Mina La Colorada

Preliminary Waste Management Plan

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Table of Contents

Tables

Appendices

APPENDIX B: PROCEDURES MANUALS FOR WASTE HANDLING

B.1. MANUALES DE PROCEDIMIENTOS
PLATA PAN AMERICANA SA DE CV: MINA LA COLORADA

Procedimiento Para Manejo de los Residuos Peligrosos
Procedimiento Para Manejo de Aceite Usado y Material Impregnado con Aceite
Procedimiento Para Manejo de Envases Vacios de Pinturas y Envases de Aerosol (Abr-02)
Administración de Control de Perdidas: Controlando el Derroche (Dic-01)

1.0 Introduction

Pan American Silver's commitment to the environment requires that wastes produced on each mine site be handled, transported, stored and disposed of in a safe and responsible manner. Before construction and expanded mine operations begin, adequate provisions for waste management will be established, and are in fact required as conditions of the agreement generated by the Mexican government (known as the "Dictamen"), which is based on the Environmental Impact Assessment submitted to the Mexican government. Appropriate waste management practices initiated at the beginning of construction will help avoid additional costly clean-up and mitigation measures as expanded operations commence and continue towards eventual closure. Waste management areas established during the initial construction phases will continue to be used until they reach capacity. New areas that meet the same impact criteria will be identified throughout the life of the mine.

The Waste Management Plan is a comprehensive approach to the management of wastes generated on the La Colorada mine site, and outlines strategies for dealing with the various waste streams. The following sections are designed to provide a general overview of all waste management practices that will be implemented at the site. As with any management document, the Waste Management Plan will be updated prior to commencement of expanded operations and reviewed periodically throughout the life of the project. This will ensure continuing compliance and allow the plan to be updated as the result of operational, regulatory, or technical changes.

The Waste Management Plan is based on the concept of source reduction to minimize the quantities of waste produced, and upholds the principles of reduce, re-use, recycle and recover. The Plan was created within the framework of the reality of mining operations in rural central Mexico. Though waste management in Mexico is rapidly evolving, some standard practices, such as facilities for recycling, available routinely in North America, are not yet widely available in Mexico. For this reason, re-use and recycling of necessity will focus first locally within the mine site, and the immediately surrounding communities. This Management Plan details the various aspects of waste disposal including management supervision, waste classification, and arrangements for regular waste removal. The Waste Management Plan applies to construction, operation, and closure of the project. The main objective of the Plan is to minimize potential adverse effects to the environment, including the surrounding rural inhabitants, wildlife, and wildlife habitat. Additional documents that discuss waste management are the Spill Prevention, Control and Countermeasures Plan, and the Environmental Procedures Manual; the last will be defined prior to the start of expanded operations.

2.0 Construction

The following types of wastes will be generated during construction of the La Colorada Mine:

- Domestic liquid effluent (sewage and gray water);
- Domestic solid wastes (hazardous[1] and non-hazardous);
- Industrial solid wastes (hazardous and non-hazardous); and
- Mine wastes.

On-site disposal of materials will be undertaken only at locations approved by the Superintendent of Health Safety and Environment. These locations will be regularly monitored to ensure compliance with this Plan. Environmental procedures for waste management activities (including petroleum products, used oil filters, batteries, laboratory wastes, domestic wastes, sewage treatment residues and inert solid wastes of non-mining origin will be developed within the Environmental Procedures Manual. Current domestic and industrial waste categories are: materials suitable for landfilling, recyclables, and hazardous wastes; these wastes will be segregated at source into their respective categories, and will remain segregated during the collection process.

2.1 Sewage Treatment

Sewage from each building currently drains into one of several "septic" tanks, and is carried by tubing to a 9000 litre per day biodigestion tank (TB) that uses enzymes to process sewage and service waters. During construction, the septic system and biodigestor will be replaced by an Imhoff Tank (IT). Clean up of the existing systems will entail removal of the top of each tank and burial of the entire system to a sufficient depth so that the old tanks and connecting lines pose no further environmental hazard. The existing sewage lines will be integrated into the new sewage treatment system, as appropriate. Sewage lines determined to be in poor condition will be removed and buried in the domestic landfill.

