444' W 106º 23.008'	Storage/Fueling	50,000
Boston #3	N 67º 39.444' W 106º 23.008'	Storage/Fueling	80,000
Boston #4	N 67º 39.444' W 106º 23.008'	Storage/Fueling	80,000
Boston #5	N 67º 39.444' W 106º 23.008'	Storage/Fueling	80,000
Boston #6	N 67º 39.444' W 106º 23.008'	Storage/Fueling	80,000
Boston #7	N 67º 39.444' W 106º 23.008'	Storage/Fueling	80,000
Boston #8	N 67º 39.444' W 106º 23.008'	Storage/Fueling	80,000

The Windy Camp, which is in "care and maintenance" mode, currently has a total of 5 "Tidy Tanks" on site, each with its own self contained secondary containment built in. Although each tank has a maximum capacity of 1240 litres, because the site is in care and maintenance, each tank has been emptied to less than 50% and the fuel retained on site for emergency heating should it be required.

The Boston Camp site, which is currently in care and maintenance but is scheduled for re-opening in 2010, has a fuel farm consisting of bulk fuel storage tanks located within a lined secondary containment facility. When the site is in care and maintenance, each tank has been emptied to less than 50% with the remaining fuel retained on site for emergency use should it be required.

The Hope Bay Project sites also contains numerous 205 litre steel barrels largely containing Jet B fuel (or remnants of emptied barrels) for the helicopters used to transport personnel and materials to and from various areas and exploration drill sites. Oil and waste (used) oil is also stored in 205 litre barrels on site.

3.7 Potential for Spills

Based on a review of the hazardous materials management at the Hope Bay Project using a failure mode and effects analysis framework, the most significant potential for spills on the site occurs during the three separate stages of petroleum fuel management activities. These are:

1. The transfer of fuel (primarily diesel) from the transport barge to the 5M litre bulk storage tank at Robert's Bay

2. The transfer of fuel (primarily diesel) from the bulk tank to transport trucks and from the trucks to on-site storage tanks
3. The refuelling of mobile equipment.

In order to reduce the potential of spills, all fuel storage tanks, piping and transfer vehicles are inspected on a regular basis. In addition, Figure 7, Figure 8 and Figure 9 provide a summary of the Fuel Handling and Spill Response Standard Operating Procedures (SOPs) for the Hope Bay Project site. These SOPs provide actions designed to minimize the potential for spills to occur during fuel handling, as well as to clearly identifying actions to be undertaken in the event that a spill of fuel does occur during any of the three scenarios identified.

