# LUPIN MINES INCORPORATED – A WHOLLY OWNED INDIRECT SUBSIDARY OF ELGIN MINING INC.

# Waste Management Plan

(Care and Maintenance)

# Lupin Mine Site

**Table of Contents**

## 1 Purpose

The Waste Management Plan for this Project is intended to:

- Provide a guidance document for Waste Management components of the Project;
- Describes the responsibility, and tasks involved with Waste Management;

Many items contained in the Waste Management Plan will be carried forward from year to year, and items will be modified when new information arises. It is important that the document is routinely updated to reflect changes at the site.

## 2 SOLID WASTE MANAGEMENT FACILITIES

### 2.1 Incinerator

The existing incinerator will be used to incinerate combustible inert solids throughout the life of the Project. The incinerator building will be located within an a secure building to deter wildlife.

The following types of material will be incinerated:

- Organic Waste (such as kitchen waste)
- Wood
- Paper
- Cardboard
- Oil filters
- Air filters
- Domestic waste
- Light plastics (bags, thin plastics)
- Rags contaminated with hydrocarbons
- Engine waste oil (used as incinerator fuel)
- Cooking waste oil (used as incinerator fuel)

## 2.2 Landfill

Non-combustible materials will be land filled within the land fill area and constantly kept covered

The following items will be designated as landfill waste and buried within the surface waste rock piles:

- Wood
- Iron products
- Plumbing piping (copper, steel, etc.)
- Electrical wiring
- Compressed gas containers
- Rubber products
- Tires
- Heavy plastics (pails, etc.)
- Plexiglass
- Glass
- Vehicle lights
- Fibreglass
- Styrofoam boards
- Insulation
- Plaster and plaster boards
- Hydraulic rubber hoses
- Rock resin
- Ash produced from incinerator
- Soils that have been remediated in the land farm

# 3 HAZARDOUS WASTE MANAGEMENT

## 3.1 Purchasing

- To the extent practical, the Lupin Site shall purchase chemicals and materials which, when disposed of, will not be hazardous wastes. At all times, the Lupin Site shall strive to minimize hazardous waste generation.

- The following procedure shall be followed for the purchasing of all chemicals, including reagents used in production and solvents used in maintenance activities, but excluding the purchase of fuels. Once a comprehensive baseline of chemical purchases has been established, this procedure may be amended.

- Upon receipt of an MSDS, and/or based on other available information, the Site Manager shall determine if the chemical is hazardous or may generate a hazardous waste.

- The Site Manager shall notify the requesting department of his findings and of the required management and disposal practices associated with the chemical.

- The Site Manager, or Purchasing Agent shall create an inventory of all chemicals used at the Lupin Site except fuels and lubricants. The inventory shall indicate the use of each chemical and the locations of the chemical's use and storage.

### 3.2 Identification of Hazardous Wastes

The Lupin Site shall determine if wastes generated by its operation and activities are hazardous or non-hazardous. In order to determine if a solid waste is a hazardous waste, the Lupin Site shall:

- Check the CCINFO.Website for MSDS if one isn't available on site:

- The list of hazardous materials should be reviewed on an annual basis:

Common knowledge can be used to determine that materials such as paper, untreated wood, concrete and food scraps are not hazardous wastes when disposed. The Lupin Site shall retain documentation to substantiate the basis for its determinations that a solid waste is not a hazardous waste, in all but the most obvious situations (e.g., food scrap)

### 3.3 Products

#### 3.3.1 Batteries

To the extent practicable, lead-acid and nickel-cadmium batteries are to be purchased only from vendors who will accept exchanges of used batteries for new batteries purchased. All used batteries, including general purpose batteries (flashlight, lantern batteries), lithium, nickel-cadmium, and lead-acid batteries shall be collected and stored in a well organized manner that prevents the release of any hazardous constituents to the environment.

#### 3.3.2 Used Light Vehicle Tires

Tires that cannot be returned to the vendor shall be disposed of in the Lupin Site landfill or, or waste rock dump, as authorized by the prevailing regulations.

### 3.3.3 Empty Drums and Scrap Metal

To the maximum extent practical, all metal drums received on the property will be returned to the vendor, sent to a drum recycler, or recycled for scrap metal recovery. All empty metal drums shall be taken to designated area, crushed and buried. To the maximum extent practical, scrap metal generated by demolition activities at the Lupin Site shall be sold for metal recycling.

### 3.3.4 Emptying of Containers That Contain Hazardous Waste

The following procedure applies to all non-latex paints, solvents and aerosol cans used at the Lupin Site with the exception of non-solvent cleaners such as glass cleaner, and other non-hazardous materials. Contact the Site Manager if there is any uncertainty regarding the applicability of this section.

### 3.3.5 Non-aerosol Cans (except acute hazardous waste)

During use, empty the container of all material by its normal means (e.g., pouring, pumping). Inspect the container to ensure that less than 1 inch or 3% by weight of the total capacity of the container remains in the container (0.3% if the container is greater than 110 gallons). If more than this amount of materials remains in the container, it must be used or emptied into a satellite accumulation drum. If the container has an inner liner, the container is empty when the inner liner has been removed Once. emptied by this procedure, the container can be disposed of as solid, non-hazardous waste in the trash.

