



Minto Mine
Waste Management Plan

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Minto Mine
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1 Introduction

Minto Explorations Ltd. (Minto), a wholly owned subsidiary of Capstone Mining Corp., operates the Minto Mine in central Yukon. The Minto Mine is located approximately 240 km northwest of Whitehorse and 41 km southwest of Pelly Crossing (Figure 1-1). The Minto Mine area consists of 164 quartz claims on the west side of the Yukon River within Selkirk First Nation (SFN) Category A Settlement Land Parcel R-6A (Survey 2000-0112LTO Plan 83638 CSR), and is comprised of several land leases with SFN. The North Klondike Highway is located on the east side of the Yukon River and the mine-site is accessed by crossing the Yukon River at Minto Landing. After crossing the Yukon River, either by summer barge or winter ice bridge, access to the mine-site is via a 27-km access road along the Yukon River and up Minto Creek drainage (Figure 1-2). Crews and supplies are transported by air during the spring thaw and fall freeze-up.

The Minto Mine is an existing and fully operational copper and gold mine. The property has been explored since initial workings began on the claims in 1971. In 2005, Sherwood Copper (the predecessor of Capstone Mining Corp.) acquired the property and has been producing copper concentrate since 2007.

This Solid Waste Management Plan (SWMP) is a requirement of Quartz Mining Licence QML-0001 (QML), which requires *“a plan that describes the mitigations and methods used to manage solid and liquid wastes and special wastes to ensure protection of the environment and human health.”* This SWMP is an update to the previous SWMP, submitted in June 2011 and approved in October 2011. The content of this SWMP is derived from the *Plan Requirement Guidance for Quartz Mining Projects* (Yukon Government, 2013).

The purpose of the SWMP is to describe the methods used to manage solid, liquid, gaseous and special wastes at the Minto Mine site, including both hazardous and non-hazardous solid wastes. All wastes will be handled, stored and disposed of according to the appropriate regulations and permits issued by Yukon Environment, including Waste Management Permit #81-005, Air Emissions Permit # 4201-60-030, and Land Treatment Facility Permit #4202-24-041. All personnel associated with waste handling, storage and disposal will be knowledgeable of the contents of this plan, the terms and conditions of the solid waste management permits, and will be trained on proper handling of materials found on site.

