# LUPIN MINES INCORPORATED

## ADDENDUM

## SPILL CONTINGENCY PLAN

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| **Project Name:** | Lupin Mine | |
| **Plan / Version** | Spill Contingency Plan | Rev 4, June 26, 2021 |
| **NWB Requirement** | 2AM-LUP2032 | Condition: Part B, Item 1(k) |

| **ADDENDUM** | | | |
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| **Section Change** | **Paragraph** | **Updated or New** | **Details** |
| Title Page | | Updated | June 2021 |
| Executive Summary | First | Updated and New | This Spill Contingency Plan has been prepared by Lupin Mines Incorporated (LMI), a wholly owned subsidiary of Mandalay Resources Corp. for the Lupin Gold Mine to support the Water Licence 2AM- LUP1520 (Licence). The Project site is located in the Kitikmeot Region, Nunavut, 400 km north of Yellowknife, Northwest Territories and 285 km southeast of Kugluktuk, Nunavut. The site is on the western shore of Contwoyto Lake, approximately 60 km south of the Arctic Circle. The site has been in a state of care and maintenance since 2006. In 2020, LMI commences the final closure and reclamation program which is scheduled to be completed in 2021.<br><br>[Removed wording referring feasibility to return to operations.] |
| Executive Summary | New Third | Updated | A review of the Plan takes place and revisions are submitted as necessary with the annual report. The current Type A water licence 2AM-LUP2032 (Water Licence) for the Lupin |

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| | | | Gold Mine (Lupin or the Lupin Mine or the Site) is valid until February 27, 2032. |
| 1. | First | Updated | Lupin Mines Incorporated (LMI), a wholly owned indirect subsidiary of Mandalay Resources Corp., has prepared this Spill Contingency Plan (the Plan) with respect to the requirements within Water Licence Number 2AM-LUP2032 (Water Licence), Part H, Item 1. |
| 1. | Third | Updated | 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-LUP2032 (Water Licence) for the Lupin Gold Mine (Lupin or the Lupin Mine) is valid until February 27, 2032. |
| 1.1 | First | Updated | [Removed reference to the Ulu Project] |
| 1.1 | Second | New | 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<br><br>2004 until February 2005. Since 2005, the Site has remained in Care and Maintenance. In 2020, LMI commences the final closure and reclamation program which is scheduled to be completed in 2021. |
| 1.1 | Third | Updated | General site maintenance is 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-LUP2032.<br><br>[Removed reference to closed water licence for exploration.] |
| 1.1 | | Updated | Company: LMI<br>Project: Lupin Mine, Nunavut<br>Company Address: Suite 330, 76 Richmond Street East, |

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| | | | Toronto, ON M5C 1P1<br>Telephone: 778-386-7340<br>Email: k.lewis@mandalayresources.com<br>Attention: Karyn Lewis, Project Manager<br><br>Effective Date: June 26, 2021<br><br>Distribution List:<br>Karyn Lewis — Project Manager<br>Discovery Mining Services — Site Contractor<br>Golder Associates — Site Consultant<br>Stantec — Site Consultant |
| 1.1 | Fourth | Updated | Additional copies of this Plan are available from the Project Manager. This Plan will be posted in key locations at the site, and all employees and contractors will be made aware of its contents. |
| 2.2 | First | | The site components used to support operations consist of facilities for handling tailings transport, storage, sewage handling, mine water disposal, freshwater supply and materials, petroleum and allied petroleum product storage (Figure 2 shows the general site plan; Figure 3 illustrates the main camp area; Figure 4 shows the water supply and sewage disposal area for the site; and Figure 5 illustrates the tailings disposal areas). Due to the current status of the closure phase, the majority of these components are not in use. Those components in use are described below. |
| 2.2.2 | First | Updated | The sewage facilities consisted of several lift stations within the camp and an 800 m long 6“ diameter insulated steel pipeline to the first of two sewage lakes. During care and maintenance and closure phase it does not warrants its use; sewage and grey water are collected in a sewage tank at the accommodation buildings. The tank is then hauled to the Upper Sewage Lake wherein waste is deposited. A sewage line to convey camp sewage directly to the Upper Sewage Lake has been cleaned, removed and |