### 3.3.6 Aerosol Cans (except acute hazardous waste)

Aerosol cans shall be punctured and drained into hazardous waste drums prior to disposal of the empty can. Once the residual materials have been drained from the can, it is burnt and the can itself is discarded in the trash as non-hazardous waste, and is disposed of in the landfill

### 3.3.7 Hazardous Wastes That Are Compressed Gases

Gases such as acetylene and propane would be hazardous wastes if disposed due to their ignitability. Gas cylinders are returned and refilled. Cylinders of these gases are considered to be empty when the tank pressure approaches atmospheric pressure.

## 4 Management of Contaminated Soils

### 4.1 Materials Contaminated with Petroleum Products

Soils contaminated from spills of petroleum products (including diesel, gasoline, oils, used oil, and grease) shall be excavated until there is no visible sign of contamination, and transported to a soil remediation area (land-farm) for treatment, or disposed of by burning in the Lupin burn pit.

### 4.2 Materials Contaminated with Metals

Materials contaminated with metals shall require excavation only if the material would be considered a remnant of hazardous materials. These materials should be managed according to the procedures for hazardous materials. Metal-contaminated material that is not remnant of hazardous materials may be left in place or placed in the tailings containment area.

### 4.3 Materials Contaminated with Solvents

Materials contaminated with solvents containing greater than 10% chlorinated and/or fluorinated hydrocarbons shall be excavated until there is no visible sign of contamination and disposed of as a hazardous material. Material contaminated with solvents other than those containing greater than 10% chlorinated and/or fluorinated hydrocarbons shall be excavated until there is no visible sign of contamination, and managed as petroleum-contaminated soil.

## 5 SOLID (NON-HAZARDOUS) WASTE MANAGEMENT

Routinely generated non-hazardous solid waste, including lunchroom wastes, paper, non-recyclable scrap metal (including non-returnable drums that have been crushed), demolition debris (e.g., scrap wood, non-recyclable scrap metal, concrete), and maintenance shop wastes (e.g., drained and crushed oil filters, punctured and drained aerosol cans, floor clean-up) shall be burnt and placed in the trash for disposal in the Lupin Site Landfill.

No hazardous wastes, bulk liquids, or bulk petroleum products (waste solvents, used oil, undrained or uncrushed oil filters or aerosol cans, batteries, mercury vapor lamps, mercury switches, used greases) shall be placed in the Lupin Site Landfill.

Used grease which has been determined to be non-hazardous waste shall be collected in drums for disposal in an industrial landfill. The drums shall be stored in the Drum Storage Building until shipped for off-site disposal. On a periodic basis, the Site Manager (or his designee) shall arrange for off-site disposal of used grease at a licensed industrial landfill.

Heavy equipment tires and light vehicle that cannot be returned to the vendor shall be disposed in the Lupin Site landfill, tailings impoundment or waste rock dumps, as authorized by prevailing regulatory requirements

## 6 TRANSPORTATION

The shipment of all hazardous materials from Lupin Site and the shipping of hazardous materials internal to Lupin Site but on public highways, requires conformance with transportation regulatory requirements, including Dangerous Goods Regulations and International Air Transport Association

Emergency Response Information for hazardous materials, shipped from Lupin Site, shall be maintained on site. Workers involved in transportation of hazardous materials shall receive proper training.

### 6.1 Storage and Packaging of Hazardous Waste Prior to Shipment

Vehicle and mill maintenance personnel shall immediately notify the Site Manager if the total amount of hazardous waste in the accumulation drums at any one location reaches 45 gallons. In the event that a total of more than 45 gallons of hazardous waste are accumulated in any one satellite accumulation area, the drums must be moved to the storage area immediately. Within 24 hours of reaching the 45 gallon total, the Site Manager must enter this waste in the hazardous waste log as being generated at that time, regardless of whether the waste has been transferred to the storage area or not. Appropriate placards, as required under the transport of hazardous materials must be supplied by the transporter. Only licensed waste handlers shall be used. A copy of the license shall be kept in the files.

### 6.2 Labelling

The Site Manager shall ensure the appropriate labeling of all hazardous waste when it is placed in the storage area. Drums must be labeled as "Hazardous Waste" and the label must include the date of the start of the accumulation and the contents of the drum. The Site Manager shall maintain a log tracking the amount, accumulation date and nature of all hazardous wastes placed in the storage area, including any used solvent or antifreeze generated at the Lupin Site which is determined to be hazardous.

### 6.3 Manifests

All required information on a hazardous waste manifest for off-site shipment of waste shall be filled out.

The manifest form must be signed by one of the following:

- Site Manager
- Purchaser or
- Designee

The transporter must sign and date the manifest upon accepting the waste for shipment. A copy of the signed manifest shall be retained for at least three years. The returned copy of the manifest with the handwritten signature of the owner or operator of the recycling or disposal facility shall be retained in the Environmental files for at least three years .

## 6.4 Record Keeping and Reporting

Copies of each manifest form (Separate files for winter road and air cargo and travel direction), Exception Report, Annual or Biennial Report when hazardous waste was generated shall be retained in the Environmental files for at least three years.

The Site Manager shall retain all records of any test results, waste analysis or other determinations made in evaluating whether wastes generated at the Lupin Site are hazardous wastes for at least three years after the waste(s) were last sent off-site for treatment or disposal.

Records containing data used to determine treatment requirements for land disposal shall be retained for at least five years after the waste(s) were last sent off-site for treatment or disposal.

The Lupin Site shall retain records of any arrangements made with local police, fire, hospitals or emergency response teams, emergency response contractors, and with the local health department, which are appropriate for the types of hazardous wastes handled at the Lupin Site and the potential need for the services of these agencies