Sewage generated during construction and operational phases of the mine will be treated in the new sewage treatment facility. The design and construction of this sewage treatment facility will be covered comprehensively in project permitting

[1] "Hazardous" as used in this document is a broad qualitative term that has no defined regulatory significance. It is encompasses materials that *(1)* if they were to accidentally escape to the environment in relatively small amounts would exhibit acute toxicity effects to the aquatic ecosystem, or *(2)* would contribute to exceedences of normally accepted limits for chronic human exposure in the atmosphere or through digestion. Most generally such wastes refer to materials that pose an unreasonable risk to human health and safety and the environment. Common sense supported by available toxicity and other scientific databases is used by the Plata Panamericana staff and consultants in interpreting the word "hazardous". Specific hazardous wastes are defined by federal Mexican laws as well as World Bank Guidelines, and include substances showing any of the following characteristics: readily ignited, corrosive, high reactive, toxic, infectious or radioactive.

and design documentation. Following start of construction and before operations commence, the solid waste will be evaluated for use as a soil additive to be used during reclamation. (One requirement of the Dictamen is to establish a nursery and grow plants to be used during reclamation. Solid wastes from the IT will be evaluated at the nursery to determine acceptability as a soil additive during the first few years of operations.)

2.2 Domestic Solid Wastes

General domestic solid waste will include food wastes, food-packaging wastes, and a percentage of non-petroleum oils and greases. Many of these items may be biodegradable, and others are considered inert. Large metal containers for collection of these materials are dispersed throughout the area near shops, the warehouse, offices and residential areas. There is regular periodic collection of residues, and occasionally broader based programs focus on gathering of solid wastes and garbage dispersed over the larger property area. Programs of "Ecological Saturdays" managed by the Health Safety and Environmental Department promote more generalized clean up. The Safety and Industrial Hygiene group has begun a recycling program within company offices, runs a program to minimize sale of soft drinks in non-recyclable plastic bottles, as well as purchasing aluminum cans for recycling in the nearest recycling center (the city of Zacatecas). Education programs have been started in the neighboring communities to develop awareness and culture of using containers and approved landfills for disposal of garbage. These programs will continue.

2.2.1 Existing landfill

Currently, domestic solid waste is placed in the sanitary landfill located in the area of the Aguila shaft, within the footprint of historic disturbances. Though this facility is unlined, it is considered appropriate for deposition of non-hazardous industrial and domestic wastes. Water quality results do not show heavy metal leaching from this facility.

2.2.2 Construction and operations

As part of construction, Plata PanAmericana will improve the design and construction of the sanitary landfill in the relatively flat area near the Aguila shaft. This will include a small berm separating the area from the neighboring arroyo to reduce windblown losses. The preliminary operations manual will be updated prior to the start of construction.

Following consultation with the municipality of Chalchihuites, which has jurisdiction of this facility, it is expected that the newly constructed landfill will be able to receive the following items:

- Construction wastes (wood, concrete, etc.);

- Shredded tires and other rubber items;
- Paper and wooden packing materials;
- Domestic solid wastes; and
- Scrap metal that cannot be recycled.

The major objective of the Landfill Operations Plan is to allow safe disposal of wastes; this will be accomplished by:

- Using a location approved by regulators and the onsite Health Safety and Environmental Department;
- Restricting the types of wastes which can be placed;
- Ongoing monitoring and documentation by the Health Safety and Environmental Department to ensure that the Plan is followed.

There will be two "boneyards" for disposal of scrap material- one within the planned shops and warehouse area, and a second within the area of the landfill. The landfill "boneyard" disposal area will be designated for the disposal of scrap machinery, rails from the mine, other metals, and non-toxic metal containers and materials, which are not considered to be of immediate use. Adequate drainage structures will be constructed to control the movement of surface water runoff through and off both sites.