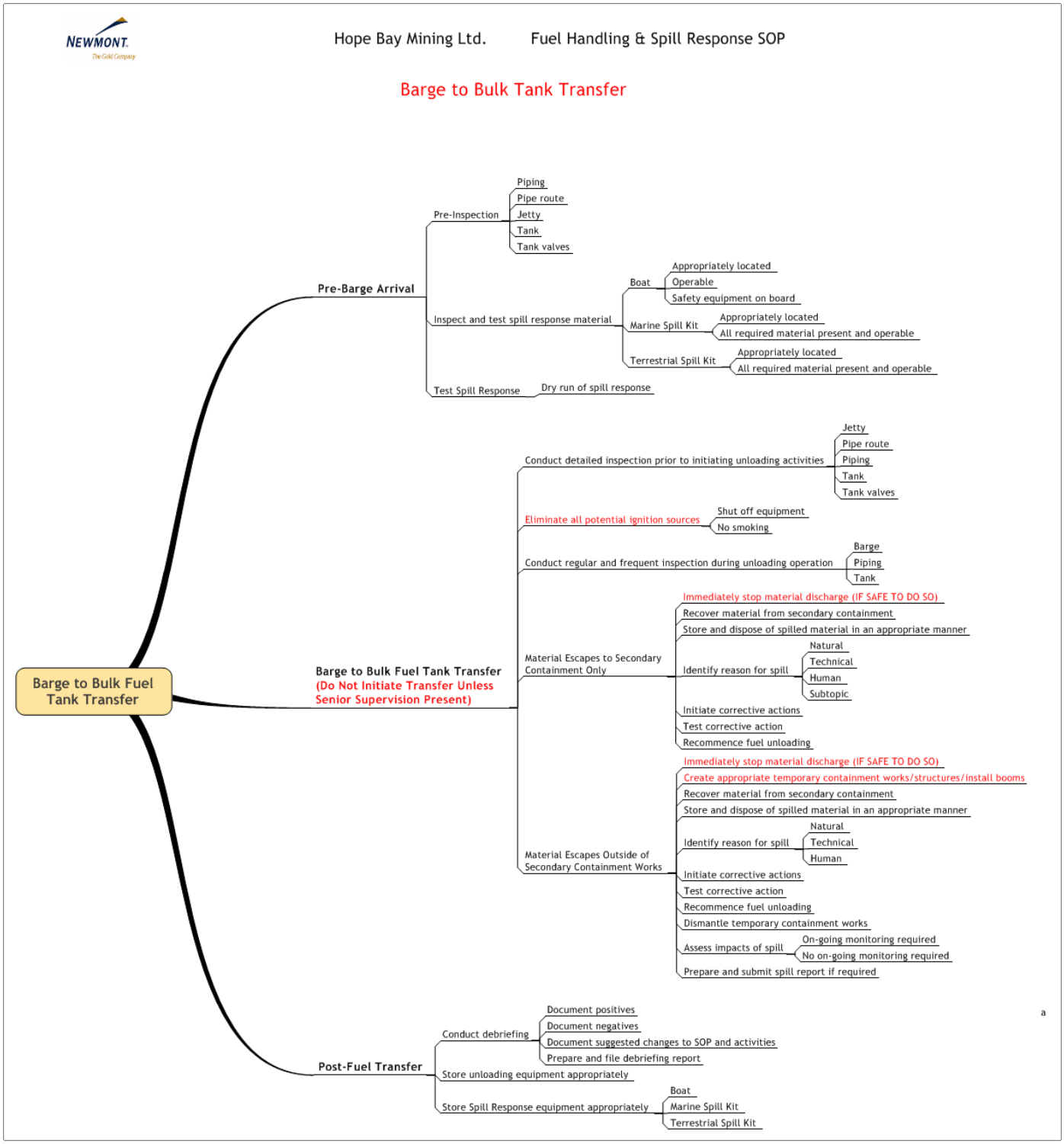


Figure 7: Barge to Bulk Fuel Tank Transfer SOP

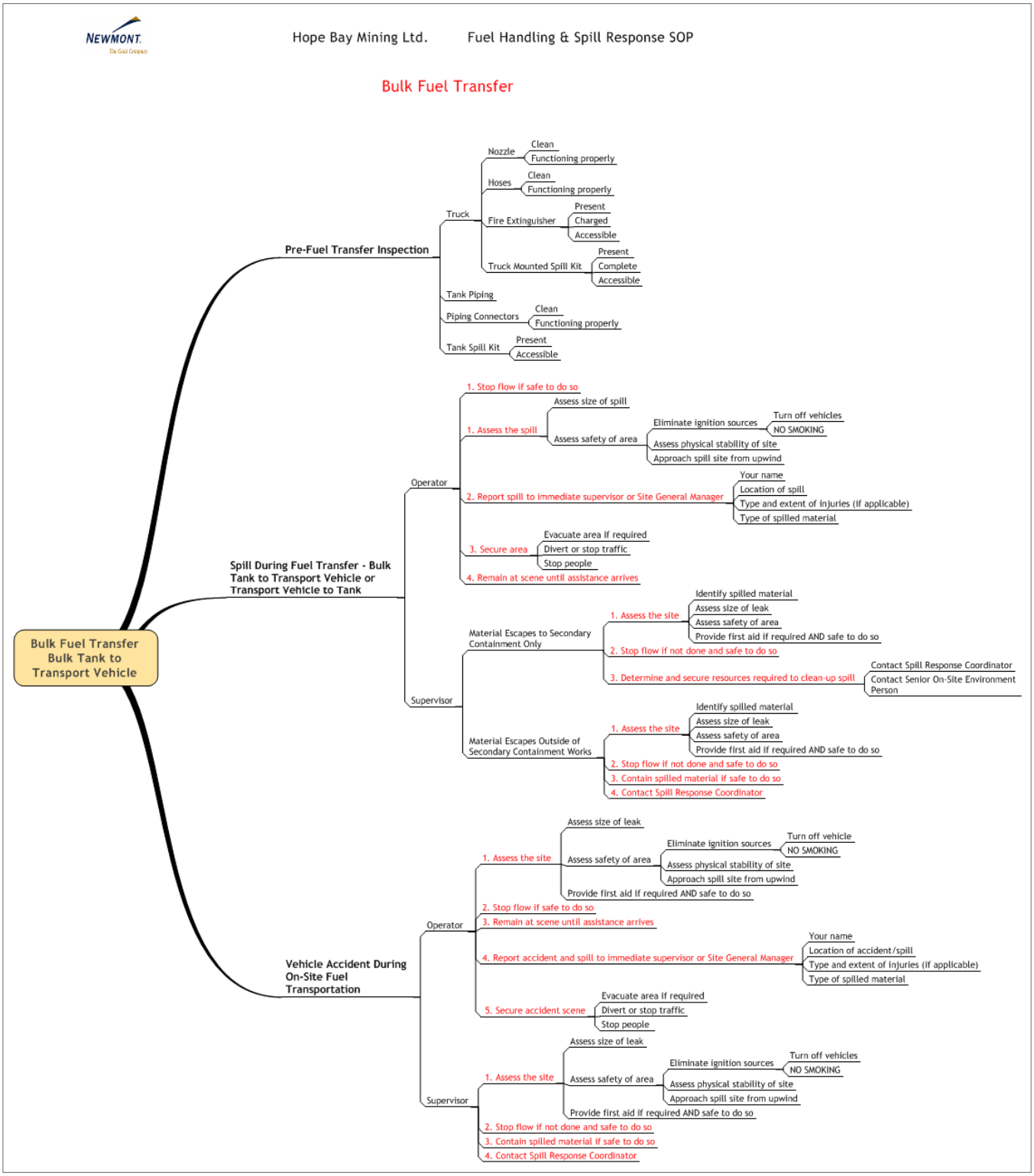


Figure 8: Bulk Fuel Transfer SOP

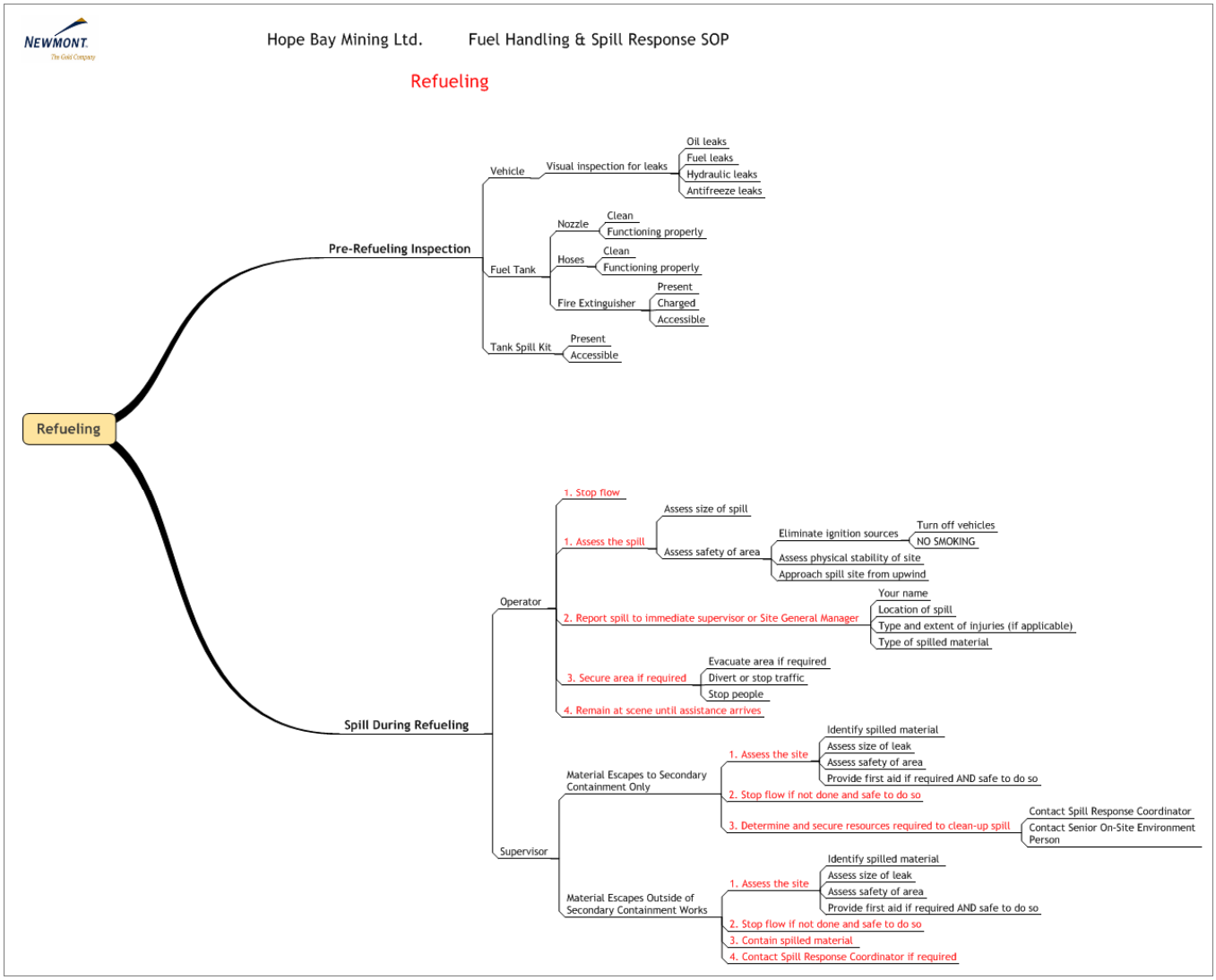


Figure 9: Refuelling SOP

4 Spill Response Organization

4.1 Summary

Figure 10 provides a general overview of the spill response organization at the Hope Bay Project site.

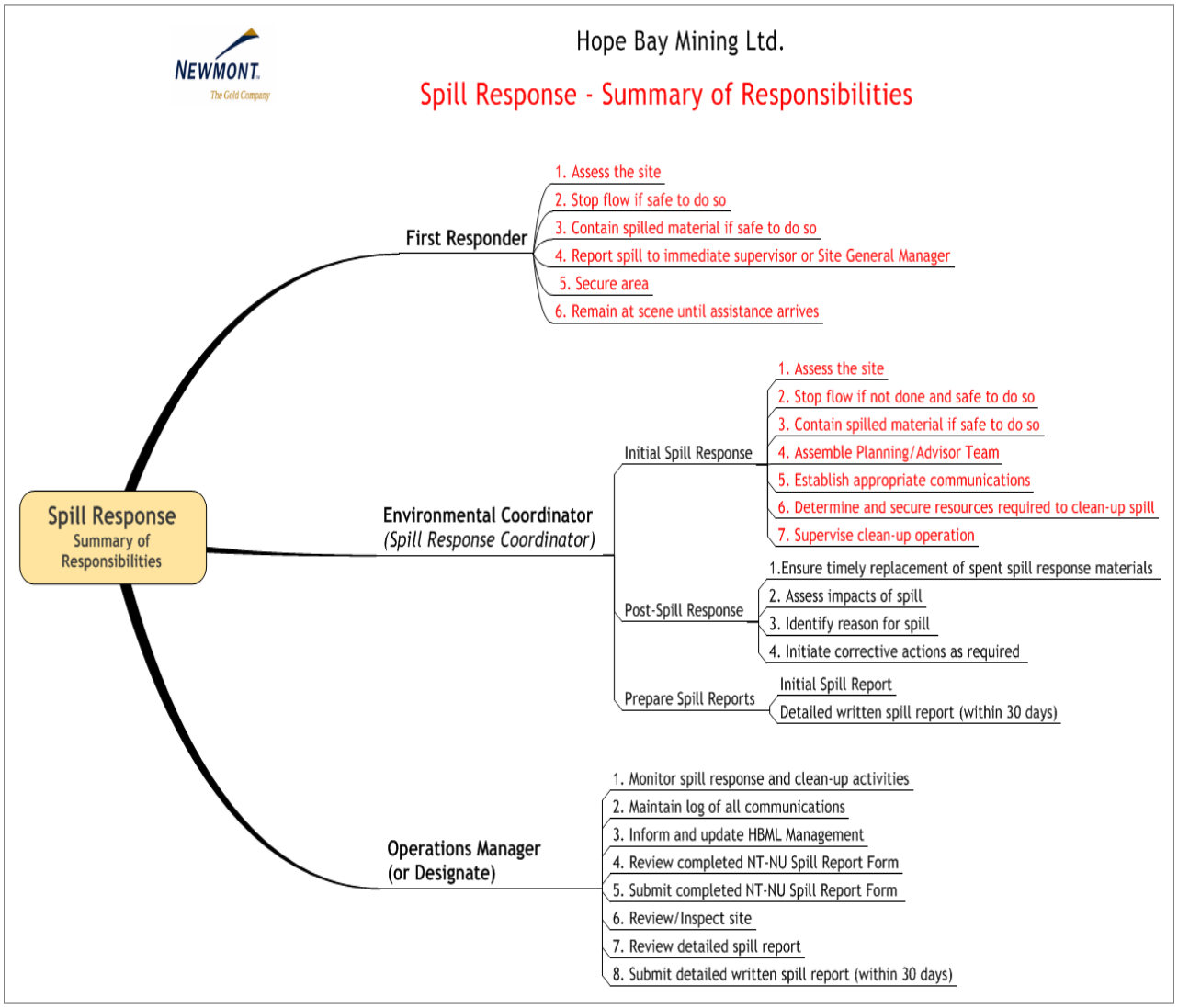


Figure 10: Spill Response Responsibilities

4.2 Spill Response Organization

Prompt, effective and organized response to an unanticipated discharge or spill by the company will enhance the health and safety of all employees, serve to minimize to the extent possible the potential adverse environmental impacts resulting from such an event and ensure effective communication with the appropriate regulatory agencies and the general public.

In order to provide such a response, the following provides a summary of the on-site spill response organization and reporting mechanism at the Hope Bay Mining Ltd. Hope Bay Project Site (Figure 11).

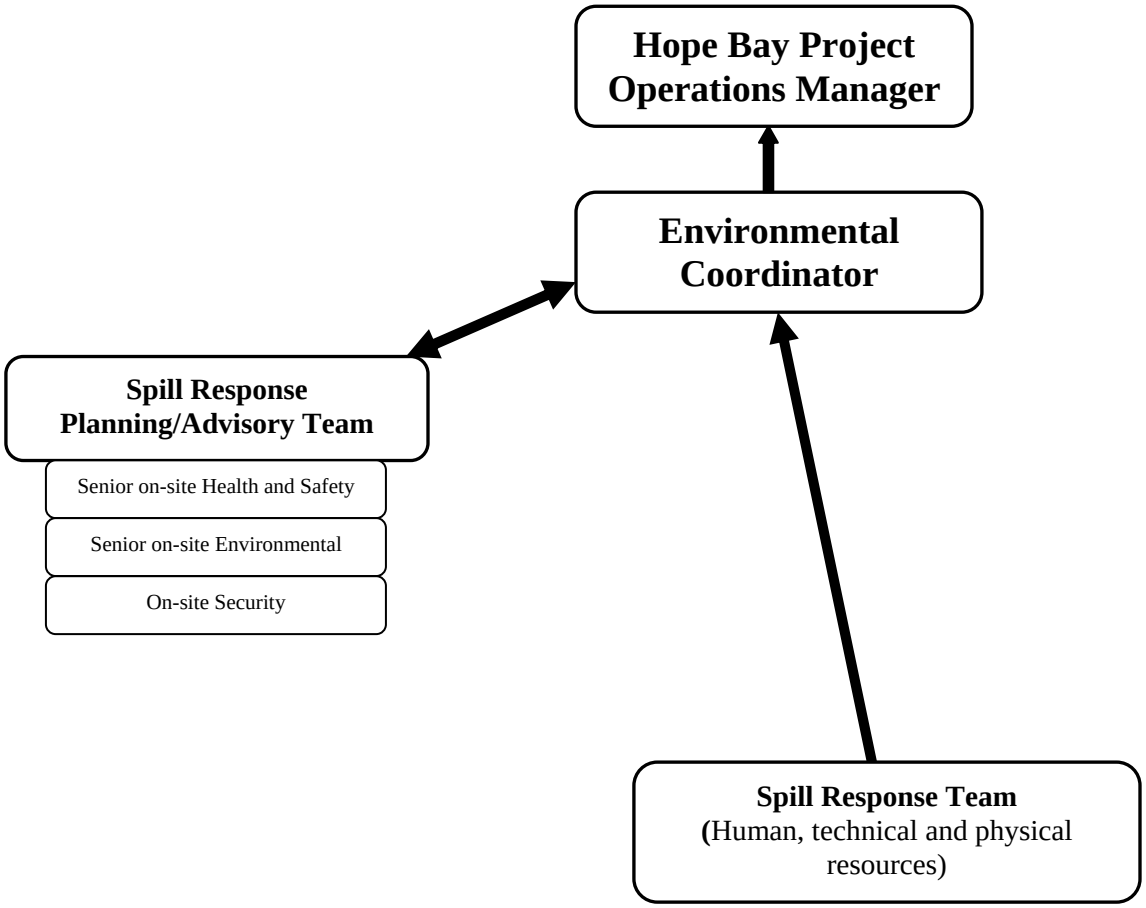


Figure 11: Spill Response Organization

Each identified individual or group has been assigned specific set of responsibilities in the event that a spill response is required. The following provides a description of the required action of each.

4.2.1 First Responder

The First Responder is defined as any person on the Hope Bay Project site who comes across or sees an unanticipated discharge or spill. As a result, every person on the Project site is considered as a potential First Responder and receives appropriate training during their initial site orientation.

When someone on site sees an unanticipated discharge or spill, he or she is immediately designated as the First Responder and, as such, shall complete the following actions:

1. Assess the spill site by:
    a. Identifying the spilled material
        i. Review MSDS for spilled material
        ii. If it is not possible to identify material the first responder will immediately report spill to supervisor (Action 4)
        iii. If there is a potential risk of explosion or fire, the First responder will immediately report spill to supervisor (Action 4)
    b. Assessing (estimating) the size of leak
    c. Assessing the safety of area by
        i. Eliminating ignition sources by turning off vehicles, etc. and not smoking
        ii. Assessing the physical stability of site, while always
        iii. Approaching the spill site and material from upwind
    d. Providing first aid to any injured parties if required AND it is safe to do so
2. Stop the flow of material if it is safe to do so by:
    a. Put on appropriate Personal Protective Equipment (PPE)
    b. Approaching the spill site from upwind
    c. Tracing (or tracking) the source of the material; and
    d. Stopping the flow if it is safe to do so
3. Contain the spilled material if safe to do so by:
    a. Constructing a temporary berms if possible
    b. Constructing a temporary containment ditch if possible
    c. Placing absorbent materials from the spill kit in the flow path of the spilled material
4. Report the spill to immediate supervisor or Operations Manager by radio or phone, giving:
    a. Their name
    b. The specific location of the spill
    c. The type of spilled material
    d. The type and extent of injuries on scene (if applicable)

    Note: Site contact numbers are included in a Spill Kit Insert found in each spill kit on site. (See Appendix A for an example)

5. Secure the immediate area of the spill by:
    a. Evacuating the area if required
    b. Diverting or stopping traffic in the vicinity
    c. Keeping people away from the area
6. Remain at/on scene until assistance arrives.

Figure 12 provides a summary of the spill response actions of the First Responder.

