

Lupin Mines Incorporated

A wholly owned indirect subsidiary of Mandalay Resources Corporation

Lupin Mine Site

Nunavut, Canada

Monitoring and Inspection Schedule

(Care and Maintenance Plan)

March 2016

Lupin Mines Incorporated
Mandalay Resources Corporation
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Document Control

Revision No	Date	Details	Author	Approver
1.0	01/05/13	Monitoring and Inspection schedule while Lupin mine is in Care and Maintenance and in un-occupied status.	D. Vokey	W. Osborne
2.0	25/03/16	Updated to reflect new water licence Updated contact and general information Removed discussion about site occupancy in 2013 Updated list of tanks that are out of service	SRK	K. Lewis

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1 Introduction

Lupin Mines Incorporated (LMI), a wholly owned indirect subsidiary of Mandalay Resources Corporation, has prepared a Care and Maintenance Plan (the Plan) with respect to the requirements within Water Licence Number 2AM-LUP0914, Part I, Item 2. This Monitoring and Inspection Schedule (Schedule) is a supplement to the Care and Maintenance Plan and outlines LMI's plan to provide site coverage during periods when the mine site is un-occupied.

An annual review of the Plan, its appendices and supplements takes place and revisions are submitted as necessary with the annual report. The current Type A water licence 2AM-LUP1520 (Water Licence) for the Lupin Gold Mine (Lupin or the Lupin Mine) is valid until August 18, 2020.

1.1 Project and Company Information

Mandalay is a Canadian based company focused on producing assets in Australia, Chile and Sweden, a development project in Chile and the exploration and development of the past-producing Lupin Gold Mine and the Ulu gold project, both located in Nunavut, Canada.

Mandalay purchased Elgin Mining Inc., which owns LMI and the Lupin Mine, in September 2014. Lupin was in operation from 1982 to 2005 with temporary suspensions of activities between January 1998 and April 2000, and again between August 2003 and March 2004. The mine resumed production in March 2004 until February 2005. Since 2005, the Site has remained in Care and Maintenance.

General site maintenance and facilities upgrades are underway at the Lupin Mine to assess operational requirements. The activities underway were screened by the Nunavut Impact Review Board under file 99WR053 and approved by the Nunavut Water Board under Water Licence 2AM-LUP1520. Surface exploration is conducted under Water Licence 2BE-LEP1217. All camp infrastructure required for the surface exploration program currently exists at the Lupin Mine

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Effective Date: March 18, 2016

Distribution List:

Karyn Lewis	General Administration
Discovery Mining Services	Site Contractor
Golder Associates	Site Consultant
SRK Consulting	Site Consultant

Additional copies of this Plan are available from General Administration. This Plan will be posted in key locations at the site, and all employees and contractors will be made aware of its contents.

1.2 *Site Location*

The Lupin Mine is located in the Kitikmeot Region, Nunavut, 400 km north of Yellowknife, Northwest Territories and 285 km southeast of Kugluktuk, Nunavut. The airport serving this Site is at 65° 46'00" N and 111° 14'41" W. The Site is on the western shore of Contwoyto Lake, approximately 60 km south of the Arctic Circle.

1.3 *Environmental and Sustainable Development Policy*

Lupin Mine Incorporated (LMI) is committed to maintaining a safe, clean, compliant and respectful work environment. LMI looks to our employees, contractors and managers to adopt and grow a culture of social responsibility and environmental excellence. Together we achieve this by:

- Promoting environmental stewardship in all tasks. Nothing is too important that it cannot be done in a clean and responsible manner. We strive towards maintaining a zero-incident work place.
- Recognizing that we have a shared responsibility as stewards of the environment in which we operate. We will not walk away from a non-compliant act.
- Identifying, managing and mitigating environmental, business and social risks in an open, honest and transparent manner.
- Planning our work so it is done in the cleanest possible manner and executing work according to plan.
- Continually improving environmental and operational performance by setting and reviewing achievable targets.
- Providing appropriate and necessary resources in the form of training, personnel and capital, including that required for closure planning and reclamation.
- Managing our materials and waste streams, maintaining a high degree of emergency response preparedness and minimizing our operational footprint to maintain environmental protection at all stages of project development.
- Procuring goods and services locally, where available, and favouring suppliers with environmentally and socially responsible business practices.
- Seeking to understand, learn from and mitigate the root causes of environmental incidents and near misses when they do occur.
- Employing systems and technology to achieve compliance, increase efficiency and promote industry best practices in development, operations and environmental stewardship.

- Working with stakeholders to identify and pursue opportunities for sustainable social and economic development and capacity building.
- Conducting early and ongoing stakeholder engagement relevant to the stage of project and mine development and operation.
- Recognizing diversity in the workplace and building meaningful relationships with all stakeholders in a timely, collaborative and transparent manner.

Through implementation of this policy, LMI seeks to earn the public's trust and be recognized as a respectful and conscientious employer, neighbor and environmental steward.