The following materials will not be stored in the scrap metal waste dump:

- Spent oil filters and petroleum containers;
- Used equipment and truck batteries;
- Products containing pressurized gas;
- Empty reagent containers or drums; or,
- Other metal containers that contain resins, solvents, cleaners, paint, or petroleum products.

These materials will be temporarily stored in a specially designated bermed area with a concrete floor, synthetic liner, and appropriate cover. This area will be secure, well labeled and clearly delineated. These materials will be shipped off site on a regular basis by an approved company to a designated disposal facility. Documents certifying this disposal will be retained in site records, with copies sent to the Durango office. Copies of the documents will also be submitted to SEMARNAT as part of required half yearly reporting with respect to generation and management of hazardous materials.

2.2.3 Closure of landfill

Closure of the landfill will be done in accordance with the Reclamation and Closure Plan (Attachment 4 of the Environmental Action Plan).

2.3 Potentially Hazardous Domestic Wastes

Potentially hazardous domestic wastes will be generated during construction and normal operations. These hazardous wastes may include household cleaning items, glues and cements, solvents, paints and pressurized aerosol cans.

These materials will be placed for temporary storage in a specially designated area similar to that described above. Materials will be removed from site by an approved carrier for appropriate disposal.

2.4 Industrial Liquid Effluent

Because the tailings facility is designed to be a closed loop system, the only potential discharge is from the wastewater treatment plant. Plata Panamericana will discharge the wastewaters from the Imhoff Tank to the tailings facility to maximize recycle of water to the mill. Therefore, there will be no industrial discharges to the environment.

2.5 Industrial Solid Wastes

Industrial solid wastes include non-hazardous and hazardous wastes. Non-hazardous wastes include:

- scrap steel and other metals;
- vehicle maintenance wastes;
- vehicle air filters (single use/non-recyclable); and
- inert industrial wastes.

Non-hazardous wastes will be disposed of in the approved landfill.

The La Colorada mine has been registered with SEMARNAT as a generator of hazardous wastes from the current operation, and is required to keep records of the type and volume of wastes generated, as well as records of how they are disposed. Detailed documentation, labeling and record keeping are required by SEMARNAT. Reports must be filed on a twice-yearly basis by each mine indicating types and volumes of hazardous wastes generated, their temporary storage in approved containers and in an approved temporary facility, and their ultimate disposal by approved carrier (in approved containment), and into approved facilities. Regulations are strictly enforced, and inspections of both generators and carriers are stringent. In accordance with IFC Guidelines a Hazardous Materials Management Program will be defined prior to the start of the expanded operation.

Potentially hazardous wastes include:

- solvents;

- paints;
- aerosol cans;
- laboratory and metallurgical wastes including empty reagent drums, cupels, filter cloths, spent solutions, etc;
- soils contaminated with petroleum products;
- truck, vehicle and equipment batteries;
- used oil and fuel filters; and
- used oils and lubricants.

Plata Panamericana will preferentially purchase non-hazardous materials through a pre-purchase program in which all dangerous goods will be reviewed by the Health, Safety and Environmental Department as well as by Plant and Warehouse Departments prior to purchase. Where an alternate, non-hazardous material cannot be substituted, each of the Departments will provide assistance to ensure its safe use, and if applicable, proper disposal. If a non-hazardous substitute is not available, the selection will be based on using the most efficient material.

Used oils and lubricants which cannot be recycled onsite or sold will be appropriately and clearly labeled, and stored in approved double lined containers within a designated secure hazardous containment area. This area will be designed under stringent specifications developed by SEMARNAT. The area will be covered, bermed and lined with a synthetic liner. On a periodic basis, materials will be removed by an approved carrier for appropriate recycling offsite or for disposal in an approved facility.