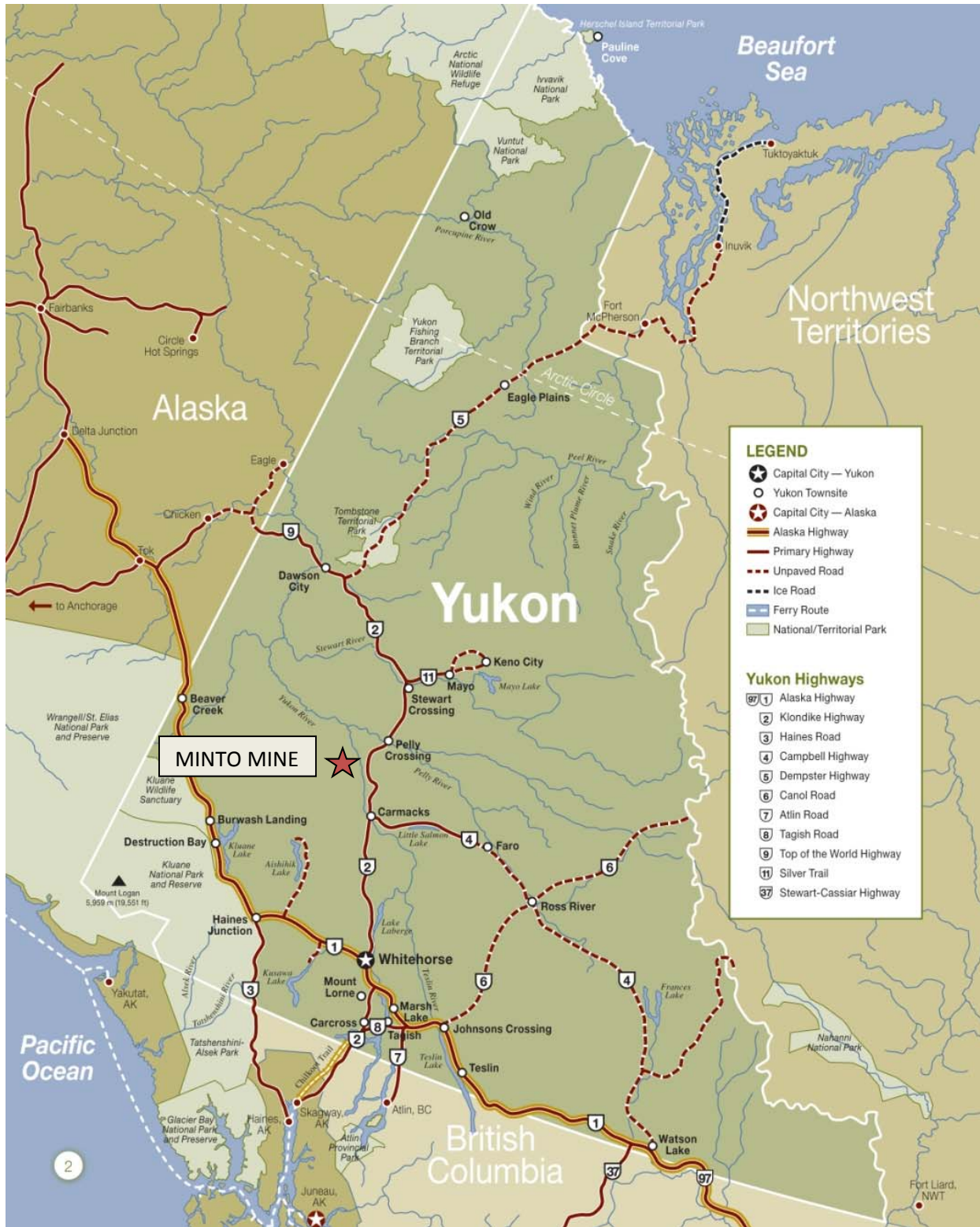


Figure 1-1: Minto Mine Location Map

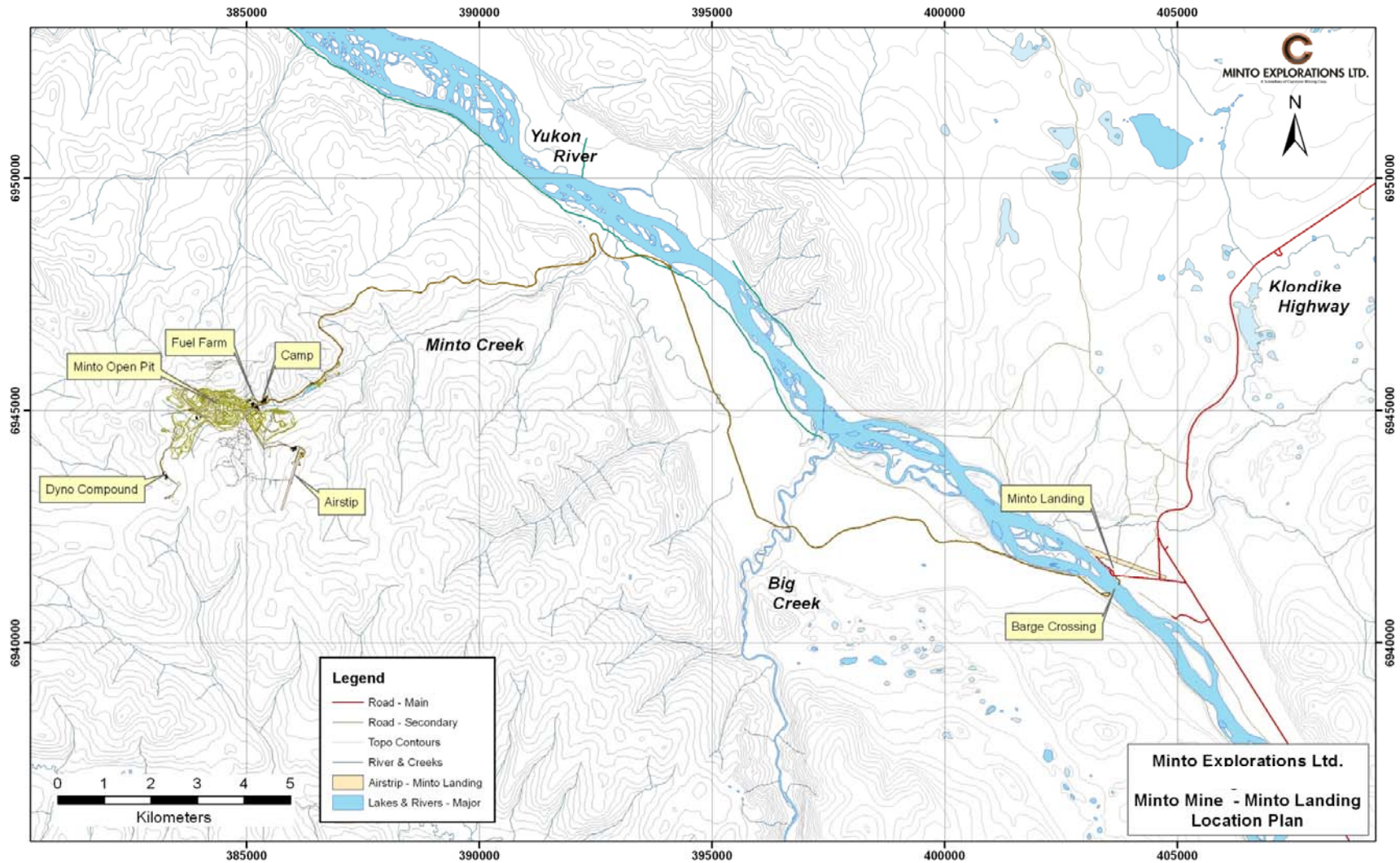


Figure 1-2: Minto Mine Access Location Plan

1.1 Definitions

For consistency in interpretation with the contents contained herein, the following terms are defined:

Waste includes Solid and Special Waste.

Solid waste includes refuse, ashes, garbage, domestic waste, compost or any other waste prescribed by regulation whether or not the waste has any commercial value or is capable of being used for a useful purpose¹.

Special Waste is a waste requiring special handling, storage, or destruction and prescribed as Special Waste by regulation whether or not the waste has any commercial value or is capable of being used for a useful purpose¹ (e.g., waste oil).

Putrescible Waste contains organic matter that is capable of being decomposed and may be capable of attracting or providing food for wildlife (e.g., kitchen waste).

Non-Putrescible Waste means any waste that contains no more than trivial amounts of putrescible materials; examples include construction waste, cardboard, demolition debris.

Class 9 Hazardous Wastes are miscellaneous products, substances or organisms considered to be dangerous to life, health, property, or the natural environment².

Bear-proof container is a container sealed to prevent the escape of attractant odours and strong enough to exclude a bear from the contents.

2 Waste Infrastructure

This section outlines where solid wastes are handled, stored and disposed. Table 2-1 summarizes handling storage and disposal locations for several solid waste streams and key waste disposal areas are shown on Figure 2-1. For a full list of waste streams and handling procedures please refer to the WMA waste segregation spreadsheet located in Appendix A. Non-hazardous solid waste will be segregated into two streams: putrescible and non-putrescible wastes. Non-putrescible wastes will be further segregated into three categories: recyclable, burnable and non-burnable material. Key waste management locations, including the storage and disposal areas, discussed further below. Disposal of these materials is discussed further in Section 3.

¹ Revised Statutes of the Yukon: Environment Act *Part 2: Definitions* (2002)

² Revised Statutes of the Yukon: Environment Act *Part 10 Section 118: Hazardous Substance and Pesticides* (2002)

Table 2-1: Handling, Storage and Disposal of Solid Waste

Type	On-site Storage Location	Disposal
Kitchen Waste	Bear-proof containers	Incinerator
Beverage Containers	Recycling Bins	Off-site disposal
Office and Dormitory Garbage	Garbage Bins/Bear-proof containers	Incinerator
Untreated Wood	Open Burn Area	Open burned ^{Note 1}
Treated Wood	Waste Storage Area	Incinerator
Heavy Plastics	Waste Storage Area	Incinerator
Light Plastics/Cardboard	Waste Storage Area	Open burned ^{Note 2} /Incinerator
Steel / Copper / Rubber	Waste Storage Area	Off-site Disposal facility
Underground Scrap Steel (screen and bolts)	Portal Laydown	Landfill
Ash from Incinerator/Open burn area	Ash Bin	Landfill
Tires (rim size < 24" diameter)	Waste Storage Area	Barrier use or off-site disposal facility
Tires (rim size > 24" diameter)	Waste Storage Area	Barrier use or land filled

Note 1. Untreated wood products may be open burned without restriction

Note 2. Ash is periodically removed and disposed of the landfill

2.1 Waste and Recyclable Storage Locations

Special waste, domestic waste, recycling, and waste oil storage locations are shown in Figure 2-1 and are detailed below.