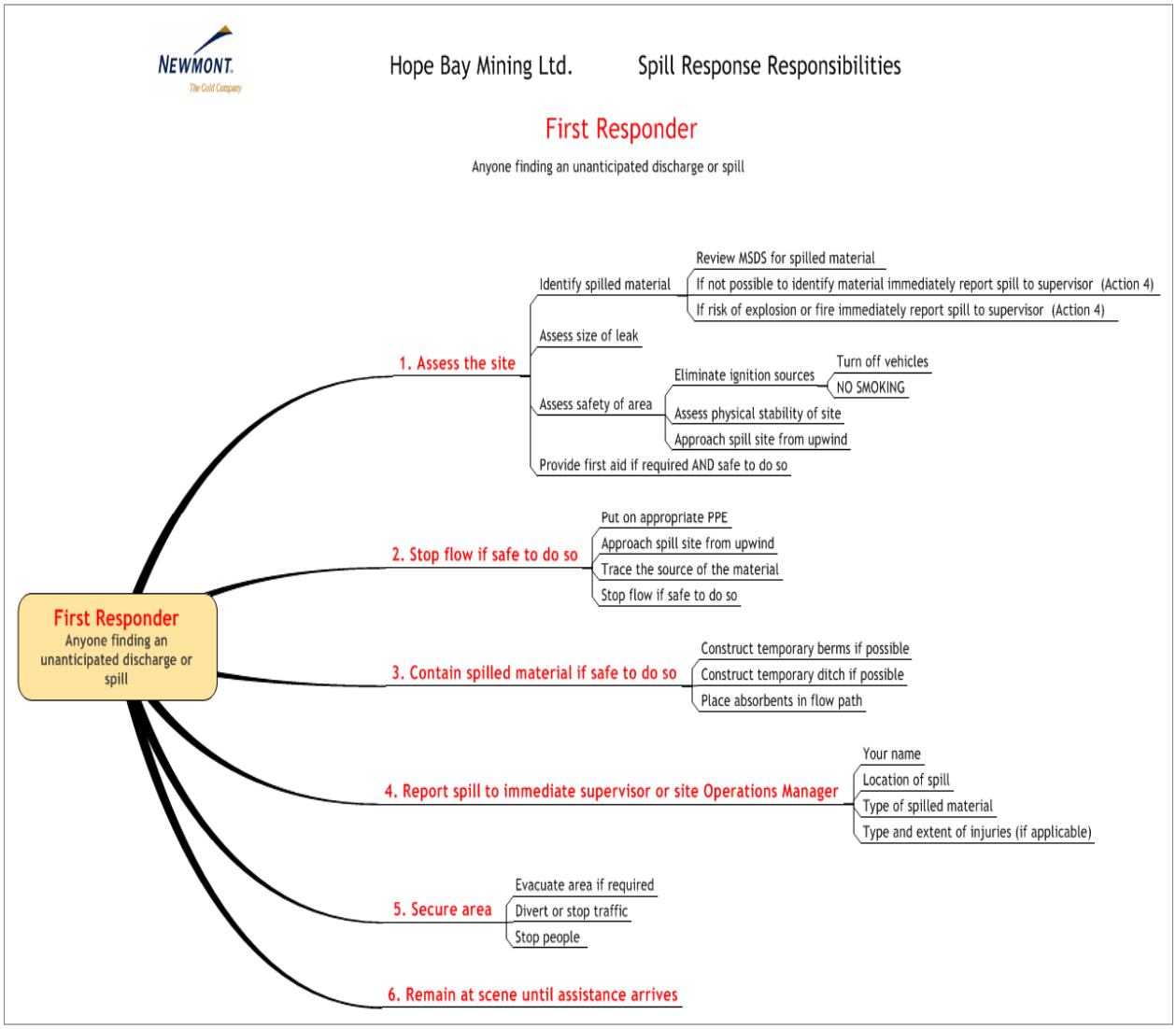


Figure 12: First Responder SOP

4.2.2 Supervisors (All)

In the event that a Supervisor is informed of a spill by any employee, he/she will immediately inform the Operations Manager using the phone number or radio channel provided (See Quick Reference section of this Plan) and proceed to the site of the spill.

Upon being informed of an unanticipated discharge or spill, the Operations Manager will immediately designate the Environmental Coordinator as the Person-in Charge and dispatch that person to the spill site. As the Person-in-Charge, the will be responsible for implementing the Spill Contingency Plan.

4.2.3 Environmental Coordinator (Spill Response Coordinator)

Once notified by the Operations Manager, the Environmental Coordinator (Spill Response Coordinator) will immediately equip him/herself with the appropriate Personal Protective Equipment (PPE) and proceed to the site of the spill. Once at the site, he/she will:

1. Assess the site by:
    a. Confirming the identity of the spilled material
    b. Assessing (estimating) the size of leak
    c. Assessing the safety of area by
        i. Eliminating ignition sources by turning off vehicles, etc. and not smoking
        ii. Assessing the physical stability of site, while always
        iii. Approaching the spill site and material from upwind
        iv. Providing first aid to any injured parties if required AND it is safe to do so
2. Stop the flow if not done and safe to do so
3. Contain spilled material if safe to do so by:
    a. Constructing a temporary berms if possible
    b. Construct a temporary ditch if possible
    c. Placing absorbent materials from the spill kit in the flow path of the spilled material
4. Assemble the Spill Response Planning/Advisory Team composed of his/herself, the most senior on-site person from Health and Safety, the most senior on-site person from site Security; and, based on advice from those people, assemble the technical resources deemed necessary to respond to the spill (e.g. equipment, personnel, etc.)
5. Establish a functional communications link with the Operations Manager and the members of the Spill Planning/Advisory Team using on-site radios, satellite and/or traditional phones.

6. Determine and secure human, technical and physical resources (including equipment) required to complete an effective and efficient clean-up of the spill.

   If, in the opinion of the Environmental Coordinator, the size and/or type of spilled material require the mobilization of off-site resources in order to effectively manage the spill and its clean-up, he/she will immediately notify of the Operations Manager. It is the responsibility of the Operations Manager to communicate with and secure any off-site resources that may be required to address the spill.

7. Supervise all of the clean-up operations, including, but not necessarily limited to:

   a. The remove, store and eventual dispose of all spilled material in an appropriate manner

   b. The removal and appropriate dispose of any material contaminated by the spill

   c. The dismantling of any temporary containment works if applicable

8. Remain on site until relieved or clean-up complete

9. Maintain a log (both written and photographic) of all activities undertaken in response to the spill.

The Environmental Coordinator will also be responsible for a number of activities after the spill has been stopped and the effected area clean-up. These include:

1. Ensuring the timely replacement of all spent spill response materials and equipment including, but not necessarily limited to those associated with the primary and secondary containment equipment, the contents of any Spill Kit used to response to the spill as well as any equipment mobilized to the spill site.

2. Assessing the impacts of the spill and its clean-up and determining, in consultation with senior environmental personnel, whether any on-going monitoring is required. In the event that such monitoring is required, the Spill Response Planning/Advisory Team will be responsible to ensure the conduct of such monitoring is done in a safe manner and by qualified and capable people.

3. Conduct an investigation to identify the reason for spill (natural, technical or human causes).

4. Based on the results of that investigation, initiate corrective actions as required at both the spill site and other similar situations on site in order to reduce the potential of a repeat occurrence.

5. Prepare and submit the Hope Bay Mining Ltd. Accident/Incident Report (Appendix B).

In the event that the spill is deemed "reportable" under the applicable legislation/regulations[1], the Environmental Coordinator, in consultation with the Spill Response Planning/Advisory Team, will be responsible for preparing the draft Spill Reports for review and submission by the Operations Manager. These included:

1. The NT-NU Spill Report Form (see Appendix C) to the NWT 24 Hour Spill report Line (see contact information in Quick reference section) which will be completed and submitted as soon as possible after the event (i.e. within 24 hours of the event if required)

2. The detailed written spill report which will be completed and submitted to the appropriate regulatory agencies within 30 days of event

3. The Hope Bay Mining Ltd. Accident/Incident Report.

Figure 13 provides a summary of the spill response actions of the Environmental Coordinator.

[1] Section 6.4 provides a definition of a "reportable spill".

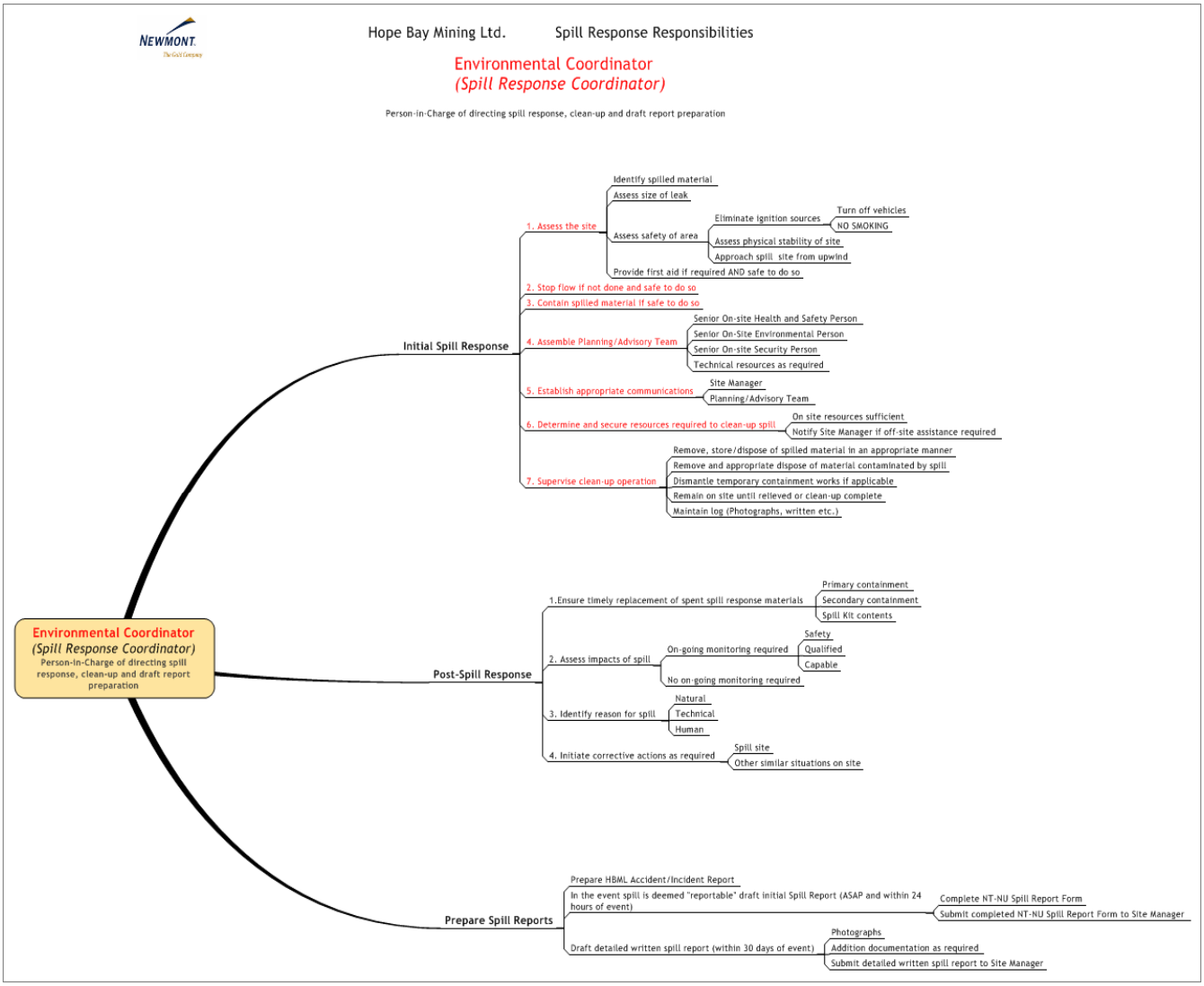


Figure 13: Environmental Coordinator SOP

4.2.4 Spill Response Planning/Advisory Team

The Spill Response Planning/Advisory Team is composed of the Environmental Coordinator, the most senior on-site person from Health and Safety, the most senior on-site person from site Security. It is the responsibility of the Team to provide advice and support to the Environmental Coordinator to ensure that:

- Human life is protected and the potential for injury is minimized to the extent possible during all spill response activities
- All adverse environmental impacts are kept to a minimum during all spill response activates
- Resources are used effectively

- All materials resulting from the spill and spill clean-up are managed, stored and disposed of in an appropriate and approved manner
- All required regulatory reporting is completed on time and in the prescribed manner.

