APPENDIX Q. SPILL CONTINGENCY PLAN

SPILL CONTIGENCY MANAGEMENT PLAN:

LUPIN MINE WINTER ACCESS ROAD PROJECT

Nov 2024

Emergency Contact Information

Organization	Contact	Location	Telephone/Radio
Discovery Mining Services (c/o Lupin Mines)	Rod Brown	Yellowknife	867-920-4600
JDS (c/o Lupin Mines)	Darren Kress	Yellowknife	204-558-6023
Stantec	Steve Bundrock	Calgary	403-990-5443
NT-NU Spill Centre	Inspector	Yellowknife	867-767-9188
Government of Northwest Territories	Resource Management Officer	Kugluktuk	867-982-4306
Crown-Indigenous Relations and Northern Affairs	Field Operations	Iqaluit	867-975-4295
Mackenzie Valley Land and Water Board	Regulatory Specialist	Yellowknife	867-766-7464
Nunavut Water Board	Licencing Department	Gjoa Haven	867-360-6338

Plain Language Summary

This Plan describes how people are trained and what needs to be done to respond safely to a spill of fuel or other hazardous material while building and using the winter road from Lac de Gras to Lupin.

Revision History

Revision #	Date	Section	Summary of Changes	Author	Approver
1	Apr 2024	All	New document	N. McLaren	

Contents

1.0 Introduction

A spill is an unplanned or uncontrolled release of a regulated or hazardous material, either as a solid, liquid or gas. Spills associated with Lupin Mine Inc. (Lupin Mine) Lupin Winter Access Program (the Program) may occur along the winter road route either on ice or on a portage overland. Regardless of the type or quantity of material involved, all work areas must implement measures to reduce the potential for spills and have an action plan for responding to spills. This Spill Contingency Plan (the Plan) describes methods for preventing and responding to spills during the Program and considers the guidance provided in the documents listed in Table 1.

1.1 Scope

The purpose of the Program is to construct and operate a portion of the Tibbitt to Contwoyto Winter Road (TCWR) route from the Ekati Mine turnoff on Lac de Gras in the Northwest Territories (NT; Lac de Gras) to the Lupin Mine in Nunavut (NU; Lupin) to mobilize and demobilize equipment and supplies that may be used for ongoing reclamation of Lupin in the Kitikmeot Region of Nunavut (the Program).

The Program includes transportation only of equipment and supplies such as bulk fuel, lime, and explosives; materials storage, other than supplies that may be housed in the emergency shelter, is outside of the scope of the Program.

This Plan is effective for the duration of the land use operations, commencing upon approval of this Plan and effective through winter road construction, operations, and closure activities for a period of up to five (years) or as otherwise permitted.

The Plan considers spills to snow or ice only.

Table 1 Relevant guidance documents including legislation, permits and licences.

Document	Authority
Contingency Planning and Spill Reporting in Nunavut: A guide to the new regulations	Government of Nunavut
Environmental Guidelines for the Construction, Maintenance and Closure of Winter Roads in the Northwest Territories (1993)	Government of Northwest Territories
A Guide to the Spill Contingency Planning and Reporting Regulations (2011)	Government of Northwest Territories
Nunavut Water Nunavut Surface Rights Tribunal Act (2002) and *Nunavut Water Regulations* (2013)	Indigenous and Northern Affairs Canada
Territorial Lands Act (1985) and *Land Use Regulations* (2016)	Indigenous and Northern Affairs Canada
Mackenzie Valley Resource Management Act (1998)	Government of Canada
Northwest Territories Lands Act (2014)	Government of Northwest Territories
Northwest Territories Lands Use Regulations (2014)	Government of Northwest Territories
Northwest Territories Waters Regulations (2014)	Government of Northwest Territories
Environmental Protection Act (1988)	Government of Northwest Territories
Waters Act (2014)	Government of Northwest Territories
Spill Contingency Planning and Reporting Regulations (1993)	Government of Northwest Territories, Nunavut
Canadian Environmental Protection Act (1999)	Environment and Climate Change Canada

Environmental Emergency Regulations (2003)	Environment and Climate Change Canada
Transportation of Dangerous Goods Act (1992)	Transport Canada
Transportation of Dangerous Goods Regulations (2012)	Transport Canada
Hazardous Products Act (1985)	Health Canada
Canada Labour Code (1985)	Employment and Social Development Canada
Canada Occupational Safety and Health Regulation (1986)	Employment and Social Development Canada
Screening Decision Report	Nunavut Impact Review Board
Approval Without a Licence	Nunavut Water Board
Land Use Permit	Crown-Indigenous Relations and Northern Affairs Canada Government of Northwest Territories

1.2 Objectives

Lupin Mine strives to meet and exceed best management practices regarding materials handling, however, it is recognized that accidental spills and unplanned releases may occur. Accordingly, the objective of this Plan is to:

- Ensure employees and contractors are trained to respond to spills in an effective manner; and
- Outline appropriate spill response measures to ensure personnel safety and environmental protection.