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| | | | placed in the landfill. Grey water originating from office cabin use may be deposited in a leaching pit adjacent to the guesthouse. Under Part E(8) of the Water Licence, all sewage is to be discharged to the Sewage Lakes Disposal Facilities. |
| 2.2.3 | First | Updated | Freshwater is obtained from Contwoyto Lake, and is currently pumped from the lake and trucked to the storage tanks at the accommodation complex. An eight (8) inch insulated pipeline was removed and placed in the landfill. A maximum quantity of 250,050 $m^3$/year can be withdrawn for all uses during the current Care and Maintenance Phase/Closure Phase of the Project and 5,000 $m^3$/year, during the Post Closure Phase of the Project, as stipulated by the Water Licence. |
| 2.2.4 | Second | Updated | The MTF containment measures 230 m long by 58 m wide and contained a total of 22 tanks (14 diesel storage tanks, 1 Jet A tank and 7 individual tanks) (Appendix 1). Two of the diesel storage tanks and the Jet A tank are currenly in use. 11 diesel storage tanks have been cleaned and placed in the landfilled. 7 individual tanks have been cleaned and will be disposed in the landfill. |
| 2.2.4 | Third | Updated | Oil cubes (1600 L capacity each) and drums (205 L size) of various other lubricants are also stored adjacent to the MTF: in the hird party fuel storage area, the storage area is lined and bermed.<br><br>[removed wording about lube oil storage area] |
| 2.2.4 | Fourth | Updated | The STF tank farm is located adjacent to the powerhouse. The 35 m by 25 m lined and bermed facility contained ten (10) horizontal aboveground storage tanks for diesel and two (2) tanks for gasoline. The tanks have been cleaned. The two gasoline tanks have been cleaned, decommissioned and placed in the landfill. 10 diesel tanks have been cleaned and 6 have been placed in the landfill. There are 4 clean tanks remaining for future disposal in the landfill. |
| 2.2.4 | Fifth | Updated | As of December 31, 2020 there was approximately 1,275,920 litres of diesel fuel and 387,072 litres of jet fuel in large fuel tanks within the MTF and within the third |

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| | | | party storage there was 615 litres of gasoline in drums, 2,460 litres of Jet-A or Av-gas; 1,640 litres of diesel in drums; and 1,845 litres of fuel along with 615 litres of Jet Fuel considered to be contaminated water. As of December 30, 2020, there 49 oil cubes, and 2 205 L drums and 64 20 L pails of various lubricants in the third party storage area and equipment shop. Safety Data Sheets (SDS), formerly known as Material Safety Data Sheets (MSDS), for known materials on site are provided in Appendix 2.<br><br>[Removed information about 2012] |
| 2.2.5 | First | New | As of December 31, 2020 no storage tanks contain glycol. There is however, a small volume held in 205 liter drums for use in the equipment shop for routine equipment maintenance and 4 (1000L) cubes of used Glycol ready to be shipped off site. SDS, formerly known as (MSDS), for known materials on site are provided in Appendix 2.<br><br>[Removed information about 2012] |
| 2.2.7 | First | Updated and New | The major chemical products that were used at the mine and mill (in order of amount) consisted of ANFO, cyanide, lime, lead nitrate, flocculent, ferric sulphate, and zinc dust. With the cessation of operations, these materials were shipped off site. Lime and soda ash are currently at site, and ANFO was shipped to site in 2020. These are the known chemical product of those listed above which are currently held on site. As of December 31, 2020 there is approximately 28,636kg of lime stored and 48,879kg of soda ash inside a cold storage building. There is 934 25kg bags of ANFO at site which is stored at the explosives area in explosives containers supplied by the blasting contractor. The LMI explosives buildings were demolished and placed in the landfill in 2020. The ANFO at site will be used in 2021 and the contractor's explosives containers will be shipped by to Yellowknife via winter road. The SDS, for known materials on site are provided in Appendix 2.<br><br>[Removed information about 2012] |