4.2.5 Operations Manager

During a spill response event, the Operations Manager will maintain regular communication with the Environmental Coordinator in order to effectively monitor the spill response and clean-up activities. In addition, the Operations Manager will:

1. Initiate HBML Rapid Response System as appropriate (Appendix D).

2. Maintain a written log of all communications both internal to the site as well as all external communications with regulatory agencies, land agencies and the public.

3. Provide regular updates to HBML senior management off-site.

4. In the event that the event is a "reportable spill", review the draft NT-NU Spill Report Form prepared by the Environmental Coordinator and submit the completed NT-NU Spill Report Form as soon as possible after the event and within 24 hours of the event (see Quick reference section for contact numbers).

5. In consultation with the HBML Director, ESR inform all agencies including, the Kitikmeot Inuit Association, the Nunavut Water Board, Environment Canada, Indian & Northern Affairs Canada, Water Resource Inspector, Fisheries & Oceans Canada, if appropriate (see Quick reference Section for contact information).

6. In consultation with the HBML Director, ESR and appropriate regulator agencies advice the public in the immediate vicinity of the spill if warranted.

7. Conduct a post-cleanup inspection of the spill site that will include, but not necessarily be limited to the management of the recovered product, the appropriate disposal of materials used in the cleanup, remediation activities, and corrective actions taken.

8. Review and submit the Hope Bay Mining Ltd. Accident/Incident Report prepared by the Environmental Coordinator.

9. In consultation with the HBML Director, ESR, submit the completed detailed written spill report to the appropriate agencies within 30 days of the event.

Figure 14 provides a summary of the spill response actions of the site Operations Manager.

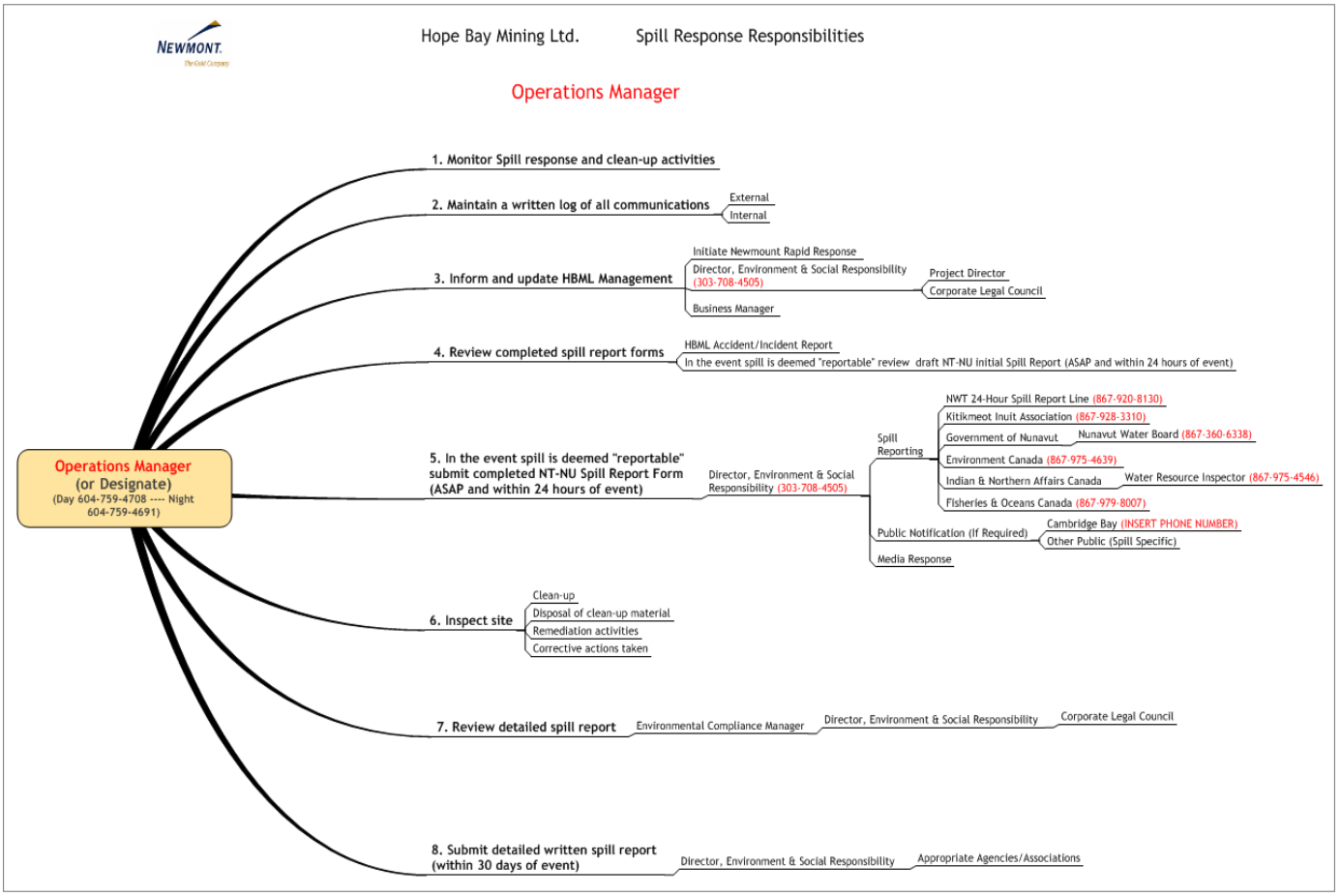


Figure 14: Operations Manager SOP

4.3 Spill Response Communications

During a spill response event, staff on site will report through the Environmental Coordinator to the Operations Manager (or Designate). The Operations Manager will maintain regular contact with Director, ESR and the corporate office.

During such an event, no on-site staff will communicate directly with regulatory agencies, the press or other parties off of the mine site. All external communication is to be through the Operations Manager or the Director, ESR. This is to prevent inaccurate information being spread during an upset condition that could lead to inappropriate response, cause undue stress to family members awaiting word, or cause undue panic to members of the general public.

4.3.1 On - Site Communications

Specific on-site personnel are equipped with portable radios and a base station is located at the site office. All front line supervisors are required to carry a functional portable radio at all times while working on site. Independent satellite phones are also available for crews working off site and for emergency communications in the unlikely event that the radio and phone system fails.

5 Spill Response Actions

The Hope Bay Project is a remote location that is essentially only rapidly accessible by plane. As a result, the *Hope Bay Project Spill Contingency Plan* does not rely on off-site resources to successfully respond to anticipated upset conditions. It is anticipated that the Hope Bay Project and its on-site contractors have sufficient resources and personnel to respond to all types/sizes of spills that could potentially occur on site.

The following issues are a consideration in spill contingency planning given the remote Arctic location of the Project.

Environmental Factors

- High density of habitat use during summer seasons
- Extreme seasonal ecological sensitivity variations
- Unique shores types (ice shelves, glacier margins, ice foot features, tundra coasts)
- Unique oceanographic and shoreline seasonal changes (open water, freeze-up, breakup, frozen conditions)
- Slow weathering and longer persistence of spilled product.

Operational Considerations

- Remote logistical support
- Need to improvise response using available means until support equipment arrives
- Safety in cold, remote areas
- Cold temperature effects on the efficiency of equipment and personnel
- Boat operations in ice-infested waters during transition periods, winter dynamic ice conditions
- On-ice operations in winter
- Seasonal daylight variation
- Minimization of damage to permafrost during land-based staging and cleanup operations
- Need of aircraft for logistics, surveillance, and tracking.

Based on a review of the hazardous materials management on the Hope Bay Project using a failure mode and effects analysis framework, the most significant potential for spills on the Hope Bay Project site occurs during three separate stages of petroleum fuel management activities on the site.

5.1 Fuel Spills on Land

Containment and Cleanup

In the event of a liquid spill on gravel, rock, soil or vegetation, it is very important to prevent the liquid from entering any body of water where it will spread and likely have a greater environmental impact. Liquid spills on gravel, rock, soil or vegetation will be contained and cleaned up by:

- Constructing a temporary soil berm in front of the leading edge of the spill and down slope of the spilled liquid. Plastic tarps can then be placed over and at the foot of the berm to permit the liquid to pool on the plastic and facilitate easy recovery.
- For small volumes of spilled material, absorbent pads etc. can be used to recover the spilled material. When such pads are saturated with fuel they can be squeezed into empty drums and re-used.
- The saturated absorbents used will be placed in empty drums for later disposal in an appropriate manner;
- Larger volumes of spilled material may be pumped to empty steel drums or empty fuel storage tanks (i.e. Tidy Tanks) , if available. Care must be taken when transferring the spilled material in order to prevent a secondary spill during this pumping and transfer.
- In extreme circumstances such as the recovery of large volumes of spilled material, consideration may also be given to employing the vacuum truck capabilities of both the Nuna service truck and sewage vacuum truck.

Removal of Contaminated Soil and/or Vegetation

In general, all contaminated material generated from a spill will be stored in steel drums for appropriate disposal which may include the off-site transport of the material for deposal at an appropriate approved facility.

In the event that a particular spill requires the removal and appropriate disposal of large volumes of contaminated soil, rock or vegetation, the Environmental Coordinator will contact the Hope Bay Project Environment member of the Advisory Team for advice on the most appropriate strategy and storage methods. This may be followed by contacting the government authority identified by the NT-NU 24-Hour Spill Report Line (867) 920-8130 to discuss the most appropriate approach to the recovery of this material and to obtain approval to proceed with the approach.

Restoration of Affected Areas

Determination of the required level of final cleanup, restoration (or mitigation) and on-going monitoring will be completed in consultation with, and to the satisfaction of, the Indian and Northern Affairs Canada (INAC) Inspector, Inuvialuit Land Administration and the KIA. Site specific studies may be required to determine the appropriate final clean up criteria.

5.2 Fuel Spills on Fresh Water

Containment and Cleanup

In the event of a liquid spill on water, it is very important to limit, to the extent possible, the spread of the spilled material. The following steps will be taken for spills on water:

- Limit the area of the spill on water to the extent possible; For example, place a large wide board (e.g., plywood) vertically across the culvert inlet to control the water level while retaining the spilled fuel. The board can be secured by stakes and absorbent materials used to recover the fuel on the water surface
- Small volume spills on water will be recovered by the use of absorbent pads, socks and similar materials
- For larger areas, absorbent boom(s) will be deployed to contain the spilled material and to facilitate recovery. Absorbent booms will be drawn slowly in to encircle spilled fuel and absorb it. The boom materials are hydrophobic (absorb hydrocarbons and repel water). The effectiveness of this action can be limited by winds, waves and other factors
- Sorbent booms, socks and/or pads can also be used to recover hydrocarbons that escape containment booms
- Consideration may also be given to employing the vacuum truck capabilities of both the Nuna service truck and sewage vacuum truck in extreme circumstances such as the recovery of large volumes of spilled material
- The saturated absorbents used will be placed in empty drums for later disposal in an appropriate manner.

All contaminated material generated from a spill response will be stored in steel drums for appropriate disposal which may include the off-site transport of the material for deposal at an appropriate approved facility.

Determination of the required level of final cleanup, restoration and on-going monitoring will be completed in consultation with, or to the satisfaction of, the Indian and Northern Affairs Canada (INAC) Inspector, Inuvialuit Land Administration and the KIA. Site specific studies may be required to determine the appropriate final clean up criteria.