1.3 Site Description

The Program occurs along an existing winter road route established in the 1970's and since used intermittently to service the Lupin Mine and the Jericho Mine (the Winter Road). The Winter Road route predominantly traverses lakes, with few portages where the road occurs overland. Of the 213 km, 95 km occur in Northwest Territories and 118 occur in Nunavut. Seven (7) portages occur in Northwest Territories and there is one (1) portage in Nunavut.

The Winter Road occurs entirely above the tree line, with overland portions traversing the barrenlands of the Southern Arctic Ecozone and the Tundra Shield Low Arctic Ecoregion, within the Slave Geologic province. Portages generally follow low-lying terrain found between lakes along the road route (EBA 2001, GNWT 2012).

The Winter Road is accessed in mid- to late-winter only. At this time, ground is frozen and snow covered, and ice thickness on lakes is up to 2 m thick.

1.4 Plan Management

This Plan is intended to fulfill requirements associated with the water licence and land use licences and permits as well as existing legislation. The Plan will be updated to maintain a current contact list, as needed.

The Plan will be reviewed annually by the Project Manager and updated as needed. When material changes occur, the updated document will be issued externally as needed.

1.5 Plan Implementation

This Plan is effective upon approval and is valid throughout all phases of the Project.

The Project Manager or designate is responsible for Plan implementation.

A copy of this Plan is maintained on site at Lupin.

