

Lupin Mines Incorporated

A wholly owned indirect subsidiary of Elgin Mining Inc.

Lupin Mine Site

Nunavut, Canada

Waste Management Plan (Solid and Hazardous)

(Care and Maintenance)

March 2012

Lupin Mines Incorporated
Elgin Mining Inc.
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Vancouver, BC, V6C 2T7

Document Control

Revision No	Date	Details	Author	Approver
1.0	20/03/12	<p>Reformatted to Lupin Mines standard.</p> <p>Revised and updated to reflect new ownership and contact information.</p> <p>Updated discussion of onsite waste management facilities to reflect current facility usage, and include burn pit, waste oil storage. Removed reference to land farm.</p> <p>Added Figures, illustrating waste management facilities.</p> <p>Removed discussion on hazardous material purchase; not relevant to current activities.</p> <p>Updated discussion on aerosol can disposal.</p> <p>Added comment on recycling.</p> <p>Removed reference to drum storage building.</p> <p>Added reference to waste generator number.</p> <p>Updated section on records to reflect current status.</p> <p>Addressed comments from AANDC (2010).</p>	S. Hamm	P. Downey

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1 Introduction

Lupin Mines Incorporated (LMI), a wholly owned indirect subsidiary of Elgin Mining Inc. (Elgin), has prepared this Waste Management Plan for Solid and Hazardous Waste (the Plan).

An annual review of the Plan takes place and revisions are submitted as necessary with the annual report. The current Type A water licence 2AM-LUP0914 for the Lupin Gold Mine (Lupin or the Lupin Mine) is valid until March 31, 2014 and has been kept in good standing.

1.1 Project and Company Information

Elgin is a Canadian based company focused on the exploration and development of the Lupin Mine and Ulu Gold Project, both located in Nunavut, Canada.

Elgin purchased LMI, which owns the Lupin Mine, from MMG Resources Ltd. in July 2011. The Lupin site was an operational underground gold mine from 1982 to 2005 with temporary suspensions of activities between Jan 1998 and April 2000, and again between Aug 2003 and March 2004. The mine resumed production in March 2004 until 2005. Since 2005, the site has remained in care and maintenance.

An exploration program is currently underway at the Lupin site under water licence 2BE-LEP1217. All camp infrastructure required for the exploration program currently exists at the Lupin Mine site, which has previously been screened by the Nunavut Impact Review Board under file 99WR053 and approved by the Nunavut Water Board under water license 2AM-LUP0914.

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Project:	Lupin Mine, Nunavut
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Effective date: 30 March 2012

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Michele Jones	Manager, Corporate Affairs
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Sharleen Hamm	Manager, Environment
Karyn Lewis	General Administration

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 Kitikmeot Region, Nunavut, 400 km north of Yellowknife, Northwest Territories and 285 km southeast of Kugluktuk. The geographic center of that property is 65° 45'29" N / 113° 13'10W (Figure 1). It is on the western shore of Contwoyto Lake, approximately 60 km south of the Arctic Circle.

1.3 Environmental Policy

LMI looks to our employees, contractors and managers to adopt and grow a culture of environmental excellence. Together we achieve this by implementing key components of our Environmental Policy:

- 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.
- 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.



Legend

 Project Location

Coordinate System: NAD_1983_UTM_Zone_12N

Map Sources/Notes:
Various Canadian Government Websites - Feb 2012



1:15,000,000

Approved By: SH Prepared By: PW
Project No.: LUP Date Revised: 23 Mar 2012
File Name: Lup-12-13-01-LocationMap-A.mxd

Project:

Lupin Project

Location: Kitikmeot Region, Nunavut, Canada

Waste Management Plan -Water Licence 2AM-LUP0914

Location Map - Lupin Mine

**Lupin Mines
Incorporated**

 **ELGIN
MINING INC.**

Figure: **1**
Rev: 120323

1.4 Purpose and Scope

This Plan is designed to provide the necessary background information for identification, segregation, handling and disposal of solid and hazardous waste generated at Lupin during care and maintenance.