5.3 Fuel Spills on Snow

Fuel spills on snow will be contained and recovered by:

- Limiting the area of the spill on water to the extent possible by compacting the snow into snow-berms and then placing a liner of plastic sheeting at the toe and over the berm in order to collect the spilled material and facilitate recovery
- Using the snow as a natural absorbent to collect spilled fuel

- For small volumes of spilled material, absorbent pads etc. can be used to recover the spilled material. When such pads are saturated with fuel they can be squeezed into empty drums and re-used. The saturated absorbents used will be placed in empty drums for later disposal in an appropriate manner

- Snow, saturated with the spilled material, may also be scraped up and stored in a lined containment area or placed in steel drums for appropriate disposal or incineration

- Larger volumes of material may be pumped to empty steel drums or empty fuel storage tanks (i.e. Tidy Tanks) , if available. Care must be taken when transferring the spilled material in order to prevent a secondary spill during pumping and transfer

- Consideration may also be given to employing the vacuum truck capabilities of both the Nuna service truck and sewage vacuum truck in extreme circumstances such as the recovery of large volumes of spilled material.

All contaminated material generated from a spill response will be stored in steel drums for appropriate disposal which may include the off site transport of the material for deposal at an appropriate approved facility.

Determination of the required level of final cleanup, restoration and on-going monitoring will be completed in consultation with, or to the satisfaction of, the Indian and Northern Affairs Canada (INAC) Inspector, Inuvialuit Land Administration and the KIA. Site specific studies may be required to determine the appropriate final clean up criteria.

5.4 Fuel Spills on Ice

Fuel spills on ice will be contained and cleaned up by:

- Limiting the area of the spill to the extent possible by compacting the snow around the edge of the spill to act as a berm. Time permitting; the berm can be lined with plastic sheeting. The underlying ice will prevent or reduce the rate of seepage of the fuel into the water below the ice
- Scraping up contaminated snow/ice and placing it in covered drums or in a lined secondary containment area on land
- In certain circumstances it may be possible to deploy skimmers in open-water areas in the early fall or late spring. Deploying skimmers in broken-ice conditions may be effective as spills tend to spread far less than in ice-free water however, under normal ice-covered periods, this is unlikely in the Hope Bay Project area
- Using snow as an absorbent to collect spilled fuel
- For small volumes of spilled material, absorbent pads etc. can be used to recover the spilled material. When such pads are saturated with fuel they can be squeezed into empty drums and re-

used. In addition the spilled material may be scraped up and stored in a lined containment area or placed in steel drums for appropriate disposal or incineration

- The saturated absorbents used will be placed in empty drums for later disposal in an appropriate manner
- Larger volumes of material may be pumped to empty steel drums or empty fuel storage tanks (i.e. Tidy Tanks) , if available. Care must be taken when transferring the spilled material in order to prevent a secondary spill during pumping and transfer
- Consideration may also be given to employing the vacuum truck capabilities of both the Nuna service truck and sewage vacuum truck in extreme circumstances such as the recovery of large volumes of spilled material.

Burning off spilled hydrocarbons on-ice offers the potential to remove the majority of a spill with minimal residue volumes left for manual recovery. Burning of spilled hydrocarbons on-ice has been considered as a primary arctic spill countermeasure. However, prior to initiating such action, representative of the Hope Bay Project will secure permission from the appropriate agencies (i.e. the NT-NU 24-Hour Spill Report Line).

Determination of the required level of final cleanup, restoration and on-going monitoring will be completed in consultation with, or to the satisfaction of, the Indian and Northern Affairs Canada (INAC) Inspector, Inuvialuit Land Administration and the KIA. Site specific studies may be required to determine the appropriate final clean up criteria.

5.5 Spills in a Marine Environment

This section provides a guideline for a petroleum product spill response specific to the unique climatic and physiographic features of the Arctic environment and provides general information on typical approaches to dealing with hydrocarbon spills in the marine environment. Hope Bay Mining Ltd. will rely on Northern Transportation Company Ltd. (NTCL) for spill response while bulk fuel and containerized shipments of hydrocarbon-based products are in transit from Hay River to the Project site. In all instances, Transport Canada approved NTCL *Ocean Pollution Prevent Plan* will take precedence

The Hope Bay Project maintains marine spill response equipment at the Roberts Bay jetty site. The spill response equipment is stored within a Seacan for deployment while barges are being off loaded. This equipment includes, among other things) floating containment booms and a small skimmer unit designed to address potential spills during the offloading process (see section 6 for a complete inventory).

For simplicity, in this section the wide range of crude and refine oils have been grouped into three types, based primarily on viscosity.

Medium (Slow Poring)

- Bunker A*
- Fuel Oil No.4*
- Lubricating oil
- Medium crudes*

Heavy (Barely flow)

- Bunker B and C*
- Fuel oil No. 6*
- Weathered Crude*
- Bitumen*

* These product are generally not found on the Hope Bay Project Site.

The following definitions are provided for three "sea conditions" (calm water, protected water, and open water) used in the following discussion (Table 3).

Table 3: Definitions of Sea Conditions

Response Environment	Significant Wave Height (m)	Wind Speed (km/h)
Calm waters	Less than 0.3	Less than 10
Protected water	0.3 to 2	10 to 30
Open waters	2 or greater	30 or greater

5.6 Spill Response in a Marine Environment

5.6.1 General Guidelines

The most effective way to minimize environmental damage is to focus on source control and to prevent product from spreading.

Slick tracking and surveillance should utilize locally available resources to determine optimum response strategies by:

- Locating brown-color slicks to be skimmed, burned and/or dispersed
- Leaving shiny, rainbow sheens to disperse naturally but plan for shoreline protection/treatment, if appropriate.

In breaking waves higher than 1 m, surveillance and monitoring may be the only practical response options.

Table 4 presents description of countermeasures that are recommended for implementation in an uncontrolled environmental incident.

Table 4: Open-water Response at Sea or in Costal Waters

Environment		Responses			
Response	Product Location	Countermeasures			Feasibility
		Contain/Recover	Burn	Disperse	
Source Control	On surface	Mobile floating barriers Stationary skimmers	Burn on water contained in booms	Vessel dispersant application Arial dispersant application	Recommended
	Underwater	Subsurface barriers			Not recommended
Control of Free Product	On surface	Mobile floating barriers Advanced skimmers	Burn on water contained in booms	Vessel dispersant application Arial dispersant application	
	Underwater	Subsurface barriers			Not recommended
Protection	On surface	Diversion booming	Burn on water contained in booms	Vessel dispersant application Arial dispersant application	
	Underwater	Subsurface barriers			Not recommended

5.6.2 Response Strategies and Methods

Responding to spills from vessels and barges in a marine situation can involve controlling slick at source and removing product that escapes initial containment. The objective of both operations is to minimize the spreading of spilled product and subsequent environmental impacts. Control methods use similar approaches both “at source” and to deal with remote slicks.

5.6.3 Containment and Recovery

Containment

- Use mobile floating booms which are best deployed down drift from the release point in order to contain and concentrate product
- Deploy mobile floating booms in U, V or J configurations. Interception of free-floating, thick slicks is not as effective as containment and removal of product at surface
- Mobile floating booms are effective in currents less than 0.5 m/s (1 knot) and winds less than 35 km/h (20 knots).

Recovery

- Advancing skimmers (Oleophilic Skimmers – units with a recovery mechanism to which oil adheres) are useful: Disc, drum and rope mop skimmers can remove light and medium viscosity oils; brush and belt skimmers can collect heavy oils

- Large volume advancing skimmers can be used when oil/water separators are available or when there are large accumulations of thick, emulsifying oil
- Subsurface barriers should be used to contain spilled oil that might sink before it submerges, if possible. Locating submerged oil is difficult, and control and collection of such is even more difficult
- If brush or belt skimmers cannot collect heavy, floating oil then trawl systems can be tried for recovery
- Planning adequate storage capacity is critical to the entire response operation to avoid operation bottlenecks
- Storage options include barges, towable tanks, tankers and/or other means that are appropriate for the type and volume of oil being recovered.

Dispersion

- Within mobile floating barriers, spills must be assessed to determine if dispersants will be effective and then treated quickly by trained personnel:
  - The oil should have a viscosity less than 10000 cSt, i.e. it should be less viscous than molasses
  - The temperature of the water should be above the pour point of the oil, i.e., the oil should be freely flowing
  - Slick thickness should be no more than 0.1 mm thick
  - Spraying operations should be conducted within 2 -5 days of a spill occurring when the oil is un-weathered and can be dispersed.
- Within mobile floating and stationary barriers, both vessels and aircraft can be used to apply dispersants. Operations should be directed from aerial vintage points:
  - Use stock piles of chemicals located strategically to the spill site at dispersant-to oil ratios of 1:10 to 1:100
  - Use fix-wing planes and helicopters on offshore spills
  - Vessels are more practical for near-shore coastal waters
  - Record information on dosage rates, areas treated and apparent effectiveness so that the data can be transferred to subsequent responders.

In-situ Burning

- In-situ burning must be quickly implemented, usually by trained personnel. In a remote area, the decision to burn should be based on the following factors:
  - Emulsion should be at least approximately 75% oi
  - Slick thickness should be greater than 2-3 mm
  - Waves should be less than 2 m high and not breaking
  - Wind speed should be less than 35 km/h (20 knots)
  - Crude oil should be burned within 2-5 days of the spill.

- An ignition system is needed; fire-resistant boom and spotter aircraft should be used, if available
- A safety plan for response workers is required that addresses the location of ignition, burning and areas that would be affected by the smoke plume
- Crude oil high sulphur content would likely present health and safety concerns either in an unburned state or upon ignition
- A 10 km (6 mile) downwind exclusion zone provides adequate protection for response workers, the public and wildlife
- Ensure that the risk of secondary fires is minimized or have the means to extinguish the burn
- No burning will take place until KIA and/or regulatory authorities give approval.

Protecting Resources

Protecting resources in the path of a marine spill usually involves the deployment of mechanical equipment but may be accomplished by chemical dispersion or burning. The objective of protection is to prevent or minimize contact between the spilled oil and the resource at risk.

- Initially, estimate the direction and speed of movement of the oil. Then identify the resources at risk from the spill and evaluate whether protection operations actions are likely to be successful, and then take the following actions for mechanical containment and removal strategies:
  - Deploy diversion boom with both top and bottom tension members and high reserve buoyancy to exclude or divert oil
  - Secure and then regularly monitor anchor systems.
- Using stationary skimmer such as smaller oleophilic skimmers, e.g., disc, drum and rope mops units, to remove light and medium viscosity oils for storage in either water – or land based storage systems
- In storm surges, protection strategies might not work if oil mixes in the surf zone and if booms fail
- In-situ burning is a possible protection option in near shore waters, using an ignition device (s) in concentrated oil; fire-resistant booms and spotter aircraft should be used, if available
- A safety plan for the burn operation must be prepared that considers the potential impacts of the burn, amenities at risk and the possible health effects of the smoke plume, e.g., 10 km (6 miles) downwind exclusion zone, sulphur content of crude and the means to extinguish the fire
- Chemical dispersion is a possible protection technique in coastal waters characterized by:
  - Good flushing
  - Water depth greater than 10 – 20 m.
- For effective dispersion, oil must meet the following criteria:
  - Viscosity is less than 10 000 cSt, i.e., less viscous than molasses
  - The temperature of the water is above the pour point of the oil, i.e., the oil is freely flowing

  - Slick thickness is more than 0.1 mm thick.

- Vessel application is likely to be as, or more effective than, aerial methods if:
  - Dispersant is applied within 2 – 5 days of spill
  - The spill covers a relatively small coastal area that can be readily treated with dispersants from vessel
  - Dispersant supplies and fuel are positioned on vessels and at selected sites onshore so that downtime is minimized
  - Good access to, and visibility of, slicks exists.
- Information on dosage rates, areas treated and apparent effectiveness should be recorded so that the data can be transferred to subsequent responders.