2.1.1 Special Waste Pole Barn

A 100-foot-long Special Waste Storage Pole Barn is located within the waste management area (WMA) (Figure 2-1) and is used for staging special waste in a covered area prior to removal from the mine site. The floor of the pole barn is lined with 4030 Enviro Liner and is covered with 30 cm of clean construction grade crushed gravel. Materials stored within the pole barn are separated by signage to ensure that like materials are stored together away from other potential reactive materials. Typical materials that are stored in the pole barn include: aerosols, gas, diesel, oils, solvents, coolants, lead acid batteries and household alkali batteries.

2.1.2 Camp

The camp waste receptacles are located in the following areas: the kitchen, office complex, dormitories and site vehicle parking lot. In an effort to discourage wildlife from entering the camp area garbage is removed twice a day and kitchen waste is stored indoors until it is picked up by a site service employee, at which time it is brought directly to the incinerator for immediate disposal. All excess material is stored in a bear proof container adjacent to the incinerator. Recycling bins for refundable beverage

containers, aerosol container bins and used alkaline battery drop bins are located throughout the camp complex.

2.1.3 Recycling Sea Can

A sea-can is located at the WMA and is used to store recyclables until a sufficient amount of material has accumulated to warrant a removal from the mine site via empty trucks that leave the mine site after bringing in supplies.

2.1.4 Waste Oil Storage Tank

An 8000L bulk double walled waste oil storage tank and a 500L day tank are located at the water treatment plant and are used to supply the waste oil burner. There is also a waste oil tank located on the south-east side of the airstrip. It is used by Pelly Construction to stage excess oil that is not used by the waste oil burner.



Figure 2-1: Location of Waste Infrastructure

3 Waste Disposal Locations

Minto Mine is licensed to operate a landfill for commercial activities, open burn solid waste, operate an incinerator and incinerate waste oil for the purpose of heating. The locations of these waste management areas are shown on Figure 2-1.

3.1 Landfill

The landfill is located on the north side of the airstrip, adjacent to the Waste Management Area (WMA). It accommodates non-putrescible and non-recyclable waste generated by the mine and is being managed in a manner that will facilitate closure at the cessation of mine operation. The landfill is located in an old borrow pit and is currently being managed by sectioning off small designated areas for waste disposal. Once a section has acquired 50 cm of waste it is buried with a minimum of 10 cm of soil (or other suitable material) and a new lift is started. Cover material is sourced from remediated soils from the LTF (that have been approved for removal) and/or stockpiled residuum. When ash is required to be deposited of, it is buried upon arrival to prevent dispersal by wind. To ensure no food waste is deposited in the landfill all loads are checked by the WMA attendant before being dropped off. The landfill is locked outside of the WMA operating hours, which are Sundays from 10:00 to 15:00.

3.2 Open Burn Area

A burn pit on flat ground surrounded on three sides by 3 m berms is located on the north side of the airstrip. The open burn area is used to burn cardboard and scrap wood. As per Waste Management Permit #81- 005 there is an electric fence surrounding the burn pit which is operational from May 31 to October 31. The purpose of the fence is to prevent wildlife from entering the facility. Ash from the burn pit is periodically emptied into the landfill, as required.

3.3 Incinerator

A Westland Single Chamber Cyclonator Incineration System (Model #CY-1020-FA "D") is located on the Southeast side of the airstrip and is used to dispose of blasting caps and other blasting materials outside of the Solid Waste Management areas operating hours. The incinerator is operated by trained employees who are responsible for ensuring the volume of waste incinerated remains within the operating conditions of this incinerator. An ash bin is located adjacent to the incinerator and is used as a transfer station for ash obtained from daily incineration of waste, prior to disposal in the landfill.

A Westland CY100CA Double Chamber incinerator is located within the WMA. This is the primary incinerator for site and is operated by Minto mine employees who have received incinerator training from Westland Environmental. Physical components of the incinerator are inspected daily and any issues are reported to the Site Services supervisor. Only combustible materials are disposed of and all materials (excluding metals) are reduced to ash prior to removal. All ash is staged in an ash bin located adjacent to the incinerator prior to being disposed of in the landfill. The manufacturer's specifications for the two incinerators are provided in Appendix B.

3.4 Waste Oil Burner

At present a CB-5000 with CB-550-S2 burner is being used to heat the Water Treatment Plant. The unit is fed by a 500L day tank and bulk waste oils are stored in an 8000L double walled storage tank located outside of the water treatment plant. The tank is filled during the summer filled on an as needed bases during winter operation. The manufacturers' specifications for the burner are provided in Appendix B. All excess waste oils that are not used by the waste oil burner are stored in an oil tanker located on the east side of the airstrip. Oil from the tanker is currently being shipped offsite by General Waste (a Whitehorse based contractor) who makes several trips a year to Minto Mine. An additional Energy Logic EL-350H 350,000 BTU waste oil burner has been installed in Pelly Construction's mechanic shop to reduce the amount of used oil that is shipped off-site.

Waste products consumed by the burner include:

- Used crankcase oil;
- Used automatic transmission fluid;
- Used hydraulic oil; and
- Used fuel oils #2 (truck diesel and heating oil), #4 (blend of diesel, distillate or residual fuel oil) and #5 (residual fuel oils (RFO) or heavy fuel oils).

3.5 Waste Treatment

Waste treatment facilities at the Minto Mine include a land treatment facility for the treatment of hydrocarbon contaminated soil, and a sewage treatment plant, which treats camp sewage prior to disposal in the Main Pit.

3.5.1 Land Treatment Facility

A Land Treatment Facility (LTF) for the purposes of remediation for hydrocarbon and glycol contaminated soil is located west of the landfill (Figure 2-1) and is permitted under Land Treatment Facility Permit #4202-24-041. The facility consists of a large treatment cell and staging area with a combined area of 2,706 m², and a sump designed to collect any runoff from the facility. A berm encloses the entire facility to ensure no migration of contaminants. The staging area, treatment cell, and berms are lined with EL4040 geomembrane and geotextile fabric, and covered with 1000mm of residuum. Remediation of hydrocarbon (oil, gas and diesel) and glycol contaminated soil and snow occurs within the land treatment facility. As material is remediated (i.e., once concentrations are below those outlined in the *Yukon Contaminated Sites Regulations for Industrial Sites*) and following approval from Yukon Environment it is removed from the facility for use in industrial land use activities. Minto is in the process of finalizing plans for the relocation and reconstruction of the LTF to a higher standard of environmental protection. The designs are currently subject to regulatory approval and as such have not been included in this plan. The relocated LTF is to be situated adjacent to the landfill. This centralises the management of the facilities and controls access to ensure proper tracking of contaminated soils.