The objectives of the Plan are to:

- Provide a guidance for solid and hazardous waste management at Lupin; and
- Describes the responsibility and tasks involved with Waste Management;

2 Waste Identification

Typical waste generated on site during care and maintenance includes domestic and hazardous waste, and, in the event of a spill, contaminated soils. In order to determine if a solid waste is a hazardous waste, the Lupin site shall:

- refer to the MSDS for the material in question;
- maintain an inventory of materials on site and their classification; and
- review the materials inventory on an annual basis.

All wastes generated by LMI's activities will be classified by managed by appropriately trained personnel. Common knowledge can be used to determine that materials such as paper, untreated wood, concrete and food scraps are not hazardous wastes when disposed. LMI will 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 Waste Segregation

Following waste identification, waste is segregated at the source. This is an essential component of waste management as comingled wastes can result in reclassification of waste streams, a change in handling and storage procedures and an increase in the cost of waste disposal. The following waste streams are currently being segregated: domestic waste; domestic recycling; scrap metal; oily waste; aerosols; combustibles; batteries; spent canisters (propane, acetylene). Each waste stream, with the exception of domestic waste, is stored in a lined Megabag in a covered facility.

4 Waste Diversion

Where possible, waste diversion, including material re-use and recycling, will occur. Where diversion is not an option, waste will be disposed of at onsite facilities or shipped offsite to a third party waste receiver.

5 Solid Waste Disposal Facilities

Waste management facilities at the Lupin site include an incinerator, a landfill, a burn pit and waste oil storage (Figure 2). In the event that a waste management facility on site is not useable, waste is appropriately segregated, stored such that it is inaccessible to wildlife and shipped to a third party waste receiver in Yellowknife, NT.