5.6.4 Shoreline Treatment

- First response activities usually take places on a shoreline only if available resources are not required for source control, recovery of free oil or protection. This might be the case for a land-based spill, e.g., a tank farm, or if all or most of the oil has washed ashore.
- Low pressure, cold-water wash is generally practical and effective before the oil has weathered, i.e., in the early stages of a spill, on:
  - Impermeable (bedrock, man-made) shore types
  - Fine sediment beaches or flats (sand, mud)
  - Vegetated shores (marshes, peat, low-lying tundra).
- On sheltered, low wave-energy shores with fine sediment, trenching can be a rapid and effective method for containing stranded oil and preventing further redistribution. Oil in the trench can be removed sorbents or vacuum trucks. If such system is not available in remote areas, sufficient bags of corn-cobs should be used to absorb the remaining oil in the trench.
- Use manual and/or mechanical removal methods to recover oil on open beaches with wave action. Often it is important to remove oil that is on surface before the oil/sediments are reworked by wave action, and the oil is potentially buried.
- Oily waste generation and its disposal are issues common in the Arctic region. As a result mixing and sediment relocation on beaches are likely to be practical and highly effective since the oil would be relatively un-weathered. Mixing (also known as tilling) and sediment reworking (surf washing) involve the use of earthmoving equipment to move oiled sediments so that they are exposed to weathering processes, such as evaporation or wave action, to accelerate natural cleaning of an oiled beached. The techniques do not involve mechanical removal of oiled sediments from beach for disposal.

Table 5 lists the recommended initial treatment methods according to various shore type in an event of an uncontrolled environmental incident.

Table 5: Recommended Initial Treatment

Environmental Habitat – Shore Type	Recommended Treatment Method
Bedrock	Low pressure cold water wash Manual removal Vacuum system
Man-made solid structure	Low pressure cold water wash Manual removal
Ice or ice covered shores	Low pressure cold water wash Low pressure , warm or hot water wash Manual removal Vacuum system Burning
Sandy beaches	Flooding Low pressure cold water wash Manual removal Mechanical removal Mixing Sediment relocation
Mixed sediment beaches	Flooding Low pressure cold water was Manual removal Mechanical removal Mixing Sediment relocation
Pebble/cobble beaches	Low pressure cold water wash Manual removal Mechanical removal Mixing Sediment relocation
Boulder beaches and rip-rap	Low pressure cold water Manual removal Passive sorbents
Sand flats	Low pressure cold water wash Manual removal Vacuum system Mechanical removal
Mud flats	Low pressure cold water wash Manual removal Vacuum system Mechanical removal
Salt marches	Flooding Low pressure cold water wash Manual removal Vacuum removal Passive sorbents

5.7 Disposal of Materials

At the Hope Bay Project site, the disposal of spilled material and/or contaminated soil is governed under the Waste Management Act and associated regulations. A copy of the Act and the Special Waste Regulation and the Contaminated Sites Regulation will be maintained on site for reference.

Clarifications and information regarding waste management and disposal issues will also be obtained from the Nunavut government and DIAND. Generally, contaminated top-soil will be sealed in 45-gallon drums and transported offsite to an approved disposal facilities in Yellowknife.

The Site Manager, in consultation with the Spill Response Planning/Advisory Team shall investigate the most appropriate disposal options for the spilled material. Disposal may include burning, disposal in waste areas or recycling.

6 Spill Reporting

6.1 Summary

Figure 15 provides a summary of Spill Response Communication & Reporting Standard Operating Procedure (SOP) for the Hope Bay Project.

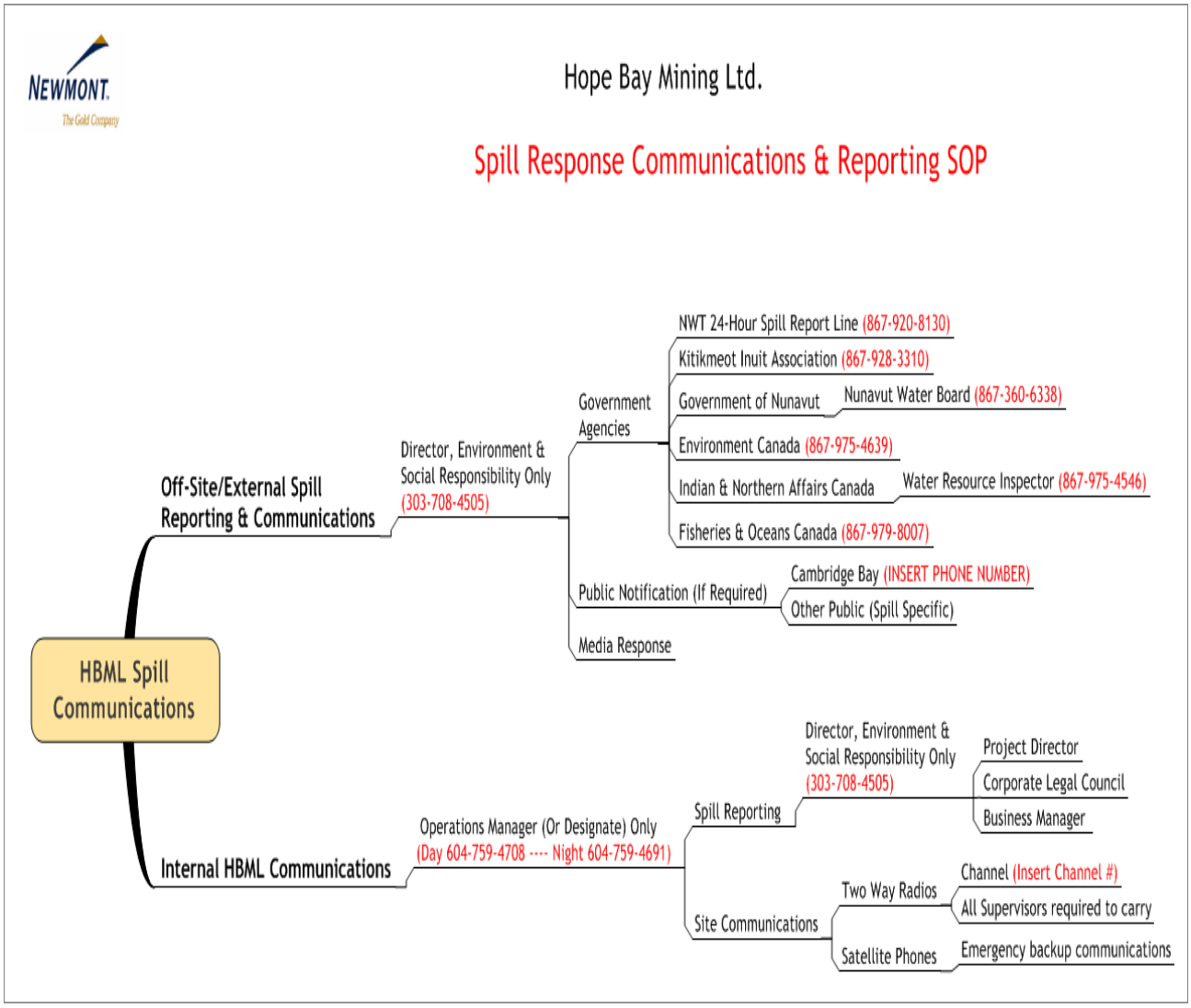


Figure 15: Spill Reporting SOP

6.2 On - Site Communications

Communications onsite related to an upset or spill condition will follow reporting structure as shown in Figure 10 in order to ensure that spill response decisions are made and implemented in a timely manner.

Specific on-site personnel are equipped with potable radios and a base station is located at the site office. All front line supervisors are required to carry a functional portable radio at all times while working on site. Independent satellite phones are also available for crews working off site and for emergency communications in the unlikely event that the radio and phone system fails.

6.3 Internal HBML Spill Reporting

In an event of a significant spill, the Person-In-Charge onsite (generally the on-site Operations Manager) shall report the occurrence to the Director, ESR, Hope Bay Mining Limited and will be the only person to provide regular (i.e. daily or more frequent depending on circumstances) updates.

6.4 External Spill Reporting

Section 9 (1) of the *Consolidation of Regulation R-068-93 Spill Contingency Planning and Reporting Regulations (Dated 22 July, 1993)* states:

> ***9. (1)*** *The owner or person in charge, management or control of contaminants at the time a spill occurs shall immediately report the spill where the spill is of an amount equal to or greater than the amount set out in Schedule B.*
>
> ***(2)*** *Where there is a reasonable likelihood of a spill in an amount equal to or greater than the amount set out in Schedule B, the owner or person in charge, management or control of the contaminants shall immediately report the potential spill.*

Table 6 is a reproduction of Schedule B of the *Consolidation of Regulation R-068-93 Spill Contingency Planning and Reporting Regulations (Dated 22 July, 1993).*

Table 6: Reproduction of Schedule B (Spill Reporting Regulations)

Item No.	TDGA Class	Description of Contaminant	Amount Spilled
1	1	Explosives	Any amount
2	2.1	Compressed gas (flammable)	Any amount of gas from containers with a capacity greater than 100 litres.
3	2.2	Compressed gas (non-corrosive, non flammable)	Any amount of gas from containers with a capacity greater than 100 litres.
4	2.3	Compressed gas (toxic)	Any amount
5	2.4	Compressed gas (corrosive)	Any amount
6	3.1, 3.2, 3.3	Flammable liquid	100 litres
7	4.1	Flammable solid	25 kilograms
8	4.2	Spontaneously combustible solids	25 kilograms
9	4.3	Water reactant solids	25 kilograms
10	5.1	Oxidizing substances	50 litres or 50 kg
11	5.2	Organic peroxides	1 litre or 1 kilogram
12	6.1	Poisonous substances	5 litres or 5 kilograms
13	6.2	Infectious substances	Any amount
14	7	Radioactive	Any amount
15	8	Corrosive substances	5 litres or 5 kilograms
16	9.1 (in part)	Miscellaneous products or substances excluding PCB mixtures	50 litres or 50 kilograms
17	9.2	Environmentally hazardous	1 litre or 1 kilogram
18	9.3	Dangerous wastes	5 litres or 5 kilograms
19	9.1 (in part)	PCB mixtures of 5 or more parts per million	0.5 litres or 0.5 kilograms
20	None	Other Contaminants	100 litres or 100 kilograms

In the event that a particular material spill meets or exceeds the amount specified in Schedule B the Director, ESR, Hope Bay Mining Limited will immediately report the spill by telephone to the NWT 24 Hour Spill Report Line, Yellowknife, Tel: 867-920-8130 (Fax: 867-873-6924) using the NT-NU Spill Report form. A sample NT-NU Spill Report form is provided as Appendix C.

When making the report, the Director, ESR will provide, to the extent possible, the following:

1. The date and time of spill
2. The location of spill
3. The type of contaminant spilled and quantity spilled
4. The cause of spill
5. A description of existing containment
6. Whether spill is continuing or has stopped
7. The direction spill is moving
8. Actions taken to contain, recover, clean-up and dispose of spilled material

9. The name and phone number of a contact person close to the location of spill
10. The name, address and phone number of person reporting spill
11. The name of owner or person in charge, management or control of contaminants at time of spill.

The Director, ESR will not delay making the required report because he/se does not have all of the specified information.

The Director, ESR, Hope Bay Mining Limited will be responsible for the submission of the required detailed written spill report to the appropriate agencies within thirty (30) calendar days of the reported spill. The written report will include, but not necessarily be limited to:

- The reporting person's name and telephone number
- The name and telephone number of the person/company who caused the spill
- The location and time of the spill
- A description of the spill location and of the area surrounding the spill location
- The type and quantity of the spilled material
- The cause of the spill
- The potential effect(s) of the spill
- Details of action taken or proposed to be taken to remediate effected areas
- Details of further action contemplated or required
- The names of agencies on the scene
- The names of other persons or agencies advised concerning the spill
- A chronological sequence of events including internal and external notifications
- Copies of analytical results from external laboratories
- Analysis of the events leading up to the spill and critique of the internal response and handling of the incident
- Measures undertaken or anticipated to reduce the potential fro a reoccurrence of the spill at the specific location or other similar locations under the control of Hope Bay Mining Ltd.

If required, continuing or progressive sample collection/analysis will be conducted and reported upon until the completion of all prescribed remedial activities.