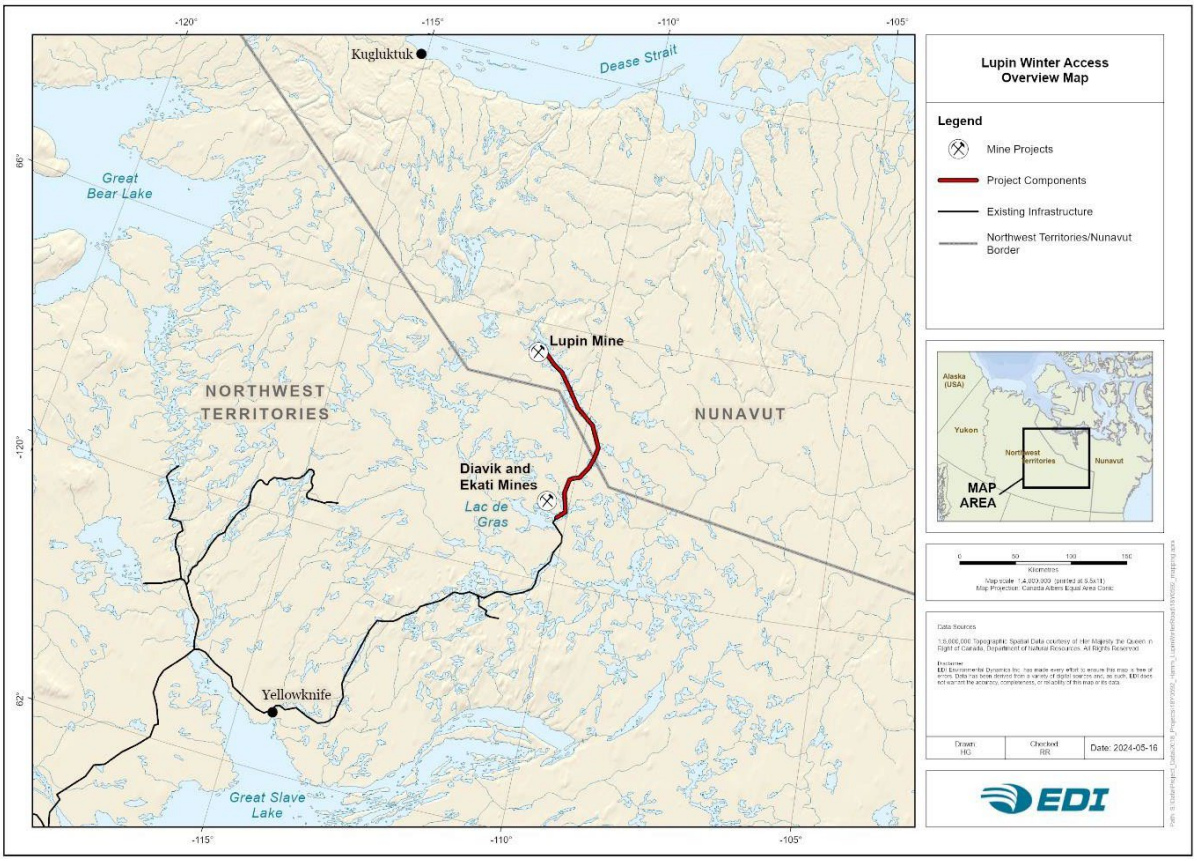

Figure 1 Lupin Mine Winter Program location.

2.0 Roles and Responsibilities

Lupin Mine is responsible for activities associated with winter access to the Lupin Mine, including implementation and management of this Plan, and directing, documenting, and reporting pertaining to closure activities.

Lupin Mine's contact information is provided below.

Lupin Mines Incorporated
c/o Mandalay Resources Corp.
Suite 330-76 Richmond Street
Toronto, ON Canada M5C 1P1
Contact: Kellie Leedham

Phone: (403)808-1534
Email: kellie@falkirk.ca

2.1 Staff, Contractors, Suppliers, and Vendors

All personnel conducting activities on site, including staff, contractors, suppliers and visitors, are required to implement this Plan as it pertains to their activities on site. Specifically, these responsibilities include:

- Taking all necessary steps to minimize the chance of spills when working with materials that may pose a risk to worker health and the environment;
- Cooperating with your supervisor and/or Lupin Mine management to implement a spill prevention program;
- Carrying out only those duties and tasks that you are experienced at and trained to perform;
- Where there is uncertainty, asking questions and bring concerns to the attention of your supervisor when working with products that pose potential environmental and health risks;
- Responding to spills for which you are responsible or discover, and for which you have the requisite training and equipment; and
- Reporting all spills, regardless of size, to your supervisor or Lupin Mine management in a timely manner.

2.2 Managers and Supervisors

Managers and supervisors have a responsibility to ensure that staff, contractors, consultants and visitors

have been trained in Lupin Mine spill response expectations and procedures. Additional supervisor and

manager responsibilities include:

- Maintaining a no blame work environment in initiating a spill response and related follow-up actions;
- Ensuring site-specific and material-specific training is provided to all departments and staff;
- Ensuring there are appropriate and sufficient spill response supplies in work area for the hazard characteristics and quantities of materials handled or transported;
- Provide assistance in response to chemical spills including the coordination of additional response personnel or equipment;
- Maintain records regarding inspections, personnel training, emergency equipment testing and spill kit maintenance; and
- Contact appropriate government agencies and emergency services where appropriate.

An emergency contact list is provided above in the first pages of this document as well as

Lupin Mine's Management emergency contacts in Appendix A.

3.0 Spill Prevention

Successful spill prevention is based on safe handling and transport of materials.

3.1 Product Inventory

Table 2 provides a list of materials expected to be transported along the winter road. Note that products are not stored on site.

Should the need for temporary storage arise, such in the event of an emergency response, secondary containment will be established, and the inspector will be notified.

Table 2 Petroleum and chemical products typically transported along the winter road.

Material	Amount	Container
ANFO	10,400 kg	Bags or sticks, on bulk haul trucks
Diesel	6	450 L truck-mounted tidy tanks
	1,500,000	Bulk haul trucks
	Up to 5	210 L drums in secondary containment, in emergency shelter
Gasoline	10	50 L jerry cans
Lime	40,000 kg	Bulk haul trucks
Propane	Up to 5	100 lb cylinders, in emergency shelter
Spent spill response materials	Various	205 L drums or lined mega bags
Various lubricants	5	5 gal pails
	40,000 L	Bulk haul trucks

3.2 Material Handling and Disposal

Material handling during the program will be minimal as most materials will be transported along the Winter Road, with loading and unloading to occur at separately permitted facilities. Instances where materials may be handled includes during a spill response or vehicle and equipment refuelling during Construction. Considerations for proper material handling include:

- Conduct refueling and equipment repair in a designated area within secondary containment or utilizing a drip tray;
- Use equipment or seek assistance when transporting heavy or awkward containers;
- Use funnels and spill containment trays when pouring or transferring chemicals from one container to another; and
- Utilize proper PPE when handling hazardous materials.

Disposal is limited to the disposal of spent spill response materials. Should a spill and related cleanup occur, spend response materials will be backhauled for proper disposal off site.