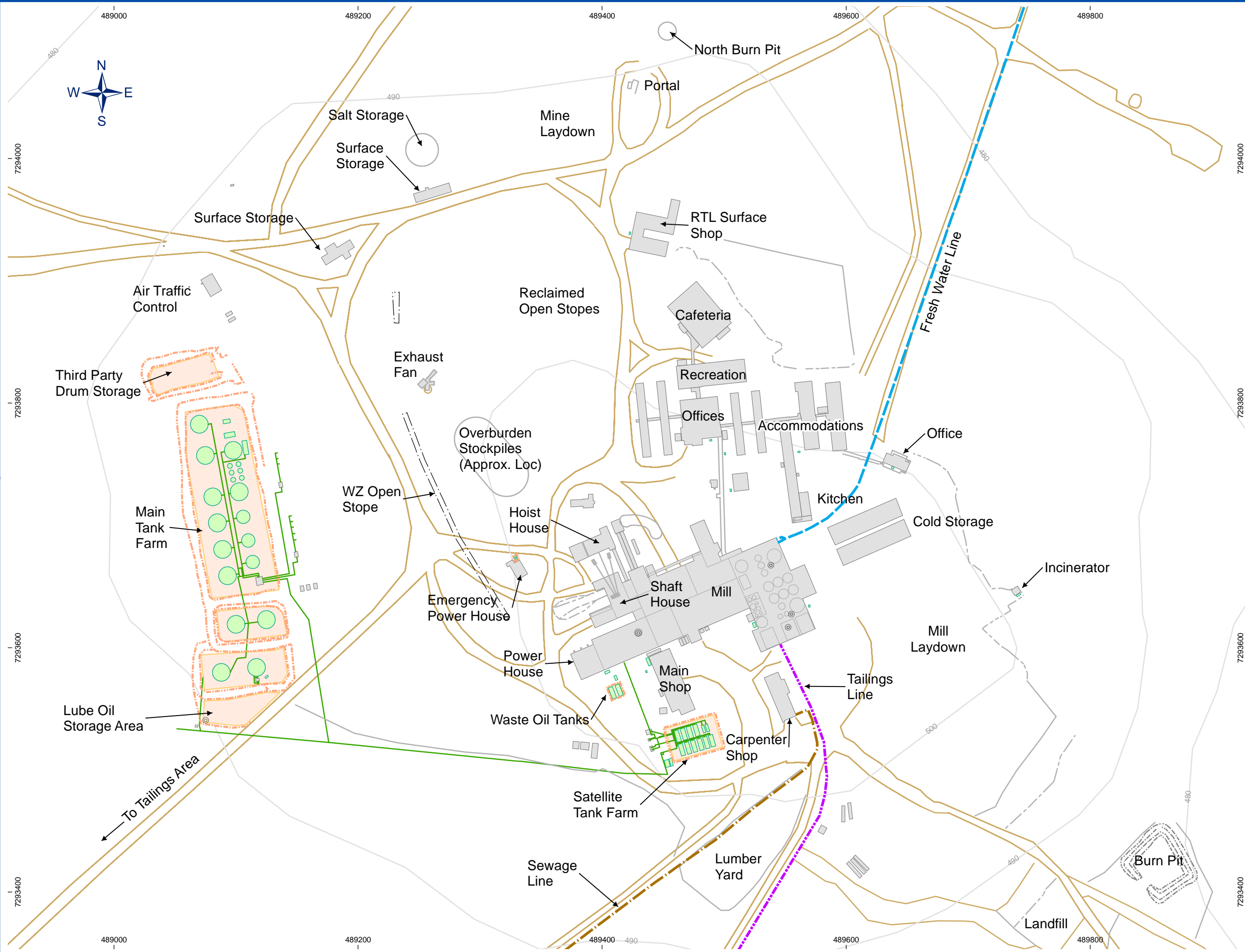
5.1 Incinerator

An incinerator will be used to incinerate combustible, inert solids throughout the life of the Lupin Mine. The incinerator will be located within a secure building to deter wildlife. The following types of material will be incinerated:

- organic waste (such as kitchen waste);
- wood;
- paper;
- cardboard;
- air filters;
- domestic waste;
- light plastics (bags, thin plastics); and
- cooking waste oil (small amounts, used as incinerator fuel).

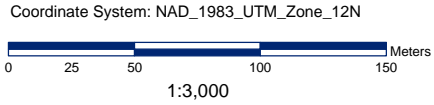
A new incinerator is currently being procured for the Lupin site. Once purchased and installed, LMI plans to compile and submit the following as an addendum to this Plan for review and approval by the NWB: *Operations and Maintenance Plan, Lupin Mine Incinerator*. This plan will include:

- incineration equipment specifications;
- quantities of waste to be incinerated;
- training procedures for site personnel working with the incinerator; and
- reporting format.



- Legend**
- Water Body 50k Topo
 - Building
 - Sump
 - Site Features
 - Tanks
 - Fuel Storage Containment Area
 - Berm Tank Farm
 - Berm Burn Pit
 - Slope Break
 - Roads
 - Contour (10m)
 - Fuel Pipe
 - Tailings Line
 - Water Pipeline (8 in Diam)
 - Sewage Pipeline (6 in Diam)

Map Sources/Notes:
Topographic features from 1:50,000 government topographic data.
Site Layout based on drawing by Morrow Environmental titled "Site Plan", 2005. File A053017R00.
Fuel tank and Fuel Containment layouts adapted from drawings by Emerson Engineering dated Oct 17, 2011 and from data gathered during a site visit by Elgin Mining staff in February



Approved By: SH Prepared By: PW
Project No.: LUP Date Revised: 28 Mar 2012
File Name: Lup-12-13-02-WasteManagement-B.mxd

Project: **Lupin Gold Mine**
Location: Kitikmeot Region, Nunavut, Canada
Waste Management Plan - Water Licence 2AM-LUP0914

**Lupin Mine Waste Management Facilities,
Water Licence 2AM-LUP0914**

5.2 Landfill

Non-combustible, non-hazardous materials were historically placed within the landfill area and constantly kept covered. In the past, it is understood that the following items were 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; and
- ash produced from incinerator.