Figure 3-1: Land Treatment Facility

3.5.2 Sewage disposal system

A modular sewage treatment plant is currently in operation at Minto Mine to replace previously used septic fields. The plant consists of a Pre-Settling unit (septic tank), an equalization tank, followed by EcoProcess sequencing batch reactors. It has a capacity to treat sewage from a 400-person camp (Minto is currently permitted to operate a 300-person camp). All treated effluent from the sewage treatment plant is disposed of in the main pit. The sewage disposal system process flow diagram is provided in Appendix C.

4 Waste Management

The types of waste generated at the Minto Mine site include domestic waste, non-putrescible waste, incinerator ash, and used tires. A full description of all the wastes produced at the Minto Mine and the methods of disposal are summarized in Appendix A. Wastes are defined by material (metals, incinerator waste, wood/cardboard, landfill/inert waste, special waste and other), and further by receptor (WMA, Incinerator, Burn Pit, Landfill, Waste Oil Tanker, Waste Oil Burner, Electrical Shop, Sewage Lagoon). Waste storage methods, transportation requirements and receiving station storage instructions are also outlined.

4.1 Domestic Waste

Domestic wastes are generated from the kitchen, office and dormitory, and include putrescible waste, recyclable materials and office and dormitory wastes.

4.1.1 Putrescible Waste

Putrescible waste from the kitchen facilities at Minto Mine are stored inside the loading doors of the kitchen complex, then collected and transported by Site Services twice daily for incineration, in an effort to minimize attracting wildlife to site. Excess waste that cannot immediately be incinerated is temporarily stored in a latched sea container adjacent to the incinerator.

4.1.2 Recyclable Material

Recyclable materials are stored in a bear proof container until they are transported off site for recycling and/or refund. Refundable recyclable materials include:

- Aluminum and tin pop/juice cans;
- White or other plastic beverage containers;
- Plastic jugs from the assay lab;
- Tetra packs; and
- Waxed cardboard juice containers.

4.1.3 Office and Dormitory Waste

Garbage bins from offices and dormitories may contain food wastes and are emptied daily by cleaning staff and transferred to bear proof containers located adjacent to the mill and at the loader doors of the kitchen complex. The containers are emptied daily by Site Services for burning or incineration.

4.2 Non-Putrescible (Construction & Shipping) Waste

Burnable non-organic wastes such as cardboard and lumber are open burned. Metal is segregated and stored at the waste management area for periodic removal from site to a recycling facility. Non-hazardous solid wastes (inert waste) that cannot be recycled are buried in the landfill. All contractors are responsible for sorting their own materials before dropping any waste at the waste management area.

Non-putrescible materials that can be reused will be stored at the WMA until they are needed. Items include used oil and glycol drums, 1m³ Totes, and waste oil.

4.3 Ash from Incinerator or Open Burning

Ash generated from both the incinerator and open burning will be landfilled. Incinerator ash will be placed in the ash storage bin and then landfilled. Open burn pit ash will be landfilled as required.

4.4 Used Tires

Used tires are the responsibility of Fountain Tire. Fountain Tire currently holds the contract to service all tires on Minto Mine property; they are responsible for collecting, storing and removing used tires from site. Tires will be kept reasonably clean and not buried or burned, with the exception of tires with rim size greater than 24.5", which may be buried at the landfill. Tires not buried or used further for protection barriers or other on-site uses will be hauled off-site and disposed of in accordance with the Yukon Used Tire Management Program³.

5 Special Waste Management

This section outlines how Special Wastes are handled, stored and disposed. Special wastes include waste oil, oil filters, diesel, anti-freeze, solvents and lubricants (and containers in which they are contained), aerosol containers, hydraulic hoses, batteries and biomedical wastes. A full list of handling procedures is outlined in the waste segregation spreadsheet (Appendix A).

Minto will arrange for the transport of Special Waste in the following manner:

- No Special Wastes will be transported by Minto other than within the mine site.
- All Special Wastes transported off-site will be in accordance with applicable transport laws, to a facility permitted in the Yukon or other jurisdiction to receive them, by a carrier permitted in the Yukon or another jurisdiction to receive and transport Special Wastes. If the facility is in the Yukon, both the facility and the carrier must be permitted in the Yukon according to the Transportation of Dangerous Goods Regulations (SOR/2008-34).
- A movement control document (manifest) will be completed to document each shipment of Special Waste, as per Transportation of Dangerous Goods Regulations (SOR/2008-34).
- All Special Wastes will be transported and transferred in such a manner as to prevent their release into the environment.
- All vehicles carrying any Special Waste will be secured to prevent access to unauthorized personnel.

Inventory of special waste is done weekly and all materials that have been packaged and are ready for shipping are communicated to the Warehouse. Warehouse personnel are responsible for organizing proper manifests, backhauls and notifying vendors of materials that are being shipped. While there is no set schedule for backhauling special waste at present, special waste inventory is communicated to the warehouse, who then organize backhauls as required.

³ <http://www.environmentyukon.gov.yk.ca/pdf/dmrone.pdf>

5.1 Waste Oil and Filters

The major sources of waste oil are from mobile equipment and power plant generators. The most common types of used oil are crank case oil, gear oil, transmission fluid, and hydraulic oil.

Waste oil will either be collected and disposed of via incineration in a waste oil burner for the purpose of space heating, or stored in the special waste oil tanker which is periodically emptied and brought to a licenced oil recovery facility. The volume of waste oil transported from site will be documented according to Transportation of Dangerous Goods Regulations (SOR/2008-34).

Waste oil filters will be crushed using an *OTC 1896 Oil Crusher* (or similar) and drained of oil. Crushed filters will be stored in 205L drums and backhauled to Whitehorse to be disposed of as scrap metal.

5.2 Waste Diesel

Waste diesel will either be stored at the Special Waste pole barn and periodically removed from site, or used in the waste oil burner located in the water treatment plant.

5.3 Waste Antifreeze

Used antifreeze will be stored in containers that are leak-proof and have tight fitting lids to prevent spills, stored at the Special Waste pole barn, and periodically shipped to a disposal facility.

5.4 Solvents and Lubricants

Small quantities of miscellaneous waste solvents and lubricants will be generated through routine site, equipment and vehicle maintenance and repairs. Solvents (e.g., paint thinners and strippers, varsols, degreasing fluids, mineral spirits and petroleum distillates) will be shipped to Whitehorse as special waste.

Since most of these liquids are flammable and toxic, solvents and lubricants will be collected and stored in appropriate drums for regular shipment to a licensed recycle or disposal facility. Containers will be covered and kept separate from other waste products.

5.5 Used Batteries

Alkaline batteries are placed in designated alkaline battery disposal bins, located throughout the Minto Camp complex, for collection by the Sodexo cleaning staff and Site Services department. Lead-acid batteries from vehicles will be stacked on wooden pallets with a minimum of three layers of cardboard or a sheet of plywood between layers and stacked no more than three layers high. Once stacked, batteries are wrapped in cellophane to prevent movement and protect batteries during shipment. Batteries are periodically shipped to a licensed recycling or disposal facility.