4.0 Spill Response

The nature of a spill response will vary depending upon the situation, the material spilled and location of the spill and the spill receiving environment. In all spill response scenarios, the following steps should be taken to ensure employee safety and environmental protection are maintained:

1. Ensure your own safety and the safety of your coworkers by:
    a. Stop what you are doing;

   b. Stay clear of the spill;
   c. Warn others nearby,
   d. Shut down nearby equipment;
2. If required, and if it is safe to do so, assist injured or contaminated persons;
3. Assess the situation. Notify and report, as needed:
   a. Emergency
      i. if the spill poses a significant risk to persons, property or the environment, call for help and contact your supervisor or the Project Manager immediately;
   b. Non-emergency: proceed with appropriate spill response;
4. Consult the Safety Data System (SDS) sheets for exposure risk;
5. Put on appropriate personal protective equipment (PPE; gloves, safety glasses, apron, footwear);
6. Contain the spill as outlined in the following sections;
7. Label and prepare containers of waste and spent spill response materials for disposal in accordance with Sections 3.1 and 3.2;
8. Conduct spill reporting as outlined in Section 5;
9. Where required, participate in incident investigations and follow-up measures.

4.1 Spills to Snow

In the event of a spill to snow:

- If flowing fluid, construct an ice berm or barrier downslope of the spill by compacting snow and spraying with water (if conditions permit) or use synthetic, impervious sheeting;
- Compact snow around the perimeter of the spill area;
- Locate the low point of the spill area and clear channels in the snow towards this low point, to allow free product to flow into the low point;
- Recover free product through manual or mechanical means including shovels, heavy equipment and pumps, or if approved, combust in situ;
- Absorb petroleum residue with synthetic sorbent socks, pillows, pads or granular materials;
- Mechanically recover all contaminated snow and ice.

4.2 Spills to Ice

In the event of a spill to ice:

- Follow procedures for a spill to snow.

If materials penetrate and are under the ice:

- Drill holes through ice using ice auger to locate fuel/petroleum product;
- Once detected, cut slots in the ice using chain saws and remove ice blocks. Light non-aqueous phase liquids will collect in openings in the ice;
- Recover free product through manual or mechanical means including scoops or pumps, or, if approved, combust in situ; and
- Absorb petroleum residue with synthetic sorbent socks, pillows, or pads.

4.3 Spill Kits

Spill kits on site may vary based on location and supplier. Contents of typical small and large kits are presented below.

A typical small (68 L) spill kit may contain the following:

- 50 oil sorbent pads
- 4 small pillows
- 2 large pillows
- 4-4 inch socks
- 1 plug patty (instant leak-stop)
- 1 pair of nitrile gloves
- 1 pair of splash goggles
- 1 disposable respirator

A typical large (220 L) spill kit may contain the following:

- 4 socks (3" x 10')
- 5 socks (3" x 4')
- 50 pads
- 5 pillows
- 1 roll
- 1 drain cover
- 1 caution tape
- 2 pairs nitrile gloves
- 2 pairs safety goggles
- 2 protective coveralls
- 10 disposable bags
- 1 instruction book

Spill kits are inspected at the start of each field season and following each spill response to ensure contents are sufficient.

5.0 Reporting and Documentation

5.1 Safety Data System (SDS)

SDS sheets are maintained onsite at the Lupin Mine. The SDS sheets are reviewed annually at the start of the field program to ensure that appropriate and current SDS sheets are available.

5.2 Spill Reporting

As mentioned in Section 4, spill reporting is a key component of the spill response efforts. Once it is safe to do so, the first responder shall collect the following info:

1) Date and time of spill
2) Location of spill

3) Direction the spill is moving
4) Name of contact person at location of spill, and phone number where applicable
5) Material and quantity spilled
6) Cause of spill
7) Whether spill is contained or stopped
8) Action taken to contain, recover, clean-up and dispose of spilled material

All spills and unplanned releases are reported to the Project Manager. Materials and quantities listed in Appendix B that are spilled or released in an unplanned manner require external reporting. In the event of a reportable spill and once it is safe to do so, the Project Manager or designate will initiate notification of the following:

1) Lupin Mine Project Manager.
2) NT-NU 24-hour spill report line.
3) CIRNAC and/or GNWT Inspector.

Following initial notification, the Project Manager will complete a NT-NU Spill Reporting Form. The completed form must be submitted to the Inspector within seven calendar days of the incident.

A detailed follow-up report must be submitted to the Inspector within 30 days of the incident.