In Mexico, the vendors of new batteries are required to accept the return of the used batteries for recycling. For batteries purchased prior to this requirement, large batteries will be drained. The acid will be neutralized and the battery casing will be disposed of in the landfill or sold for recycling.

Soils can become contaminated by hydrocarbons in the course of routine operations in a number of ways including small spills during fueling and lubrication, breaks in lines or equipment. Sources will be minimized by careful management and provision of drip pads and absorbent materials. Locations where spills have a higher probability will be lined with geomembrane or floored with concrete. Source reduction is the preferred strategy, but where spills do occur, soils will be excavated and taken to the landfarm area that will be bermed and lined with geomembrane. Large rocks will be segregated. Finer soils will be spread to allow turn over and facilitate remediation to an acceptable level using natural microbiological processes. If necessary, fertilizer may be added to accelerate the process.

2.6 Summary of Waste Classifications and Handling Requirements

Table 1 provides a summary of the waste disposal recommendations for the major waste sources that will be generated during construction and operations at the La Colorada Project.

Table 1. Waste Classification and Disposal Methods

Waste	Type of container	Storage	Disposal
Fuel and lubricant	Drums	Double lined drums in bermed, lined area.	Remove from site.
Solvents	Drums	Double lined drums in bermed, lined area.	Remove from site.
Tires	NA	NA. Maximize use for laydown storage, and protection of turning areas from collision.	Excess are cut up and landfilled or backfilled into historic mine workings.
Explosives and associated material	Sacks	Sacks to be stored in secure area while awaiting return to provider.	Landfill
Cement	Sacks	Burial	Landfill
Process reagents	Sacks, containers	Designated bermed area.	Return to supplier. Decontaminate. Landfill
Filter cloths and other plant materials.	Drums	Designated secure area.	Tailings facility.
Cupels and spent lab solutions and materials	Drums	Designated secure area.	Process Plant
Antifreeze	NA		
Batteries (small)	Plastic casing	Drums	Neutralize acid. Landfill casing or remove from the site.
Batteries (large)	Plastic casing	Drums	Return to provider (new) or drain and recycle casing.
Filter (oil/ gas)	Paper/plastic	Crush. Drain. Place in double lined drums	Remove filled drums from site.
Trash	Variable.	Landfill	Landfill
Scrap metal	NA	Boneyard	Recycle or remove from site.

3.0 General Management Guidelines

Management of the waste disposal program will be a key factor in ensuring that environmental protection measures are accomplished. Management will include employee training on hazardous waste handling and identification, as well as regular programs of inspection to ensure compliance. The following measures will be employed to ensure a successful management plan:

- Elimination of unnecessary crating and packaging materials prior to delivery to the site;
- Contracting with suppliers for return of crating and packaging materials following use;
- Segregation of certain scrap materials from the waste stream for reuse in other aspects of the operation;
- Segregating combustible, non-combustible, hazardous and non-hazardous wastes at the source;
- Where possible minimize using hazardous and non-recyclable substances and materials;
- Minimizing generation of scrap by prompt maintenance of equipment;
- Maximizing purchase of bulk greases, lubricants and solvents, and minimizing use of aerosol containers;
- Using combustible materials as a supplemental fuel where possible; and
- If appropriate using nutrient rich organic wastes as a soil amendment to facilitate reclamation success or as fertilizer and soil amendment.

Waste management best practices during construction and operation of the mine, mill and related facilities will be implemented in accordance with all applicable Mexican regulations and with World Bank Group guidelines.

This revised Preliminary Waste Management Plan will be updated before construction commences. A final Waste Management Plan will be available prior to the start of expanded operations.