1.4 Purpose and Scope

This schedule is designed to outline management and monitoring measures on site while the Lupin Mine is under care and maintenance and is un-occupied.

The objective of the schedule is to:

- Identify areas requiring monitoring and inspection,
- Outline method of recording and documenting the monitoring and inspection, and
- Provide a schedule for site visits during the un-occupied phase.

2 Occupation of the Site

Measures are taken to secure the site and protect the environment during periods that the site is un-occupied. All buildings are locked and secured. All fuel tank valves are closed and all tanks containing fuel in the Main Tank Farm (MTF) and Satellite Tank Farm (STF) have the valves closed and locked. All water and sewer lines are drained. All food removed from the camp, and all garbage incinerated and/or removed from site for off-site disposal at an approved facility in Yellowknife, NT.

Responsibilities of LMI personnel during the Monitoring and Inspection visits include:

- Inspect hydrocarbon storage tanks and associated piping at the MTF, STF, Waste Oil Tank Farm (WOTF), all generators, Volcano Glycol Boiler tank, and all tanks connected to heating appliances for signs of leaking and/or compromised integrity;
- Inspect all drums and oil cubes in the hazardous waste storage area for signs of leaking and/or compromised integrity;
- Inspect all drums and oil cubes in the Third Party Berm for signs of leaking and/or compromised integrity;
- Implement *Lupin Mine Spill Contingency Plan*, as needed;
- Inspect sewage lagoon dams for erosion, tension cracks, etc. and monitor water levels;

- Inspect TCA dams for signs or erosion, tension cracks, etc., and monitor water levels in each pond;
- Monitor run-off and water movement from snowmelt and divert flows if necessary;
- Monitor wildlife presence and/or migration; and
- Inspect all buildings for signs of entry and/or recent damages and/or deterioration.

3 Record Keeping

During each site visit LMI will utilize checklists for each area indicating the date and time of the inspection, as well as the name(s) of the person(s) involved. These checklists will be maintained on file and be available to the Indigenous and Northern Affairs Canada (INAC) Inspection Officer (the Inspector) upon request. A copy of the checklists can be found in Appendices A, B, and C.

4 Monitoring and Inspection Schedule

LMI will commence performing the site visits to conduct the monitoring and inspections during the last week of May. At the start of May LMI commences communication with personnel working in the region (i.e. Sabina's Back River project, MMG's Izok project, and Xstrata's Hackett River project) weekly (at a minimum) to assist in determining when signs of the onset of the freshet become evident. LMI will commence monitoring the daily weather recordings made at Environment Canada's Lupin weather station and posted on http://www.wunderground.com/weather-forecast/CA/Lupin_Airport.html the second week of May. Based on this communication and temperature trends noted in the Lupin weather forecast, LMI may make a site visit earlier than the last week of May.

LMI will continue to make bi-weekly site visits to monitor and inspect the site during freshet in accordance with Part E(6g) of the Water Licence. LMI will undertake routine monitoring and inspection visits monthly thereafter until fall freeze up as stipulated in Part E(6g) of the Water Licence. Additional site visits will be added if site conditions warrant it. LMI has on standby, a crew of operators, labourers, and supervisory staff that can and will be mobilized to site with minimal notification, should a situation occur that requires immediate attention.

At the start of freshet LMI will collect water samples from the tank farm secondary containment area. Upon receipt of analytical results, LMI will notify the Inspector of the results, and request approval to dewater the secondary containment areas. Should the water not meet the discharge criteria, LMI will pump the contaminated water into empty tanks and/or drums and hold it pending treatment or off-site disposal.

If the water level in any of the ponds associated with the mine site has risen to an unacceptable level, LMI will notify the Inspector of this immediately, and advise the Inspector that a crew will be mobilized to control the water levels by pumping and/or syphoning as agreed to by LMI and the Inspector.