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| 2.3 | Second | Update | Environmentally sensitive areas, in addition to the surrounding tundra include the limited extent of the west shore of Contwoyto Lake where the mine is located, the potential for runoff from the site to the lake, drainage from the sewage lakes system which could enter Contwoyto Lake, and the Tailings Containment Area (TCA) which, in the event of an unplanned release, would discharge to either to the west or south drainage basins that lead to Contwoyto Lake. The six (6) km tailings line route is no longer in use, has been removed and placed in the landfill. |
| 2.3 | Third | Update | Most of the larger lakes in the Lupin area are regarded as having fish habitat to some extent. Contwoyto Lake is the largest body of water in the area, containing the greatest water and fisheries resources. Possible sources of contamination of this area include stormwater runoff from the site facilities. The sewage disposal pipeline was located on the south end of the complex, has been cleaned, removed and place in the landfill and not subject to contamination from line spillage. Boot Lake, located northeast of the site was the original water supply during construction and is known to be a seasonal fisheries habitat. This area has a potential to be affected in the event of a major petroleum spill from the MTF. |
| 2.3 | Fourth | Updated | Along the tailings line route several smaller lakes exist with only one larger lake having a known fish habitat. Punkin Lake, located approximately 1.5 km from the site, is situated in a gentle sloping terrain which receives runoff from an approximately 4-5 $km^2$ area which includes the location of the No.2 Dump station and the tailings line to the north and south (approx. 2 km). As the tailings line has been removed and placed in the land, there is no potential for contamination from this source. |
| 2.3 | Fifth | Updated | There are several small lakes in the immediate vicinity of the TCA that could have been affected by potential spills from the impoundment. These include Norma Lake, Lori Lake, Long Lake and Boomerang Lake, all of which are considered to be fisheries habitat. These areas are adjacent to a series of dams which segregate the TCA into a series of cells: Cells 1A, 1, 2, 3, 5, and N contain old tailings; the corner of Cell 4 has an identified |

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| | | | area of exposed tailings; Ponds 1 and 2 are polishing ponds so contain tailings supernatant but no tailings. |
| 2.4 | First | Updated | The annual inspections of the TCA are carried out during ice free, open water conditions by a registered geotechnical engineer. As required by the Water Licence, the annual geotechnical reports are to be forwarded to the NWB within 60 days of the inspection. Bi-weekly inspections are conducted during freshet (May and June), and monthly during the remainder of the open water period (July to October) of the TCA, sewage ponds and fuel systems. Significant maintenance of the fuel storage systems has been undertaken since 2011 as reported in the annual reports to the NWB. Outdated components of the fuel storage system are routinely cleaned, decommissioned and eventually placed in the landfill. |
| 3.2.3 | | | [fax numbers in the Plan remain the same]<br><br>**Lupin Mines Incorporated** — **Telephone**<br>Karyn Lewis, Project Manager — 778-386-7340<br><br>**NT/NU 24 –Hour Spill Report Line** — **867-920-8130**<br><br>**Nunavut** — **Telephone**<br>Stephanie Autut, Executive Director, NWB — 867-360-6338<br>GN Environmental Protection, Iqaluit — 867-975-5910<br><br>**Aboriginal Affairs and Northern Development Can ıda-Land Use and Water Use**<br>Baba Pedersen, Regional Officer, Kugluktuk — 867-982-4306/867-222-2839<br><br>**Environment Canada** — **Telephone**<br>Mark Aussenegg, Enforcement Officer, Yellowknife — 867-669-4785/867-445-6719 |

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| 3.2.3 | Second to Last | Updated | Regardless of the size of the spill, a Spill Report Form (Appendix 4) will be completed, with the original retained at site, and a copy delivered to LMI's Project Manager. |
| Appendix 1 | | Updated | Attached below, updated Appendix 1 |