APPENDIX A: LA COLORADA MINE- WASTE MANAGEMENT DATA SHEETS

MRE-01: Used Engine and Lubricating Oils
MRE-02: Oil and Air Filters
MRE-03: Hydraulic Hoses
MRE-04: Equipment & Machine Belts
MRE-05: Small Diverse Metal
MRE-06: Cardboard and Paper
MRE-07: Aluminum Cans and Small Plastic Bottles
MRE-08: Empty Aerosol and Paint Cans

La Colorada Mine Waste Management Data Sheet
MRE-01: Used Engine and Lubrication Oils
XX-YY-2002

Material: Used engine and lubrication oils generated by servicing of internal combustion motors.
Department: Mechanical Maintenance workshop
Favored Disposal Option: Recycle off site.
Other Disposal Options:
Possible Waste Reduction Strategies: New technology may greatly reduce used oil in the future. Ensure equipment is in good working order to reduce amounts generated.
Handling Notes: Used engine oil is drained from engines/vehicles during servicing and stored with other fluids in a secure holding place until removal from the site. Today products are sealed in 200l metal drums in the short-term combustible storage area prior to transport from the site.
* In future, a bulk storage tank will be used to store filtered oils, prior to backhaul to a licensed recycler.

La Colorada Mine Waste Management Data Sheet
MRE-02: Heavy Equipment Oil and Air Filters
XX-YY-2002

Material: Large numbers of engine oil filters will be generated, and in Mexico are classified as hazardous wastes. Air filters are inert.
Department: Mechanical Maintenance workshop
Favoured Disposal Option: Oil: Filter crushing and oil removal. Removal offsite. Air: crush and landfill
Other Disposal Options: Oil: Recycle using off-site recycler.
Possible Waste Reduction Strategies: Reusable Filters
Handling Notes: Filters are removed during routine maintenance, crushed to reduce waste volume and sealed in 200 l metal storage drums in the short term combustible storage area until removal from the site either by a licensed recycler or licensed transport company to an approved disposal facility. Air filters from automotive maintenance areas are hauled to the landfill and buried with other inert wastes.

La Colorada Mine Waste Management Data Sheet
MRE-03: Rubber and Plastic Hoses/Tubing
XX-YY-2002

Material: hoses originate from hydraulic systems of motors.
Department: Mechanical Maintenance workshop
Favoured Disposal Option: Recycle using off-site recycler.
Other Disposal Options:
Possible Waste Reduction Strategies:
Handling Notes: hoses are removed during routine maintenance, coiled or crushed to reduce waste volume and sealed in 200 l metal storage drums in the short term combustible storage area until removal from the site either by a licensed transport company to an approved disposal facility.

La Colorada Mine Waste Management Data Sheet
MRE-04: Conveyor and Rubber Belting
XX-YY-2002

Material: belts originate from replacement and servicing of mechanical systems motors.
Department: Workshops of Electrical and Mechanical Maintenance and Plant
Favoured Disposal Option: Recycle using off-site recycler.
Other Disposal Options:
Possible Waste Reduction Strategies:
Handling Notes: Belts removed during routine maintenance, are coiled or crushed to reduce waste volume and placed in sealed 200 l metal storage drums in the short term combustible storage area until removal from the site either by a licensed transport company to an approved disposal facility.

La Colorada Mine Waste Management Data Sheet
MRE-05: Small Metal Waste
XX-YY-2002

Material: fine to medium metal shards and scraps. Construction waste may include steel, cladding, ducting, banding, piping etc. Metal also comes from automotive repairs including haul truck repair, grader blades, welding waste etc.
Department: soldering and welding in various mine areas. Scrap iron from plus old/obsolete facilities plus construction contractors.
Favoured Disposal Option: Recycle where possible or return to vendor. Otherwise landfill
Other Disposal Options: Recycle – Plata Panamericana will investigate recycling programs.
Possible Waste Reduction Strategies:
Handling Notes: Metal waste is collected from various sources around the site.