The most senior on-Operations Manager or a designate will be responsible to attend the scene of any spilled materials to photograph and measure the effected area and will be responsible to engage properly qualified personnel to collect samples of the materials or soils. No person will be permitted to sample or handle spilled materials unless that person has received adequate training in the

identification of the hazards associated with the spilled material, the selection and use of appropriate personal protective equipment and in safe sampling procedures.

6.5 Reporting to the Public

In the unlikely event that a spill poses the potential for the general public to be impacted, the Director, ESR will be the only individual authorized to make contact and inform the public. The Director, Environment & Social Responsibility will initiate such notification after appropriate discussion and approval of the Vice President, Legal and Vice President Environment and only after discussion with appropriate representative of the Nunavut government and the Kitikmeot Inuit Association (KIA).

7 Spill Response Training

Training of all Hope Bay Project employees to familiarize them with the Spill Contingency Plan and testing the plan's elements through mock spill exercises is critical to ensuring the success of the plan. Training and training exercises prepare personnel, evaluate the plan holder's ability to respond to a spill and demonstrate to government and to the public that there is adequate preparation should a spill occur.

On-site training at the Hope Bay Project site commences with every employee during their initial site orientation. At that time, every employee is informed that he/she is potentially a First Responder to any spill or unanticipated discharge event and is schooled on the actions expected of every First Responder.

Additional, more detailed training is provided to selected supervisory individual on a regular basis by the Mackenzie Delta Spill Response Corporation (MDSRC) and Aura College through attendance at training session provided by those agencies. The instructional sessions include site safety, materials properties and strategies as well as tactics for containment and recovery in-facility, on land and on water spills.

Additional on-site training is also provided annually with the performance of mock spill response exercises under typical operating conditions.

These training programs ensure that all Hope Bay Project personnel understand the procedures in the *Hope Bay Project Spill Contingency Plan*; the hazards of the materials stored on-site, who is responsible for what activities, where to find response equipment and how to operate it, and how to obtain off-site resources.

8 Document Control Record

This, the Hope Bay Project Spill Contingency Plan August 2009, has been reviewed and is approved by:

Document Approval

Position	Name	Signature	Date
Environmental Coordinator			
Senior Environmental Coordinator			
Environmental Compliance Manager			
Director, Environmental & Social Responsibility			
Operations Manager			
Compliance Manager			

The re-issuance of this document have been reviewed and approved by the Quality Assurance and Management and are authorized for use within Hope Bay Mining Ltd.

Document Control Revision History

Document Control Revision History					
Rev. No.	Page No.	Details of Revision	Name	Initial	Date

Document Distribution

Date	Copy #	Name	Department/Location	File Type
	1			
	2			
	3			
	4			
	5			
	6			
	7			
	8			
	9			
	10			
	11			

Disclaimer

"This report and the opinions and conclusions contained herein ("Report") contains the expression of the professional opinion of SRK Consulting (Canada) Inc. ("SRK") as to the matters set out herein, subject to the terms and conditions of the agreement dated April 2008, HBML Professional Services Agreement (HBML.BOC-CM.PSA.003) (the "Agreement") between Consultant and Hope Bay Mining Ltd. ("Hope Bay Mining"), the methodology, procedures and sampling techniques used, SRK's assumptions, and the circumstances and constraints under which Services under the Agreement were performed by SRK. This Report is written solely for the purpose stated in the Agreement, and for the sole and exclusive benefit of Hope Bay Mining, whose remedies are limited to those set out in the Agreement. This Report is meant to be read as a whole, and sections or parts thereof should thus not be read or relied upon out of context. In addition, this report is based in part on information not within the control of SRK. Accordingly, use of such report shall be at the user's sole risk. Such use by users other than Hope Bay Mining and its corporate affiliates shall constitute a release and agreement to defend and indemnify SRK from and against any liability (including but not limited to liability for special, indirect or consequential damages) in connection with such use. Such release from and indemnification against liability shall apply in contract, tort (including negligence of SRK whether active, passive, joint or concurrent), strict liability, or other theory of legal liability; provided, however, such release, limitation and indemnity provisions shall be effective to, and only to, the maximum extent, scope or amount allowable by law."

This report, "**Hope Bay Project Spill Contingency Plan**", has been prepared by SRK (Consulting) Canada Inc.

Prepared by

Don Hovdebo
Principal Consultant

Reviewed by

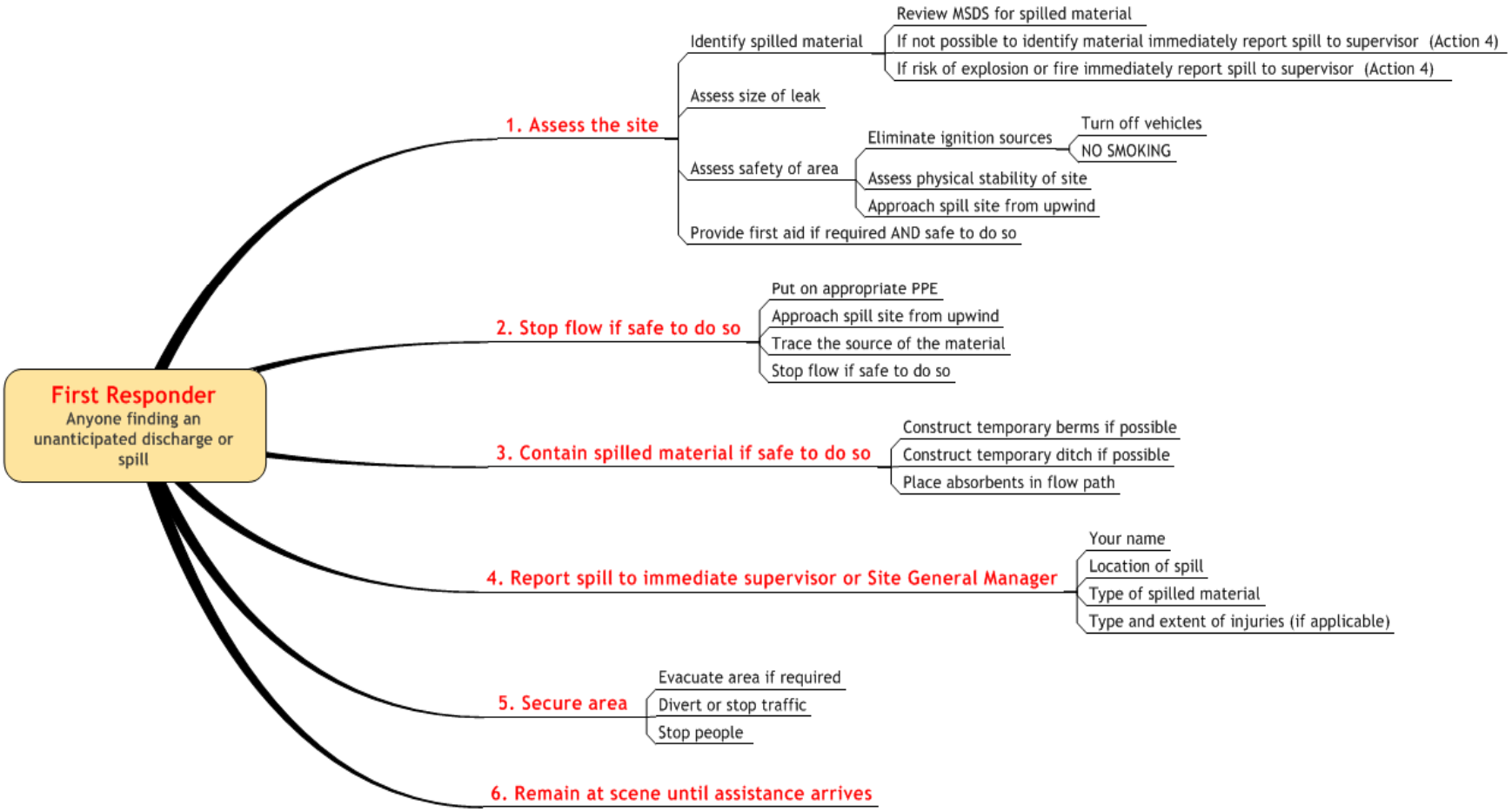
Mark Vendrig
Principal Consultant

Appendix A
Spill Kit Insert

Hope Bay Mining Ltd. Spill Response Responsibilities

First Responder

Anyone finding an unanticipated discharge or spill



Site Radio Channels

Channel 1	**Doris Emergency**
Channel 2	Geology/Drilling
Channel 3	Nuna/Doris Camp
Channel 4	Doris Airstrip/Security
Channel 5	Helicopter coordinator
Channel 6	**Boston Emergency**
Channel 7	Boston Camp
Channel 8	Boston Use
Channel 9	Boston Use
Channel 10	Boston Use
Channel 11	Geology
Channel 12	Survey

Site Emergency Phone Numbers

	DAY	NIGHT	CAMP ROOM NUMBER
MEDIC-FIRST AID ROOM	**604-759-4693**	**604-759-4706**	**C9**
HEALTH & SAFETY	**604-759-4694**	**604-759-4702**	**C1**
EMERGENCY RESPONSE TEAM	**604-759-4700**	**604-759-4707**	**C2**
SITE MANAGER	**604-759-4708**	**604-759-4691**	**C3**
ENVIRONMENT	**604-759-4714 or 604-759-4698**	**604-759-4710**	**C6**
SECURITY	**604-759-4704**	**604-759-4687**	**C10**
SITE SUPERVISOR	**604-759-4684**	**604-759-4689**	**C7**

Appendix B
HBML Accident/Incident Report Form

SECTION 1. ACCIDENT/INCIDENT REPORT

(This page to be completed within the same shift as the event occurrence)

Complete all shaded sections

REPORT NO.

Accident/Incident Category 1: | **Date of Incident:** | **Time of Incident:** ☐ AM ☐ PM

Accident/Incident Category 2:

Accident/Incident Type 1: | **Reported To:** | **Reported By:**

Accident/Incident Type 2:

Location: | **Employer**

Person(s) Involved	Badge #	Department	Supervisor's Name	Manager's Name

Witness(es)	Badge #	Department	Supervisor's Name	Manager's Name

Brief Description of Occurrence

If Spill, indicate volume:

Immediate Action Taken

If spill, estimate quantity in kg of contaminated soil removed:

Consequence Level:

Insignificant	Minor	Moderate	Major	Catastrophic
☐ Level 1	☐ Level 2	☐ Level 3	☐ Level 4	☐ Level 5

Notifications Made:

☐ HSLP ☐ ENV ☐ EA/CR ☐ GM ☐ ERT ☐ Region ☐ Corporate ☐ Government

Insert Photos Here:

Appendix C
NT-NU Spill Report Form

NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE
TEL: (867) 920-8130
FAX: (867) 873-6924
EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

A	REPORT DATE: MONTH – DAY – YEAR	REPORT TIME	☐ ORIGINAL SPILL REPORT, OR ☐ UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT NUMBER _____-_____
B	OCCURRENCE DATE: MONTH – DAY – YEAR	OCCURRENCE TIME		

C	LAND USE PERMIT NUMBER (IF APPLICABLE)	WATER LICENCE NUMBER (IF APPLICABLE)
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION	REGION ☐ NWT ☐ NUNAVUT ☐ ADJACENT JURISDICTION OR OCEAN
E	LATITUDE DEGREES MINUTES SECONDS	LONGITUDE DEGREES MINUTES SECONDS

F	RESPONSIBLE PARTY OR VESSEL NAME	RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION	
G	ANY CONTRACTOR INVOLVED	CONTRACTOR ADDRESS OR OFFICE LOCATION	
H	PRODUCT SPILLED	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES	U.N. NUMBER
	SECOND PRODUCT SPILLED (IF APPLICABLE)	QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES	U.N. NUMBER
I	SPILL SOURCE	SPILL CAUSE	AREA OF CONTAMINATION IN SQUARE METRES
J	FACTORS AFFECTING SPILL OR RECOVERY	DESCRIBE ANY ASSISTANCE REQUIRED	HAZARDS TO PERSONS, PROPERTY OR EQUIPMENT
K	ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS		

L	REPORTED TO SPILL LINE BY	POSITION	EMPLOYER	LOCATION CALLING FROM	TELEPHONE
M	ANY ALTERNATE CONTACT	POSITION	EMPLOYER	ALTERNATE CONTACT LOCATION	ALTERNATE TELEPHONE

REPORT LINE USE ONLY

N	RECEIVED AT SPILL LINE BY	POSITION STATION OPERATOR	EMPLOYER	LOCATION CALLED YELLOWKNIFE, NT	REPORT LINE NUMBER (867) 920-8130

LEAD AGENCY ☐ EC ☐ CCG ☐ GNWT ☐ GN ☐ ILA ☐ INAC ☐ NEB ☐ TC

SIGNIFICANCE ☐ MINOR ☐ MAJOR ☐ UNKNOWN

FILE STATUS ☐ OPEN ☐ CLOSED

AGENCY	CONTACT NAME	CONTACT TIME	REMARKS
LEAD AGENCY			
FIRST SUPPORT AGENCY			
SECOND SUPPORT AGENCY			
THIRD SUPPORT AGENCY			

Appendix D
HBML Rapid Response System

Introduction

Welcome to the Newmont Rapid Response System

What is Rapid Response?