5.6 Biomedical Waste

A small amount of biomedical waste (such as bandages) are generated at the first aid rooms at the Minto site. This waste will be collected in designated purpose-built containers, and then transported by Safety Coordinators to the incinerator for immediate incineration.

6 Contaminated Materials

Spills on-site may include hydrocarbons (i.e., diesel, waste oil, and hydraulic oil), antifreeze, solvents and lubricants. These items each have specific disposal methods as follows:

- Hydrocarbon contaminated soil and snow will be excavated and transported to the land treatment facility (LTF) – samples will be taken by the Environment Department to ensure compliance with LTF Permit.
- Hydrocarbon-contaminated absorbent pads will be incinerated.
- Antifreeze contaminated soil and snow will be excavated and transported to the Land Treatment Facility – confirmatory samples will be taken by the Environmental department to ensure material is within acceptable limits of the LTF.
- Antifreeze contaminated absorbent pads will be incinerated.
- Solvents and lubricants have specific disposal requirements as per the MSDS sheets.

Below are the details of the assessment, treatment and confirmatory sampling for material disposed of in the LTF. Methods of assessment and treatment described below are as per the *Contaminated Sites Regulations* (Yukon Government, 2002) and the protocols established under it.

6.1 Assessment

Soils and snow contaminated with hydrocarbons and glycol may be disposed of in the LTF; however, soils with grain size greater than 15mm are not able to be treated in the LTF, and would require disposal in the Main Pit or processed through the mill. Treatable material is immediately placed in the LTF and undergoes initial characterization.

Quantities less than 1 m³ are placed on a “Small Hydrocarbon Spills” pile or a “Small Glycol Spills” pile. Quantities greater than 1 m³ are identified with Environmental Incident Report number (EIR number) marked permanently on stakes. The maximum permissible height of piles of contaminated soil is 0.75 metres. In winter/spring, material is not placed on deep snow or ice, as this will cause contaminated water to leach from the pile in the summer and may cause subsidence. If necessary, snow or ice from the chosen spot must be removed prior to placement.

Initial characterization sampling is performed on all excavated materials that are brought to the land treatment facility prior to consolidating the material into a treatment cell. When necessary, *in situ* sampling is performed at the spill site to ensure that all contaminated material is excavated. Sampling is done at a rate of one composite for every 50 m³ of material, except where there is reason to believe

that Petroleum Hydrocarbons (PHC) may be at Special Waste levels (30,000ppm or 3% and above), in which case a sample must be taken for every 10 m³ of material. Note that 3% is the level at which pools of free product can be expected to form in many matrix types.

For soil sampling, two 125ml glass jars with Teflon cap liners are filled with sample. Additionally, two soil core samples are taken and placed in 40ml vials with methanol preservative. The collected samples are then analyzed for BTEX group (Benzene, Toluene, Ethylbenzene and Xylene), TEPH, LEPH, HEPH (Total, Light and Heavy Extractable Petroleum Hydrocarbons), PAH (Polycyclic Aromatic Hydrocarbons), Styrene, chlorinated and non-chlorinated phenols, pH, and any other constituents of concern.

Analytical results are compared to *Contaminated Sites Regulations* (Yukon Government, 2002) Schedules 1 and 2.

6.2 Treatment

Contaminated soils resulting from spills are excavated and hauled to the LTF, where they are placed in a staging area. Initial characterization of these soils is undertaken by means of soil sampling, and they cannot be placed in the treatment cell until we have received analytical results for the contaminants of concern. Once under treatment, interim samples are taken annually at the end of August or in early September.

Key components of treatment in the Land Treatment Facility are water addition, nutrients addition, and tillage. Soil must be free from debris such as piping, concrete, wiring conduit and the like, before spreading in the treatment cell. Soil can be placed in the treatment cell only when tillable (i.e. not frozen). Soil is to be spread to an approximate thickness of 15 cm. Stockpiles of contaminated material from different spills can be consolidated and treated together, provided their combined volume does not exceed 500 m³.

Water addition to the LTF is generally not required as spring, summer and fall in the Yukon tend to be generally wet, with precipitation falling in low amounts, but at frequent intervals. During the first tilling or the placement in the treatment cell, fertilizer should be applied by hand broadcast to achieve approximately the PHC: Nitrogen: Phosphorous ratio of 50:2:1. Application rates are summarized in Table 5-1 (to be used in combination with the N-P-K rating of the fertilizer you are using), and can be used to estimate fertilizer usage requirements.

Table 6-1: LTF Fertilizer Application Requirements

Petroleum Hydrocarbon Concentration	Nutrient requirement (g/m ³)	
	Nitrogen (as Nitrate)	Extractable Phosphorous
1,000 ppm	44	22 – 33
1,500 ppm	66	22 – 33
2,000 ppm	88	22 – 33
2,500 ppm	110	22 – 33
3,000 ppm or greater	132	22 – 33

Remediation of ethylene glycol contaminated soils can be assisted through phosphorous addition to reduce the half-life of glycols contamination in soils. The wide variability in the results of studies of glycol degradation undertaken to date suggest a strong influence of context-specific conditions, so no single fertiliser amendment rate exists for glycol. Therefore, fertilizer application is at the same rate as for hydrocarbons.

6.3 Confirmatory Sampling

Confirmatory sampling is conducted once interim samples indicate that the soil has been remediated to below *Contaminated Sites Regulations* (Yukon Government, 2002) standards. Confirmatory sampling is conducted at a rate of one sample per 100 m³ of soil using composite sampling techniques outlined in Protocol 11 of the *Regulations*. Each composite is to be composed of soil from the deeper horizons of the treatment cell where remediation rates are lowest.

Once remediated material meets the *Contaminated Sites Regulations* standards, an application to the Yukon Government Environmental Programs Branch is sent to request permission to remove the soil from the treatment facility. Remediated materials are only used for the application under which they were approved by the Environmental Programs Branch (i.e., industrial use).

7 Inspections and Record Keeping

Inspections of the incinerator, land treatment facility and waste management area are conducted regularly with records kept in the Environment department office. Details are provided below and samples of the inspection forms are provided in Appendix D.

7.1 Incinerator Inspections and Record Keeping

Equipment checks and logs are performed in accordance with the manufacturer's specifications. Daily checks include integral physical components such as thermocouples, contact switches, refractory in primary chamber, gaskets and seals, and general housekeeping. Weekly inspections consist of checking the incinerator blowers (primary, secondary and flame port blowers) to ensure they are working properly. Monthly inspections consist of checking the external surfaces of the incinerators, more specifically checking for 'spotty' discolouration on surfaces. In 2013, a building was constructed over the incinerator to protect the incinerator and equipment from inclement weather.