Appendix A: Fuel Containment Inspection Checklist – Tank Farms

Fuel Containment Inspection Logs	Date & Time:	
Bi-Weekly//Monthly	Inspector:	
Inspection Item	COMMENTS	OK ? (Y / N)
Main Tank Farm		
Measured Depth of water in berm?? (Cm)	No water in any of the berms before freeze up	
Main Pump Shack	Temporarily out of service	
Pump Station 1	Temporarily out of service	
Pump Station 2	Temporarily out of service	
Jet A Pump station	Temporarily out of service	
Tanks M3, M5 to M12, M14	All tanks empty and disconnected from piping header. All tanks temporarily out of service.	
Marlin tanks M16 - M21	M16 contains oily waterAll others are empty and temporarily out of service.	
Tank M22	Tank is empty. Temporarily out of service	
Tanks M15, M13, M1, M2 and M4	All tanks contain fuel. No leaks observed.	
IND-11 is a "pup" tanker trailer located in 3rd party berm.	Empty	
PM check Main Tank Farm		
Inspect fuel pumps & control systems at Main Pump Shack	Temporarily out of service	
Inspect active tanks for structure damage & leaks.	Only M15, M13, M1, M2 and M4 contain fuel	
Inspect valves, piping & connections for damage & leaks.	Only M15, M13, M1, M2 & M4 are connected	
Inspect fuel pumps & control systems at Pump Station 1 & 2.	Temporarily out of service	
Inspect line from transfer pump to underground line to Sat Farm	Permanently out of service	
Inspect liner and berm structure	Liner on SE corner of Tank 14 & 15 is exposed 10 m along South berm and needs covered	
Inspect fuel line where it crosses the Tailings Service Road	Permanently out of service	
Satellite Tank Farm		
Measured Depth of water in berm?? (Cm)	Water in berm?	
Fuel Truck Station	Temporarily out of service	
Powerhouse Pump Station	Temporarily out of service	
	Out of service	
Fuel Dispensing Station DIESEL ONLY		
Fuel Transfer Line to Powerhouse Pump stn	Out of service, valves closed	
Fuel Transfer Line to Fuel Truck stn	Temporarily out of service	
S1 to S10	Out of service. No leaks observed.	
S11 and S12	MT. Temporarily out of service. (Gasoline tanks)	
PM check Satellite Tank Farm		
Inspect fuel inlet at Diesel dispensing Station	No issues	
Inspect Diesel fuel delivery meter, nozzles & hose for leaks.	Out of service. Valves closed and locked.	
S1 to S10 tank line valves, piping & connections for damage & leaks. Each tank has a valve and each jct of the tank line to delivery line has a valve	Out of service. Valves closed and locked.	
Inspect fuel storage tanks for structure damage & leaks.	No issues	
Inspect line where it enters from the Tailings Service Road	Permanently out of service, valves closed	

Appendix B: Fuel Containment Inspection Checklist – Other Tanks

Fuel Containment Inspection Logs	Date and Time:	
Bi-Weekly//Monthly	Inspector:	
Inspection Item	COMMENTS	OK ? (Y / N)
Camp Generator Two tanks		
Inspect fuel storage tanks for structure damage & leaks.	New double wall tanks	
Inspect valves, piping & connections for damage & leaks.	Flexible hose pending engineer deign	
Mechanical Shop Generator Tank		
Inspect fuel storage tanks for structure damage & leaks.	Has secondary containment	
Inspect valves, piping & connections for damage & leaks.	Temp out of service	
Incinerator Tank		
Inspect fuel storage tank for structure damage & leaks.	New double wall tanks	
Inspect valves, piping & connections for damage & leaks.		
Used Oil Two Tanks (Two) 90,000 l each		
Inspect 2 storage tanks for structure damage & leaks. 10k and 15 k l in them, so almost MT	Temporarily out of service.	
Inspect valves, piping & connections for damage & leaks.	Not in service. U/G Piping needs removed	
Inspect containment berm	Minimal water in it before freeze up	
Office Day Tank		
Inspect valves, piping & connections for damage & leaks.	New double wall tank, no issues	
Camp back up generator tank		
Inspect valves, piping & connections for damage & leaks.	Has secondary containment	
Emergency Powerhouse Tanks (2)		
Inspect fuel storage tanks (2) for structure damage & leaks.	Has secondary containment.	
Inspect valves, piping & connections for damage & leaks.		
Tank at Volcano boiler, W of 600 wing.		
Inspect valves, piping & connections for damage & leaks.	Out of service.	

Appendix C: TCA and Dams Monitoring Checklist

																		
Lupin Mine Dams Inspection Form																		
Date & Time:						Weather:												
Inspector:						Inspection Method (Ground/Air):												
Tailings Containment Area	Upstream Face							Crest (access road)		Downstream Face and Toe					Other			
	Water level relative to Dam Crest	Tailings Level relative to Dam Crest	Visual Cracks or Erosional Features (Y/N)	Displaced or Eroded Rip-Rap (Y/N)	Sink Holes or Settlement of Slope or nearby Beach (Y/N)	Water Entering Into Upstream Face (Y/N)	Erosional Features (Y/N)	Sinkholes, Settlement, or Depressed Areas (Y/N)	Visual Cracks (Y/N)	If Cracks Visible, note Length (m)	Visual Cracks or Erosional Features (Y/N)	Bulging or Deformation along Slope or Toe (Y/N)	Visible Seepage (Y/N)	If Seepage Visible, note Quantity (m3/sec)	If Seepage Visible, note if Sediment is Suspended (Y/N)	Other Atypical Conditions Observed (Y/N)	Thermister Readings Taken (Y/N)	Diagrams Attached (Y/N)
Dam 1A																		
Dam 1B																		
Dam 1C																		
Dam 2																		
Dam 3																		
Dam 4																		
Dam 5																		
Dam 6																		
Sewage Containment Area																		
Tailings Dump Pond 1 Dike																		
Tailings Dump Pond 2 Dike																		
Upper Sewage Pond Dike																		
Lower Sewage Pond Dike																		
Notes / Observations																		

Revised: 01 May 2013