Rapid Response is a system that aims to mitigate and prevent the escalation of adverse consequences in the event that existing risk management controls fail.

Newmont operations already have emergency or risk management procedures in place and the need to implement evacuation procedures has been previously tested. *Rapid Response* provides a corporate-wide, common and tested procedure that will allow an appropriate response to any circumstance, in any geographic location, in a predictable and measurable manner.

What defines a Rapid Response Incident?

"An incident or issue that can have the potential to seriously threaten Newmont's operations, reputation and the safety and well-being of its employees"

Such an incident might:

- Attract intense public, shareholder and customer scrutiny
- Create financial, legal and governmental impacts on the business
- Threaten the Company's reputation, or even its survival

It is important therefore to be watchful of issues or events which outwardly seem harmless but which have wider implications. Incidents are considered against a Severity Matrix of outcomes to assist the judgment of incident outcomes against the appropriate response.

What does the Rapid Response System aim to achieve?

- Provide appropriate support to an affected Site and/or Region in its technical response to an incident
- Minimize the impact on the Company by consideration of the environmental, strategic, legal, financial and public image aspects of the incident
- Ensure communications are being carried out in accordance with legal and ethical requirements
- Identify actions which need to be taken on a broader scale than can be envisaged by those involved in overcoming the immediate hazards

What are the System priorities?

Newmont has the following protection priorities in the event of an incident or issue:

1. Safety of People
2. Protection of the Environment
3. Safeguarding of Reputation, Assets and Commercial Considerations

Introduction

Your Individual Profile Pack

What is a Profile Pack?

Members of the Rapid Reponses system can now generate an Individual Profile Pack to ensure they have the system information they need when responding to a Rapid Reponses incident. These Profile Packs contain both mandatory and user selectable system information, and be edited and reprinted at anytime. Teams may also submit relevant information that can be stored centrally for all team members to access.

What's in the Profile Pack?

Role Checklists including Pre-Incident Responsibilities

Role checklists have been developed for each role to assist with the management of Rapid Response incidents. Each checklist provides a series of actions, prompts and interfaces to guide and assist strategic team response.

The role checklist for your nominated role(s) will be automatically included in your pack

Additional Rapid Response Documentation

The Rapid Response system contains additional supporting documents to assist team members manage certain elements of an incident. These documents can now be selected for inclusion in your Individual Profile Pack, and are grouped under the following headings:

- Strategic Action Prompt Sheets
- Communication Guidelines
- Identified Risk
- People Strategy
- Recovery Planning
- Forms

Certain documents have been considered mandatory and are included in all Rapid Response Profile Packs. These include standard reporting forms, the Severity Matrix and introduction section.

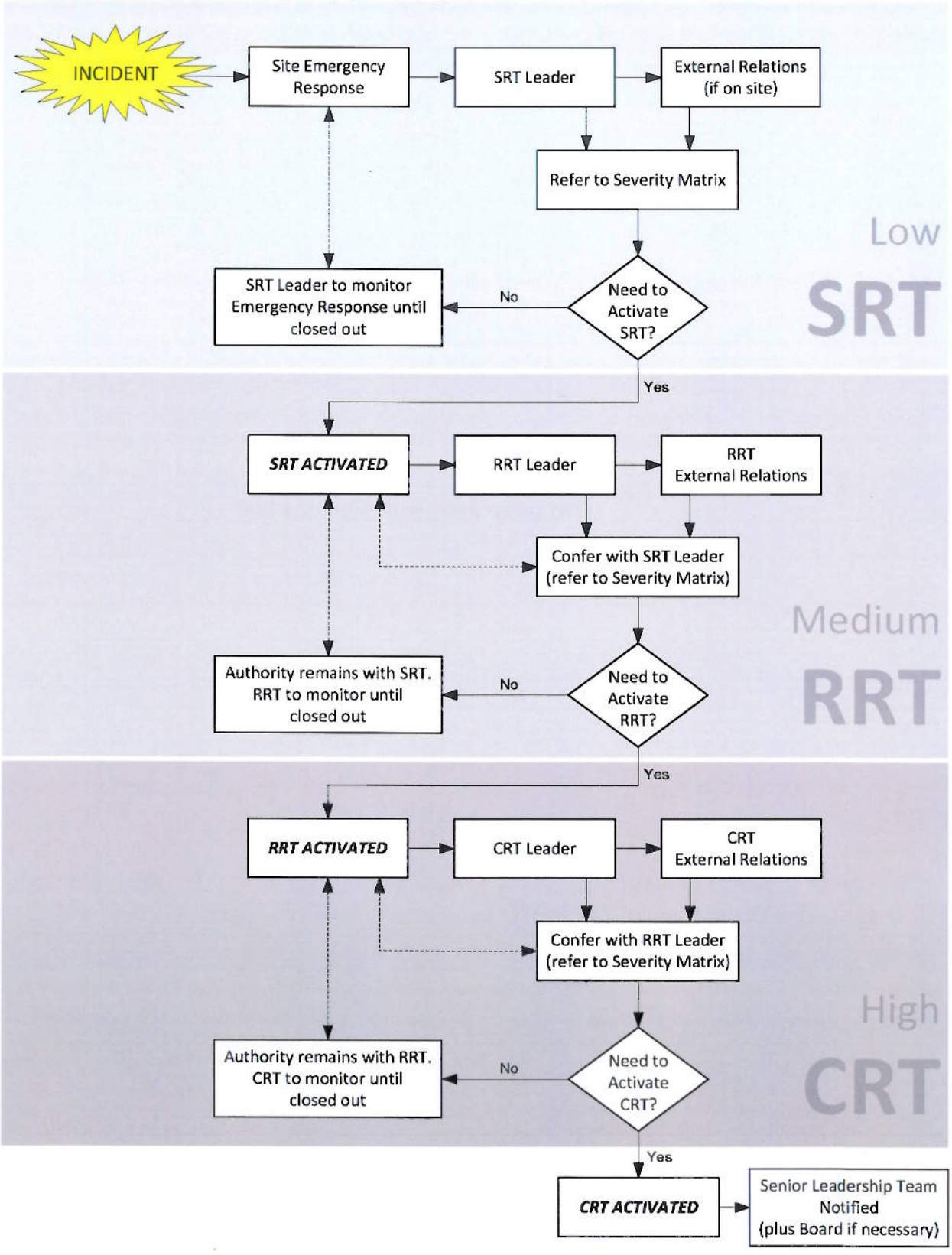
Site Specific Information

Information that is specific to your location may be added to the ***Fast Facts*** section of web site and can then be selected for inclusion in profile packs. This may include maps or local guides, and should be submitted via the Rapid Response Coordinator at your site.

Rapid Response Activation

Rapid Response Activation

The following activation process is followed when considering a potential Rapid Response event. This process confirms notification between Team Leaders and External Affairs during activation, while ensuring continual consultation with the Severity Matrix throughout the process.



This page intentionally left blank

Rapid Response Severity Matrix

All Rapid Response events are considered against the following matrix. It provides a description of the types and/or outcomes of Rapid Response events, the measurement of severity and the teams that would usually be involved.

The highest severity rating for any individual risk factor determines the overall severity rating of the incident or issue.

Response by / Outcome	Low	Medium	High
	SRT	SRT & RRT	SRT, RRT & CRT
Personal injury	Injury involving hospitalization	Single fatality or multiple injuries	Multiple fatalities
Missing personnel	One or more people not accounted for	One or more people confirmed missing	One or more people confirmed missing >24hrs
Terrorism, Kidnap, Extortion, Sabotage	Threats to individuals or structures from known individual or organization	Confirmed threats without actions	Escalated threats or actions involving harm and/or significant damage
Environmental	Low level incident, site contained, requiring regulatory reporting	Incident resulting in offsite contamination and regulatory reporting	Significant incident which has across company implications
Production loss	Reduction of >25% normal capacity for a period of up to one month	Total loss of production or >25% loss for more than one month	Total loss of production for more than one month
Technical difficulty	Inability to operate at design capacity due to known problem	Inability to operate at design capacity due to unknown problems	Continued operating problems >3 months
Major contractor, supplier or partner Issue	No disruption to supply or activities	Supply or services disrupted with threat to production	Joint venture partner in crisis
Financial issue	Site accounting issue with ability to resolve	Cashflow or accounting issues involving multiple sites or no resolution on site	Cashflow or accounting issues requiring public disclosure
Community / NGO action	No immediate likelihood of media interest	Community threat or use of media for publicity	Likelihood of national media attention
Media coverage	No company response warranted	Response required to local or state media article	Response required to nationwide media attention
Regulatory authority action	Action relating to site incident or issue	Action which has implications across multiple sites	Action with company wide implications
Government action	No loss of control	Newmont controlling with higher than normal government interest	Threat of government interference with operations
Civil Unrest	Local disruption with no imminent threat to site	Local disruption with possibility of affecting operations	Civil unrest or hostile threat from change in government
Labor Unrest	Local disruption affecting operations/production	Disruption which has implications across multiple sites	Disruption with company wide implications
Loss of Senior Personnel	Accident/illness adversely affecting normal operational management capabilities	Accident/illness affecting normal regional management capabilities	Accident/illness affecting Newmont corporate management capabilities
Other Criminal Acts	Illegal act which threatens to cause local disruption	Illegal act which threatens to cause national/international disruption	Illegal act which threatens Newmont's corporate governance reputation
Business / publicity opportunity	Low level discussions without commitments	Formal discussion or prepared statement required	Opportunity has company wide implications

Note: Non-operational issues may result in a Medium or High severity ranking and may not involve an SRT or RRT

Rapid Response Activation

What is the Rapid Response System Structure?

Corporate Response Team (CRT)

The CRT is based in Denver and it's primary role is to minimize the financial impact on the Company by assessing the consequences of any incident or issue and managing those with potential enterprise-wide impact whilst sheltering, supporting and advising any RRT and SRT response.

First Flight Team (FFT)

The CRT may establish a First Flight Team (FFT). The primary role of a FFT is to travel to an affected Site or Region and provide direct assistance including adopting relief SRT and/or RRT positions if required.

Note: Once mobilized, FFT members report directly to the Site or Region Rapid Response Team Leader at the affected location.

Region Response Team (RRT)

Based in each Regional head office, the primary role of the RRT is to ensure the well being of people involved in, or affected by, a Newmont incident or issue. This is achieved by providing shelter, support and advice to any operational response and carrying out strategic planning to get Region operations back to normal as quickly as possible whilst liaising with the Newmont CRT.

Note: Some Regions may not have sufficient personnel available to establish a "full" RRT. In this case pre-identified Site personnel may be required to assist the RRT.

Site Response Team (SRT)

Newmont has a Site Response Team (SRT) at each of its operating Sites.

The primary role of the SRT is to oversee the operational emergency response and the well being of people involved in, or affected by, an incident or issue whilst liaising with the RRT to develop plans to get operations back to normal as quickly as possible.

Rapid Response Structure