7.2 Land Treatment Facility Inspection

LTF inspections are conducted on a biweekly basis to ensure that all signage is visible, berms are not damaged, and new material has been properly labeled and staged in the appropriate sections of the LTF. Record keeping ensures that tillage is occurring as required, that laboratory results are up to date and that all material that has been confirmed as being acceptable is moved from the staging to the treatment cell in a timely manner.

7.3 Waste Management Area Inspection

While the WMA is open, the attendant organizes materials that have been dropped off. If additional resources are required, the attendant will report requirements to the supervisor.

References

Yukon Government. (2002). *Contaminated Sites Regulations O.I.C. 2002/171*.

Yukon Government. (2013, August). *Plan Requirement Guidance for Quartz Mining Projects*. From <http://www.yukonwaterboard.ca/forms/quartz/Plan%20Requirement%20Guideline%20for%20Quartz%20Mining%20Projects%20-%20August%202013-kh.pdf>

Appendix A

Waste Segregation Spreadsheet

Waste Segregation Detail - Last updated 2017-06-13

WASTE TYPE	DESCRIPTION	WASTE GENERATION LOCATION (Pelly, Dumas, Mill (Front & Back Door), Tailings, Water Treatment Plant, Camp, Site Services, Electrical Engineering Office, Fuel Farm, Dyno, Light Duty Shop, SGS Lab, Warehouse, Exploration Laydown, Water Treatment Plant)	GENERATING STATION CLASS (Bin/Container: 1.Metals, 2.Incinerator Waste, 3.Wood/Cardboard, 4.Landfill/Inert Waste,5.Special Waste= no bin specified, 6.Other=no bin specified)	WASTE STORAGE METHOD/INSTRUCTIONS	TRANSPORT TO RECEIVING STATION (Site Services, Safety, Responsible Department, Responsible Contractor)	RECEIVING STATION (WMA, Incinerator, Burn Pit, Landfill, Waste Oil Tanker, Waste Oil Burner, Electrical Shop, Sewage Lagoon)	RECEIVING STATION STORAGE METHOD/INSTRUCTIONS	FINAL DISPOSAL (Receiving Station or Off Site)
Absorb all (Amorphous Silica)	Contaminated Absorb All. NOTE that Absorb-all becomes the absorbed material as far as disposal regulations are concerned.	Dumas, Pelly, Mill	Special Waste	Contain in 20 liter pails that will be manageable for Site Services	Responsible Department, Responsible Contractor	WMA	Place in the Special Waste area of the WMA	Depends on what the Absorb is mixed with
Absorb all (Amorphous Silica) / Floc/Lime/PAX	Absorb all used to absorb spilled Floc in the mill	Mill	Other	Self Dumping Bin in Tails and in Mill	Site Services	Main Pit	SS to haul to the west end of the Main Pit and ensure the material is end dumped to reach the water level	Main Pit
Absorb all (Amorphous Silica) / Oil	Absorb all used to absorb spilled oil	Dumas, Pelly, Mill	Special Waste if above 30,000ppm or 3% oil	Contain in 20 liter pails that will be manageable for Site Services, or full drums that are clearly labelled	Site Services	WMA	Place in the Special Waste area of the WMA	Offsite
Acids	Used acids from the lab,	SGS lab and Enviro Lab	Other	Acids generated from both labs on site will be disposed of to the acid sump at the SGS lab.	Site Services	Main Pit	To Main Pit with Sucker Truck	Main Pit
Acids - Hydrochloric Acid	Used hydrochloric acid	Water Treatment Plant	Special Waste	Hydrochloric Acid used for cleaning the RO's will be disposed of in Main Pit. Very large quantities may require off-site disposal and this will be at the discretion of the Environmental Department.	Site Services, Responsible Department	Main Pit	To Main Pit with Sucker Truck	Main Pit
Aerosol Cans	Shaving Foam, Hair products, Deodorants, Fly Repellent, Paints, Lubricants, etc.	Engineering office, Pelly, Site Services, Warehouse, Camp	Special Waste	Place in containers at recycling stations around site labeled " <u>Aerosol Can Disposal</u> "	Site Services, Responsible Contractor	WMA	A can puncturing machine will be located at the WMA. All Aerosol cans must be punctured before placing in special waste pole barn labeled " <u>Aerosol Can Disposal</u> "	Off site
Ammonium Nitrate Bags	Empty Ammonium Nitrate (AN) bags	Dyno and Dumas	Other	No special instructions	Responsible Contractor	WMA	Only to be handled by Dyno or Dumas	Landfill
Appliances - with refrigeration	Fridge, Water Cooler, Freezer, Air Conditioners.	Camp	Other	There will be a designated area beside the scrap metal bins for storing broken appliances	Site Services, Responsible Contractor, Responsible Department	WMA	On the ground at signed location in the metal section of the WMA.	Off site
Appliances - without refrigeration	Dryers, Washers, Microwaves, TV	Camp	Other	There will be a designated area beside the scrap metal bins for storing broken appliances	Site Services, Responsible Contractor, Responsible Department	WMA	On the ground at signed location in the metal section of the WMA.	Landfill
Batteries - Dry Cell Batteries (alkaline)	Small dry cell batteries (e.g. AA, AAA, C, D, 6V, 9V, etc.)	Entire site	Special Waste	Place in containers at recycling stations around site labeled " <u>Dry Cell Batteries</u> ".	Site Services	WMA	Place batteries in the tote or drum " <u>Dry Cell Batteries</u> " in the special waste pole barn.	Off site
Batteries - Lead Acid	Vehicle and heavy equipment batteries	Dumas, Pelly, Light Duty Shop, Exploration Laydown	Special Waste	Temporary store batteries at mechanic shops.	Responsible Department, Responsible Contractor	WMA	Stack batteries on a pallet in the Special Waste Pole Barn Storage labelled " <u>Lead Acid Batteries</u> "	Off site
Batteries - Lithium Batteries	Batteries - Lithium (used)	Entire site	Other	Store separately and deliver to WMA on as needed basis	Site Services	WMA	Store in tote or drum labeled Lithium Batteries Only	Offsite
Bear Spray	Bear Spray (expired canisters)	Safety	Special Waste	Safety to store and notify Environment if they have expired cans to dispose of.	Safety or Environment	WMA	Disposal: if container is empty, press valve to release all pressure. If container is not empty, spray off contents toward the ground outside on a calm day. Use gloves, long sleeves and dusk mask when doing this. Do not incinerate or puncture. Wash hands thoroughly after handling. Place in separate aerosol container for bear spray only (not punctured).	Off site
Bentonite	Waste or unusable Bentonite clay	Dumas, Pelly, Driftwood, Mine Tech	Landfill/Inert Waste	No special instructions	Responsible Department, Responsible Contractor	Landfill	Place in active landfill. If in large quantities can be buried in the buttress.	Landfill
Beverage containers - Recyclable containers	Beverage containers - Aluminum can, tetra packs, plastic bottles.	Entire site	Other	Place in appropriately labeled bags. Requires double bagging if being transported on an outside flatdeck.	Site Services, Responsible Contractor	WMA	Site services will bring refundables to the green recycling sea can. When enough cans have been collected S.S will notify warehouse and a backhaul will be arranged.	PRESSURE. IF CONTAINER IS NOT EMPTY, SPRAY OFF CONTENTS
Bio-Hazardous	Contaminated bandages, Sharps (syringes), etc.	Entire site	Other	Place in appropriate containers at the <u>First-Aid Station</u> under the direction of the safety coordinator. Personnel from the safety department will bring up material and place it in the incinerator.	Safety	Incinerator	First aid attendant will bring garbage to incinerator sea can and drop material in garbage can labeled Bio Hazard	TOWARD THE GROUND OUTSIDE ON A CALM DAY. SECURELY WRAP CONTAINER IN
Blasting Caps	Used blasting caps	Dyno, Pelly and Dumas	Other	Take directly to CY-1020 incinerator(old incinerator)	Responsible Contractor	Old Incinerator	Only to be handled by Pelly blaster, Dumas blaster or Dyno	SEVERAL LAYERS OF NEWSPAPER AND DISCARD IN TRASH. DO NOT
Camp Cleaning Products	Expired cleaning products	Camp	Special Waste	Depending on quantity contact environment department	Site Services	WMA	Depending on quantity it will be back hauled as special waste.	INCINERATE OR PUNCTURE. WASH HANDS
Cardboard (non-food related)	Cardboard boxes from shipping & packaging. Food related cardboard not accepted and must go to "Incinerator Waste"	Warehouse/ Kitchen	Wood/Cardboard	Cardboard will be burnt in the burn pit	Site Services	Burn Pit	Burn Pit	THOROUGHLY AFTER HANDLING.
Cardboard (food related)	Food related cardboard from Kitchen.	Kitchen	Wood/Cardboard	Cardboard will be burnt in the burn pit	Site Services	Burn Pit	Burn Pit	Burn Pit
Chemicals -(Process Facility / Water Treatment Plant)	Un-usable Chemicals (including totes and containers) used during commissioning of process facilities and water treatment plant operations (e.g. Polymers, pH adjusters, etc.)	Mill, Water Treatment Plant	Other	Ensure containers and chemicals are appropriately labeled. Contact Environment Department for Disposal	Site Services, Mill Operations	WMA	Store in proper containers for back hauling as special waste. Ask Environment Departemnt is unsure.	Offsite