Appendix 1

Fuel System Inventory

| Location | Map Reference | ID /Serial # | Registration # | In Secondary Containment? | Capacity (L) 95% | Fuel type | Status On Site | Status on FIRSTS | Type | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| Main Tank Farm System (MTS) | M-01 | M-01 | EC-00004535 | Yes | 790,000 | Diesel | Active | Incomplete | Vertical AST | |
| | M-02 | M-02 | EC-00004535 | Yes | 790,000 | Diesel | Active | Incomplete | Vertical AST | |
| | M-03 | M-03 | EC-00004535 | Yes | 790,000 | Diesel | Inactive | Incomplete | Vertical AST | |
| | M-04 | 82-133 | EC-00004535 | Yes | 1,530,000 | Diesel | Active | Incomplete | Vertical AST Gem Steel 1982 | last digit of serial number illegible |
| | M-05 | 82-133- | EC-00004535 | Yes | 1,510,000 | Diesel | Inactive | Incomplete | Vertical AST Gem Steel 1982 | last digit of serial number illegible |
| | M-06 | 82-133-1 | EC-00004535 | Yes | 1,520,000 | Diesel | Inactive | Incomplete | Vertical AST Gem Steel 1982 | |
| | M-07 | 82-133-2 | EC-00004535 | Yes | 1,530,000 | Diesel | Inactive | Incomplete | Vertical AST Gem Steel 1982 | |
| | M-08 | 82-133-5 | EC-00004535 | Yes | 1,530,000 | Diesel | Inactive | Incomplete | Vertical AST Gem Steel 1982 | |
| | M-09 | 82-133-3 | EC-00004535 | Yes | 1,530,000 | Diesel | Inactive | Incomplete | Vertical AST Gem Steel 1982 | |
| | M-10 | 82-133-4 | EC-00004535 | Yes | 1,530,000 | Diesel | Inactive | Incomplete | Vertical AST Gem Steel 1982 | |
| | M-11 | 89-33-001 | EC-00004535 | Yes | 1,520,000 | Diesel | Inactive | Incomplete | Vertical AST Gem Steel 1989 | |
| | M-12 | 86023-001 | EC-00004535 | Yes | 1,510,000 | Diesel | Inactive | Incomplete | Vertical AST Gem Steel 1986 | |
| | M-13 | J-8716 | EC-00004535 | Yes | 1,550,000 | Diesel | Active | Incomplete | Vertical AST GLM 1986 | |
| | M-14 | 93-86 | EC-00004535 | Yes | 1,597,314 | Diesel | Inactive | Incomplete | Vertical AST Wilkinson steel | |
| Jet A System in Main Tank Farm | M-15 | 92-050 | EC-00004535 | Yes | 1,530,000 | Jet A | Active | Incomplete | Vertical AST Gem Steel 1992 | |
| Individual Tanks in Main Tank Farm | M-16 | 954 | EC-00018370 | Yes | 64,000 | Diesel | Inactive | Incomplete | Vertical AST Marclan Industries 1985 | Contaminated fuel/water |
| | M-17 | 960 | EC-00018371 | Yes | 64,000 | Diesel | Inactive | Incomplete | Vertical AST Marclan Industries 1986 | |
| | M-18 | 958 | EC-00018372 | Yes | 64,000 | Diesel | Inactive | Incomplete | Vertical AST Marclan Industries 1986 | |
| | M-19 | 957 | EC-00018374 | Yes | 64,000 | Diesel | Inactive | Incomplete | Vertical AST Marclan Industries 1986 | |
| | M-20 | 1184 | EC-00018375 | Yes | 64,000 | Diesel | Inactive | Incomplete | Vertical AST Marclan Industries 1986 | |
| | M-21 | 952 | EC-00018376 | Yes | 64,000 | Diesel | Inactive | Incomplete | Vertical AST Marclan Industries 1985 | |
| | M-22 | M-22 | EC-00018377 | Yes | 137,000 | Diesel | Inactive | Incomplete | Horizontal AST | |
| Satellite Tank System (STS) | S-1 | S-1 | EC-00004544 | Yes | 87,000 | Diesel | Inactive | Identified | Horizontal AST | |
| | S-2 | S-2 | EC-00004544 | Yes | 87,000 | Diesel | Inactive | Identified | Horizontal AST | |
| | S-3 | S-3 | EC-00004544 | Yes | 87,000 | Diesel | Inactive | Identified | Horizontal AST | |
| | S-4 | S-4 | EC-00004544 | Yes | 87,000 | Diesel | Inactive | Identified | Horizontal AST | |
| | S-5 | S-5 | EC-00004544 | Yes | 87,000 | Diesel | Active | Identified | Horizontal AST | |
| | S-6 | S-6 | EC-00004544 | Yes | 87,000 | Diesel | Active | Identified | Horizontal AST | |
| | S-7 | S-7 | EC-00004544 | Yes | 87,000 | Diesel | Active | Identified | Horizontal AST | |
| | S-8 | S-8 | EC-00004544 | Yes | 87,000 | Diesel | Active | Identified | Horizontal AST | |
| | S-9 | S-9 | EC-00004544 | Yes | 87,000 | Diesel | Active | Identified | Horizontal AST | |
| | S-10 | S-10 | EC-00004544 | Yes | 87,000 | Diesel | Active | Identified | Horizontal AST | |
| | S-11 | S-11 | EC-00018392 | Yes | 22,000 | Gas | Empty | Identified | Horizontal AST | |
| | S-12 | S-12 | EC-00018392 | Yes | 22,000 | Gas | Empty | Identified | Horizontal AST | |
| Waste Oil Tank Farm | WO-1 | WO-1 | EC-00018398 | Yes | 90,000 | Waste Oil | Active | Identified | Horizontal AST | |