La Colorada Mine Waste Management Data Sheet
MRE-06: Paper and Cardboard Waste
XX-YY-2002

Material: Office paper is generated from administration and contractor activities. Corrugated cardboard is widely used in packing of many goods and materials provided to the site.
Departments: Warehouse, Camps, Administration
Favored Disposal Option: Office paper is used for double-sided copying. Confidential material is shredded and landfilled. Recycling.
Other Disposal Options:
Possible Waste Reduction Strategies: Move to paperless office with increased use of email, voice mail. Request that suppliers reduce packaging of materials being sent to site. Reuse boxes in return shipments.
Handling Notes: Cardboard is collected at various locations around the site.. Waste paper is collected from various locations at the site. Used office paper and cardboard are assembled in 25kg packages for transport and recycling in the city of Zacatecas.

La Colorada Mine Waste Management Data Sheet
MRE-07: Soft Drink Cans and Plastic Bottles
XX-YY-2002

Material: Aluminum drink cans and some plastic drink bottles are generated from leisure hours within the camp. Plastic bottles also originate from food products, drinks and cleaning products.
Departments: Warehouse, Camps, Kitchens, Administration
Favoured Disposal Option: Recycle. Offer incentives to small shops to stock only recyclable containers.
Other Disposal Options: Landfill
Possible Waste Reduction Strategies: Use pop and juice dispensers in kitchens.
Handling Notes: Where possible cans and plastic bottles are segregated at source from other domestic wastes throughout the camp. Less frequently, they may not be segregated and are taken from camp with other garbage to the landfill. The more complete implementation of a recycling program is currently underway. Products are compacted and placed in plastic bags for recycling in the city of Zacatecas.

La Colorada Mine Waste Management Data Sheet
MRE-08: Aerosol Cans and Empty Paint Containers
XX-YY-2002

Material: Aerosol cans are used in many applications. They contain pressurized gas and should not be landfilled or incinerated without pre-treatment. Paint cans are generated during operation
Department:
Favoured Disposal Option: Aerosol cans: Puncture and Landfill. Containers: Landfilling when non-hazardous
Other Disposal Options: Return containers to Suppliers
Possible Waste Reduction Strategies: Minimize use of spray cans in favour of other options, including pump bottles. Supply paint in larger containers to reduce waste
Handling Notes: Users collect ***aerosol cans*** separately for disposal. Aerosols cans are punctured, and any residual chemical is collected and then the can is landfilled. Any residual chemical is characterized and then shipped off-site for recycling or disposal.

Paint cans are emptied to the full extent by the user. Any residual water based paint is allowed to dry out before the can is landfilled. Residual oil based paints and specialty coatings are collected and sent off-site for recycling or disposal. Once paint cans are empty (or in the case of water based paint, residual allowed to dry out), the cans are landfilled.

(ALSO to come: Sheets for the following will be generated from site as operational planning is finalized:

Soils Contaminated with Petroleum or Combustible Products
Kitchen Wastes
Heavy Equipment Batteries
Used Small Batteries
Used Light Vehicle Tires
Used Heavy Vehicle Tires
Scrap Iron
Solvents
Wood Waste
Larger Plastic Waste

La Colorada Mine Waste Management Data Sheet
Heavy Equipment Batteries
XX-YY-2002

Material: These types of batteries are classed as hazardous waste
Favoured Disposal Option: If new return to vendor or otherwise recycle off-site
Other Disposal Options:
Possible Waste Reduction None
Strategies:
Handling Notes: When batteries are removed from a piece of equipment they are taken to the Battery Room in the Truckshop where the acid is drained into shipping containers. The batteries are then packaged for shipment in wooden crates. Batteries and battery acid are shipped to licensed recyclers.

La Colorada Mine Waste Management Data Sheet
Used Light Vehicle Tires
XX-YY-2002

Material: Significant numbers of worn out tires are generated from maintenance of light pick-up trucks.
Favoured Disposal Option: Landfill after shredding
Other Disposal Options: Use around site in complete or shredded form.
Possible Waste Reduction Better repair facilities on site for repairing tires.
Strategies:
Handling Notes: Tires are collected at the source and hauled to the landfill for storage. Tires are stored in a designated area at the landfill.