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Conveyor Belting and misc. Rubber	Used conveyor belting from rock crushing operations, miscellaneous rubbers	Mill (Back Door)	Landfill/Inert Waste	Place in containers labelled " Landfill/ Inert Waste ". Large items stored and transported separately.	Site Services, Responsible Contractor, Responsible Department	Landfill	Place in landfill	Landfill
Copper and Brass	Wire, electrical brushes and brass etc. generated during operations and construction activities	Electrical, Site Services	Other	Store separately and deliver to WMA on as needed basis	Responsible Department, Responsible Contractor	WMA	Place all copper wire in the designated pile for backhaul	Offsite
Diesel	Waste Diesel	Dumas, Pelly, Light Duty Shop	Special Waste	Add to the Waste Oil Burner if possible (check with Maintenance) or take to the Pelly Waste Oil Tanker. Small amounts may be taken to the WMA for drainage into drums.	Pelly Construction	WMA	Store by Special Waste. Can be used to mix with waste oil for oil burners. Ensure that the Diesel is sucked out by the Pelly Lube truck from drums at regular intervals for offsite shipment. DO NOT SHIP OFFSITE IN BARRELS	Burn on site or ship offsite in bulk
Dragosorb 400 (Lime Soda)	Dragosorb is Lime Soda used as an absorber of for carbon dioxide in respiratory equipment / devices	Safety	Other	The white pellets are extremely irritating to the eyes, skin and respiratory track and may cause burns. Just like lime	Safety	Landfill	Place in landfill away from metals (may cause a reaction and form hydrogen sulfide)	Landfill
Drums - Metal Drums (used 205 L)	Drums - Empty 205 liter metal drums from equipment servicing, commissioning, agents, additives, parts, etc.	Dumas, Pelly Light Duty Shop	Other	Drums need to be drained by Generating Department . Department should collect residual oils in a central labelled drum. Designated drum will also be located at the WMA.	Responsible Department	WMA	Drums can be dropped off at the bermed area at the WMA. All Drums must be laying on their side with bungs removed. Excess drums will be crushed and shipped offsite as scrap metal	Offsite- Wayne Sally
Drums - Single use oil and glycol plastic drums (used 205 liter)	Drums - Empty 205 liter drums (glycol, oil)	Light Duty Shop, Dumas, Pelly	Other	Barrels need to be drained by generating department into appropriate drums. Shops should set up a draining station to handle residual amounts of liquid. Barrels can be drained into appropriate containment at the WMA.	Site Services, Responsible Contractor	WMA	Berm area at the WMA, may find a means of recycling so stored here prior to crushing and landfilling	Landfill
Drums - Single use plastic reagent drums (used 205 liter)	Drums - Empty 205 liter drums from mill production (e.g.. Nitric acid)	Tailings	Other	Single use barrels should be cleaned by Mill personnel and a hole will be punched in the top and bottom with at least one bung removed. Cleaned and drained with holes punched in bottom. barrels will be moved to the WMA where they will be temporarily stored.	Site Services, Responsible Contractor	WMA	Berm area at the WMA, laid on their side	Raven Recycling
Electronics - Computers and Electronics - non recyclable	Electronics - CRT monitors, scanners, laser printers, inject printers.	Mill, Site services, Pelly, Dumas, Tailings,Camp, Engineering Office	Other	Computers/ electronics will first go to the IT department to confirm they are no longer useful. IT will disable the unit so it cannot be used again. IT will remove batteries from electronics if possible.	Site Services	Landfill	Place in active landfill	Landfill
Electronics - Computers and Electronics - recyclable	LCD Screens, Laptops, Desktops, keyboards, mice, network cables, power cables, monitor cables, backup	Mill, Site services, Pelly, Dumas, Tailings,Camp, Engineering Office	Other	Computers/ electronics will first go to the IT department to confirm they are no longer useful. IT must disable the electronics so that private information cannot be restored. IT / Environment will package the electronics and ship to Raven Recycling via warehouse. Do not store these items at the WMA.	Site Services	Warehouse	Approved items for recycling should be packaged and boxed and sent to Raven Recycling through the warehouse. Items that are not accepted by Raven Recycling should be sent to Landfill once confirmed that all special waste has been removed (no batteries)	Raven Recycling
Envirobind	left over in totes	Mill / Nuway	Special Waste	Reuse to the greatest extent possible. Put any excess into the Main Pit if necessary	Responsible Contractor	Main Pit	Have SS deliver to the Main Pit or to Tails Box but should if at all possible be reused	Main Pit
Epoxy Resin (LokTite, FASLOC) - Cured	Used resin cartridges	Dumas	Landfill/Inert Waste	Place in "Landfill/Inert Waste" bin. If uncured, rupture cartridge to cure.	Responsible Contractor	Landfill	Place in active landfill	Landfill
Filter - Fuel Filter	Filters - Fuel	Dumas,Pelly, Light Duty Shop	Incinerator	Hydraulic transmission filters and fuel filters must be drained of oil and placed in the Hydraulic Transmission Filters and fuel filters bin under the Pole Barn at the WMA.	Site Services, Responsible Contractor, Responsible Department	WMA	Hydraulic transmission filters and fuel filters must be drained of oil and placed in the Hydraulic Transmission Filters and fuel filters bin under the Pole Barn at the WMA.	Incinerator
Filter - Hydraulic Transmission Oil Filters	Hydraulic Transmission Oil Filters - contain only plastic and paper,Small amount of rubber and metal on filters OK.	Dumas, Pelly, Light Duty Shop	Incinerator	Hydraulic transmission filters and fuel filters must be drained of oil and placed in the Hydraulic Transmission Filters and fuel filters bin under the Pole Barn at the WMA.	Responsible Contractor	WMA	Hydraulic transmission filters must be drained of oil and placed in the Hydraulic Transmission Filters bin under the Pole Barn at the WMA. They can then be incinerated.	Incinerator
Filter - Oil	Used Oil filters from equipment	Pelly, Light Duty Shop	Other	Crushing of oil filters with a filter crusher is mandatory. A Filter crusher is located in the Underground Shop and at Pelly Laydown. Place crushed filters in metal drums labeled " Crushed Oil Filters "	Site Services, Responsible Contractor, Responsible Department	WMA	Crushed oil filters will be deposited in a designated covered area located in the Pole Barn (to ship offsite as scrap metal). Some Oil filters are too big to crush and will simply be drained and sent off as uncrushed filters.	Offsite
Filters - Air	Air Filters from heavy and light equipment, HVAC systems, etc. Small amount of rubber and metal on filters OK.	Dumas, Pelly, Light Duty Shop	Landfill/Inert Waste	Place in " Landfill/Inert Waste " bin	Site Services, Responsible Contractor	Landfill	Place in active landfill	Landfill
Gasoline	Waste Flammable Liquids generated as a result of contamination with water, dirt, etc.	Dumas, Pelly, Light Duty Shop, Exploration Laydown	Special Waste	Place in 205 L drums labeled with contents (e.g.r " Waste Gasoline ", etc.) Avoid mixing with diesel.	Responsible Department, Responsible Contractor	WMA	Very Flammable fuels like Gasoline must be labeled with contents and grouped appropriately. Barrels must have both bungs screwed in. Store at the Special waste within the WMA. Ensure pails are transferred to appropriately labelled 205 L drums.	Off site
Food Waste and Kitchen Waste	Food, coffee grinds and filters, milk containers, fruit peels, food packaging, etc.	Entire site	Incinerator	Place in containers labeled " Incinerator "	Site Services, Responsible Contractor	Incinerator	store food waste garbage in sea can located beside the incinerator	Incinerator
Glass	Glass jars, beakers, etc	Kitchen/ Lab	Landfill/Inert Waste	Once Kitchen glass barrel is full, site services can bring it directly to the landfill. Others can deposit smaller buckets in " Landfill/ Inert Waste " bins.	Site Services	Landfill	Place in landfill	Landfill