Appendix 1

Fuel System Inventory

| Location | Map Reference | ID /Serial # | Registration # | In Secondary Containment? | Capacity (L) 95% | Fuel type | Status On Site | Status on FIRSTS | Type | Notes |
|---|---|---|---|---|---|---|---|---|---|---|
| (WOTF) | WO-2 | WO-2 | EC-00018398 | Yes | 90,000 | Waste Oil | Active | Identified | Horizontal AST | |
| Tanks in Bone Yard | BY-1 | 4187L AG4027 | EC00018404 | N/A | 64,019 | - | Removed from service | Incomplete | Horizontal AST | |
| | BY-2 | | | N/A | 102,431 | - | Removed from service | Incomplete | Horizontal AST | Removed 2011 |
| | BY-3 | Unidentified Tank | - | N/A | 64,019 | - | Removed from service | Incomplete | Horizontal AST | Removed 2011 |
| | BY-4 | 4209 | EC00018409 | N/A | 105,155 | - | Removed from service | Incomplete | Horizontal AST | Removed 2011 |
| | BY-5 | Unidentified Tank | - | N/A | 105,155 | | Removed from service | Incomplete | Horizontal AST | Removed 2011 |
| | BY-6 | Unidentified Tank | - | N/A | 14,404 | | Removed from service | Incomplete | Horizontal AST | Removed 2011 |
| | M-23 | from MTF | EC-00018378 | N/A | 6,000 | | Removed from service | Identified | Horizontal AST | Removing in 2013 |
| | MTF-1 | from MTF | - | N/A | 2,000 | | Removed from service | Unidentified | Horizontal AST | Removed 2012 |
| | GLY-2 | Glycol Tank outside WOTF | - | N/A | 9,603 | | Removed from service | Unidentified | Horizontal AST | Removed 2012 |
| | IND-1 | RTL Shop tank | - | N/A | 2,290 | | Removed from service | Unidentified | Horizontal AST | Removed 2012 |
| | IND-4 | D-87781 | - | N/A | 50,000 | | Removed from service | Unidentified | Horizontal AST Serial # D87-781 | Removed 2012 |
| | IND-5 | Spare Tank | - | N/A | 20,000 | | Removed from service | Unidentified | Horizontal AST | Removed 2012 |
| | Old IND-6 | Spare Tank | - | N/A | 2,290 | | Removed from service | | | Removed 2012 |
| | IND-7 | Generator Station | - | N/A | 2,000 | | Removed from service | Unidentified | Horizontal AST | Removed 2013 |
| | Old IND-8 | Incinerator Day Tank | - | N/A | 6,669 | | Removed from service | Unidentified | Horizontal AST | Removed 2012 |
| | IND-10 | Mill Tank | - | N/A | 2,000 | | Removed from service | Unidentified | Horizontal AST | Removed 2012 |
| Emergency Powerhouse | EG-1 | Unidentified Tank | NA | Yes | 2,000 | Diesel | Active | Registration not required | Horizontal AST | Replacing with double wall in 2013 |
| | EG-2 | Unidentified Tank | NA | Yes | 2,000 | Diesel | Active | Registration not required | Horizontal AST | Replacing with double wall in 2013 |
| Glycol Tanks | GLY-1 | Glycol Tank outside WOTF | - | No | 9,603 | Glycol | Inactive | Unidentified | Horizontal AST | |
| | GLY-3 | Glycol Tank outside Mill | - | Yes | 8,803 | Glycol | Inactive | Unidentified | Horizontal AST | |
| | GLY-4 | Glycol Tank beside Mechanical Shop | - | No | 2,134 | Glycol | Inactive | Unidentified | Rectangular tank | |
| | GLY-5 | At Boiler beside Offices & IND-12 | - | No | 2,134 | Glycol | Active | Unidentified | Rectangular tank | Supports boiler |
| Active Individual Tanks | IND-2 | Portable Tank | - | Yes | 1,200 | Diesel | Active | Registration not required | Horizontal AST Gem Steel | Used to fuel day tanks |
| | IND-3 | Tank Near Old Accommodations | - | Yes | 2,134 | Diesel | Active | Unidentified | Horizontal AST | Camp backup generator |
| | IND-6 (new) | Camp generator tanks; # 671204309; 671204312 | - | Double walled | 2 tanks X 2290 | - | Active | Unidentified | Horizontal | |
| | IND-8 (new) | Incinerator; #671207534 | - | Double walled | 2,290 | Diesel | Active | Unidentified | Horizontal | |
| | IND-9 | Log Cabin Tank//711 | - | Double walled | 455 | Diesel | Active | Registration not required | Horizontal AST Model C 643334 2008 | |
| | IND-11 | Fuel Tanker Trailer | - | Yes | 4,000 | Diesel | Inactive | Registration not required | Mobile tanker trailer | |
| | IND-12 | Boiler by offices, beside GLY-5 | - | Yes | 5,000 | Diesel | Active | Unidentified | Horizontal | Replacing with double wall in 2013 |