La Colorada Mine Waste Management Data Sheet
Used Heavy Equipment Tires
XX-YY-2002

Material: Significant numbers of worn out tires are generated from maintenance of the heavy equipment.
Favoured Disposal Option: Landfill if not required for engineering projects on-site.
Other Disposal Options:
Possible Waste Reduction Strategies:
Handling Notes: Tires are collected at the source and hauled to the landfill for storage. Tires are stored in a designated area at the landfill.

LA COLORADA MINE- WASTE MANAGEMENT DATA SHEETS
Hydrocarbon Contaminated Soil
XX-YY-2002

Material/issue: Small quantities of affected soils are generated from fueling spills and similar occurrences.
Department:
Favored Disposal Option: Landfarm on site.
Other Disposal Options: Encapsulate. Remove from site.
Possible Waste Reduction Strategies: Protect against potential spills by using improved containment methods.
Handling Notes: Contaminated soil is transferred to the pending area of the landfarm by the Warehouse Department under the supervision of the Environmental Department. After characterization contaminated soil is added to the active treatment area of the landfarm. Prior to the start of the expanded operation a Landfarm Operating Manual will be created.

La Colorada Mine Waste Management Data Sheet
Kitchen Wastes
XX-YY-2002

Material: Effective disposal of food wastes is essential to minimize incidents of wildlife contact.
Department:
Favoured Disposal Option: Composting
Other Disposal Options: Landfilling
Possible Waste Reduction Strategies: Reduce packaging, bring in largest practical sizes packaging. Reuse leftovers in other dishes.
Handling Notes: Cans are dumped into wheeled collection bins when full which hold approximately 6 to 8 large bags. Notes: Total domestic waste generation is less than 1kg/p/d.

La Colorada Mine Waste Management Data Sheet
Sewage Sludge
XX-YY-2002

Material: The camp IT plant produces sludge.
Department:
Favoured Disposal Option: Disposal in designated area into tailings facility.
pile.
Other Disposal Options: Potential for composting with other wastes and use as solid amendment.
Possible Waste Reduction: N/A
Strategies:
Handling Notes: Sludge is pumped out of the treatment plant and intoa sump truck.

La Colorada Mine Waste Management Data Sheet
Wood waste
XX-YY-2002

Material: Wood is generated from packaging and carpentry work
Department:
Favoured Disposal Option: Offer to community. Landfill
Other Disposal Options:
Possible Waste Reduction Make use of scraps where possible
Strategies:
0Handling Notes: Wood wastes are collected with paper waste and sent to landfill for burial with the exception of shipping crates and wire spools which are returned to suppliers for deposit.

La Colorada MineWaste Management Data Sheet
Plastic Waste
XX-YY-2002

Material:
Department:
Favoured Disposal Option: Landfill
Other Disposal Options:
Possible Waste Reduction Strategies: Less packaging of material sent to the site where possible
Handling Notes: Plastic waste is collected along with steel waste instorage bins placed around the site.

HOJAS DE DATOS DE SEGURIDAD PARA EL MANEJO DE RESIDUOS

MRE-01: Aceites Lubricantes
MRE-02: Filtros para Aceite y Aire
MRE-03: Mangueras de Hule y Plastico
MRE-04: Bandas Transportadoras y Automotrices

MRE-05: Metales Diversos
MRE-06: Cartones y Papeles
MRE-07: Envases de Plastico (PET)
MRE-08: Envases Vacios de Pintura Liquida y en Aerosol

APPENDIX B: PROCEDURES MANUALS FOR WASTE HANDLING

MP-01: Procedimiento Para Manejo de Aceite Usado y Material Impregnado con Aceite
Procedimiento Para Manejo de Envases Vacios de Pinturas y Envases de Aerosol (Abr-02)
Administración de Control de Perdidas: Controlando el Derroche (Dic-01)

APPENDIX C: SOLID WASTE LANDFILL OPERATING PLAN

1.0 Introduction

This operating document forms part of a solid waste management plan for the La Colorada mine site, and will govern operations at the current landfill site. It will be reviewed for applicability as construction begins, the mine site developed, and operations begin. Daily operation of the landfill site is conducted by the Warehouse Department of the mine. The Health Safety and Environmental Department routinely audits the landfill to confirm that personnel are following the Waste Management Plan.