LMI would like to continue to utilize the landfill accordingly. In 2012, LMI plans to compile and submit the following as an addendum to this Plan for review and approval by the NWB prior to continuing landfilling: *Operations and Maintenance Plan, Lupin Mine Landfill*.

5.3 Burn Pit

A burn pit is located on site adjacent to the landfill. Historically, combustible non-hazardous, non-domestic waste was open-burned here. LMI would like to continue to utilize the burn pit accordingly. In 2012, LMI plans to compile and submit an application for a permit to open burn prior to utilizing the burn pit.

5.4 Waste Oil Storage

A waste oil tank farm, including two horizontal above ground storage tanks located in secondary containment, and a lube oil and grease storage area exist on site. The waste oil tank farm is currently not in use. Used oil is currently placed in sealed containers and stored in a bermed area adjacent to the main tank farm.

6 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) are collected and segregated, along with bulk liquids, or bulk petroleum products (waste solvents, used oil, undrained or uncrushed oil filters or aerosol cans, batteries, mercury vapour lamps, mercury switches, used greases). All waste is currently being stored and backhauled, as necessary (on every flight, in the case of domestic waste) to Yellowknife for disposal at a third party facility. Once facilities such as the incinerator, burn pit and landfill are installed or approved for use, disposal will commence per facility as outlined in Section 5.

Used grease which has been determined to be non-hazardous waste shall be collected in drums for disposal offsite at a third party facility.

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

Recyclable containers, primarily food and beverage, are segregated and shipped off site for management by a third party waste receiver.

7 Contaminated Soil Management

7.1 *Materials Contaminated with Petroleum Products*

Soils contaminated from spills of petroleum products (including diesel, gasoline, oils, used oil, and grease) will be remediated to the *CCME Canada Wide Standards for Petroleum Hydrocarbons in Soil*, which have been adopted by the Government of Nunavut in the Environmental Guideline for Contaminated Site Remediation (2009).

7.2 *Materials Contaminated with Metals*

Materials contaminated with metals 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.

7.3 *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.

8 Hazardous Waste Management

8.1 *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.

8.1.1 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. Otherwise, all empty metal drums shall be taken to designated area, crushed and buried. To the maximum extent practical, scrap metal generated at the Lupin site shall be sold for metal recycling.

8.2 *Emptying of Containers that Contain Hazardous Waste*

The following sections apply 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.

8.3 *Non Aerosol Cans (except acute hazardous waste)*

During use, containers will be emptied of all material by normal means (e.g. pouring, pumping), until 1% of the container's original capacity remains. If more than this amount of materials remains in the container, it must be used or emptied into a satellite accumulation drum prior to disposal. Inner liners, if present, are removed. Once emptied by this procedure, the container can be disposed of as solid, non-hazardous waste.

8.4 *Aerosol Cans (except acute hazardous waste)*

Aerosol cans emptied of all products are currently being segregated from the waste stream, stored in a lined Megabag, and shipped off site for disposal by a third party waste receiver.

8.5 *Hazardous Wastes that are Compressed Gases*

Gas cylinders for acetylene and propane are returned and refilled. Cylinders are considered empty when the tank pressure approaches atmospheric pressure.

9 Transportation and Documentation

Transportation of dangerous goods within the Lupin site and shipping to and from Lupin 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.

9.1 *Labeling*

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.

9.2 *Storage and Packing 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.

9.3 *Manifests*

LMI has a waste generator number, and proper manifesting will accompany all waste shipments. 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 on site for at least three years.

9.4 *Record Keeping and Reporting*

Copies of each manifest form shall be retained on site 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, as appropriate, for the types of hazardous wastes handled at the Lupin site and the potential need for the services of these agencies.