6.0 Training

All attendees to site participate in a site orientation which outlines onsite hazards and roles and responsibilities regarding material handling, storage, and spill response. Spill kit contents and deployment are periodically reviewed at weekly site safety meetings.

All attendees to site must be trained in Workplace Hazardous Materials Information System (WHMIS) procedures.

7.0 References

Canada Labour Code R.S.C., 1985, c. L-2

Canada Occupational Safety and Health Regulation. 1986. SOR/86-304

Canadian Environmental Protection Act (CEPA). S.C. 1999, c.33

Environmental Emergency Regulations SOR/2003-307

Environmental Protection Act. R.S.N.W.T. 1988, c.E-7

Hazardous Products Act R.S.C., 1985, C. H-3

Mackenzie Valley Resource Management Act. S.C. 1998, c. 25

Mine Health and Safety Act, SNWT (Nu) 1994, c25

Mine Health and Safety Regulations, NWT Reg (Nu) 125-95

Northwest Territories Lands Act. S.N.W.T. 2014,c.13

Northwest Territories Lands Use Regulations. R-012-2014

Northwest Territories Waters Regulations. R-019-2014

Nunavut Waters and Nunavut Surface Rights Tribunal Act. S.C. 2002, c.10

Nunavut Waters Regulations. SOR/2013-69

Spill Contingency Planning and Reporting Regulations R-068-93

Territorial Lands Act. R.S.C.. 1985, c. T-7

Territorial Land Use Regulations. SOR/2016 R-32, s.1.

Transportation of Dangerous Goods Act (TDGA). S.C. 1992, c.34

Transportation of Dangerous Goods Regulations. SOR/2012-245

Government of the Northwest Territories, 2011. *A Guide to the Spill Contingency Planning and Reporting Regulations*. Environment and Natural Resources. Updated March 2011.

Government of the Northwest Territories, 2003. *Environmental Guidelines for the Construction, Maintenance and Closure of Winter Roads in the Northwest Territories*.

Government of Nunavut, 2011. *Contingency Planning and Spill Reporting in Nunavut: A guide to the new regulations*.

Appendix A. Lupin Mine Emergency Contact List

Name	Role	Phone
Daniel Jenkins	JDS - Project Manager	+1-604-813-1792
Darren Kress	JDS - Construction Manager	+1-306-575-7027
Jon Melnyk	JDS - Project Coordinator	+1-403-862-2994
Darwin Ziprick	JDS – Health and Safety Lead	+1-250-575-7179
Malcolm Mclean	DMS - President	+1-867-920-4600
Rod Brown	DMS – Vice President	+1-867-920-4600
Jennifer Ryden	DMS – Logistics Manager	+1-867-445-1637
Kellie Leedham	Mandalay Consultant	+1-403-808-1534

Appendix B. Reportable Spill Volumes

Substance	Reportable Quantity
Explosives • Compressed gas (toxic/corrosive) • Infectious substances • Sewage and Wastewater (unless otherwise authorized) • Radioactive materials • Unknown substance	Any amount
Compressed gas (Flammable) • Compressed gas (Non-corrosive, non-flammable)	Any amount of gas from containers with a capacity grater than 100L
Flammable liquid	≥100 L
Flammable solid • Substances liable to spontaneous combustion • Water reactant substances	≥ 25 kg
Oxidizing substances	≥ 50 L or 50 kg
Organic peroxides • Environmentally hazardous substances intended for disposal	≥1 L or 1 kg
Toxic substances	≥ 5 L or 5 kg
Corrosive substances • Miscellaneous products, substances or organisms	≥ 5 L or 5 kg
PCB mixtures of 5 or more ppm	≥ 0.5 L or 0.5 kg
Other contaminants--for example, crude oil, drilling fluid, produced water, waste or spent chemicals, used or waste oil, vehicle fluids, wastewater.	≥ 100 L or 100 kg
Sour natural gas (i.e., contains H_2S) Sweet natural gas	Uncontrolled release or sustained flow of 10 minutes or more
Flammable liquid Vehicle fluid	≥ 20 L When released on a frozen water body that is being used as a working surface
Reported releases or potential releases of any size that: 1. are near or in an open water body;	Any amount

2. are near or in a designated sensitive environment or habitat; 3. Pose an imminent threat to human health or safety; or 4. Pose an imminent threat to a listed species at risk or its critical habitat	

Note: L = litre; kg = kilogram; PCB = Polychlorinated Biphenyls; ppm = parts per million
Source: https://www.gov.nt.ca/ecc/en/services/report-spill (September, 2024)