1.1 Location and Uses

The solid waste landfill is located in the flat area surrounding El Aguila shaft, within the footprint of the previously disturbed area. Activities at the solid waste landfill are limited to disposal of inert, non-reactive and non-hazardous solid wastes.

2.0 Functions

2.1 Inert Solid Waste Landfill

The landfill is to be used for the disposal of non-hazardous materials that are generated as part of the operation of the mine or during construction or demolition. The following materials are acceptable:

- Construction wastes, including: plastic or synthetics, rubber and rubber coated products conduit and insulated electrical wire, and siding
- Inert waste arising from mine operations.

The following materials are not to be disposed into the landfill:

- hazardous waste[1] of any type;
- putrescible wastes (require incineration prior to disposal)
- any waste containing any food residues (require incineration prior to disposal),
- oily wastes including oil filters,
- used oil, fuels, lubricants, and solvents
- greases,
- sludges,
- paints,
- asbestos,
- aerosol cans (to be punctured, drained and incinerated prior to disposal),
- any chemical wastes,
- lead acid batteries, and
- salvageable or recyclable materials such as drums, vehicles, and tanks.

1. Hazardous waste is a broad term that covers wastes that pose an unreasonable risk to human health and safety and the environment. Specific hazardous wastes are defined by federal Mexican laws as well as World Bank Guidelines, and include substances showing any of the following characteristics: readily ignited, corrosive, high reactive, toxic, infectious or radioactive.

Wastes are dumped over the working face of the landfill. On a regular basis, as waste is taken to the landfill, the Warehouse- Site Services co-ordinates the compaction, contouring and covering of the waste. Equipment used to complete this work can include front-end loaders and dozers. Waste rock from the working pit is used as cover material. Waste covering is completed as necessary to minimize blowing and wildlife attraction while reducing aesthetic concerns. Only the tire area is covered on a less frequent basis as they are preferentially reused prior to burial. A minimum rock cover is maintained over buried wastes at all times. A separate area of the landfill has been established for used tires

2.2 Tire Recycling Stockpile

Used light and heavy vehicle tires are stored in the designated area of the landfill. This area of the landfill is not covered until it is considered unlikely that they will be used in future engineering projects. The tire area is kept separate from the wood/paper disposal area to reduce the severity of fire, if one were to occur at the landfill.

3.0 Contingency Planning

The main issues for contingency planning directly related to waste operations are:

- Improper disposal,
- Fire, and

- Extreme precipitation.

3.1 Improper Disposal

Should unacceptable wastes be placed for disposal, they are to be removed to the correct disposal/storage point in the case of minor infractions. Should larger quantities of unacceptable waste be noted, these are to be reported to the Superintendent of Health Safety and Environment staff for corrective action. Should unacceptable wastes be noted after they have been placed in the landfill, they are to be removed.

3.2 Fire

Though the risk of fire is best managed by prevention, depending on the severity of the fire, the response may vary. In the event of a fire, the Emergency Response Program will be followed. If fire breaks out or spreads to areas of waste, the following actions can be taken:

1. Assess the situation.
2. Follow emergency procedures to initiate response to the incident.
3. Separate burning wastes, if safe to do so, using any suitable means
4. Smother using soil, fine rocks, coarse process plant rejects, etc as available.
5. If the burn spreads to covered wastes or beyond the landfill margins, use water and fire fighting chemicals to contain the fire.

3.3 Extreme Precipitation

Compaction of the waste will be continued year round to maximize site life and to minimize wind-blown materials. Best management practices for stormwater management will be used with diversion ditches regularly inspected and maintained. The landfill will operate in accordance with operating procedures at the remainder of the site and work will cease when conditions are deemed unsafe.