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Glycols (waste antifreeze)	Glycol - used glycol from vehicles, heavy equipment, and facility heating systems, etc.	Dumas, Pelly, Light Duty Shop, Exploration Laydown	Special Waste	Place in 205 L drums labeled " Glycol ". Ensure glycol is not mixed with any other products.	Responsible Department, Responsible Contractor	WMA	All waste glycol will be stored in the Special Waste Pole Barn pending off-site disposal. Look into the option of having Pelly Construction Recycle our Glycol waste.	Off site
Hazardous Wastes and Special Wastes - misc	Product Specific -Check with Environment or Site Service for Disposal	Entire Site	Special Waste	Product Specific -Check with Environment or Site Service for Disposal	Responsible Department, Responsible Contractor	WMA	N/A	Off Site
Household/Office Waste	Household/Office waste, paper, old clothes and textiles, boots, misc. packaging,.....	Entire site	Incinerator	Place in containers labeled " Incinerator "	Site Services, Responsible Contractor	Incinerator	Sea can beside incinerator	Incinerator
Hoses	Hoses - hydraulic							
Incinerator Ash	Ash from the incineration of waste	Incinerator	Other	Allow to cool and place in steel container labeled " Incinerator Ash ". Waste must be completely incinerated. Acceptable ash is transported to the Landfill for disposal.	Site Services	Landfill	Once incinerator ash bin is full bring it to the landfill and cover immediately	Landfill
Inert Waste - misc (non-recyclable / non-hazardous waste)	Windshield glass, insulation, Portland cement, construction plastics, drywall, bentonite, sand, small scrap non-recyclable metals, styrofoam, etc.	Pelly, Dumas, Mill, Water Treatment Plant, Engineering Office, Dyno	Landfill/Inert Waste	Site services will bring these bins to the landfill. If bins contain material that is not designated to go in the landfill the responsible party will sort the material properly	Site Services	Landfill	Place in active landfill	Landfill
Ink Cartridges	Ink cartridges for printers	Entire site	Other	The ink cartridges are to be separated by brand and then taken to the Warehouse in boxes, IT will then print off a pre-paid shipping label and affix to each of the boxes	Responsible department	Warehouse	The ink cartridges are to be separated by brand and then taken to the Warehouse in boxes, IT will then print off a pre-paid shipping label and affix to each of the boxes	Offsite
Kitchen Grease	Cooking oil / grease - Used cooking oil and grease collected from kitchen sinks / grease traps, etc.	Camp	Other	Place in 20 liter pails (max 50% full) and label " Waste Kitchen Grease ".	Site Services	Burn Pit	Burn hot and complete	Burn Pit
Lights - Fluorescent Light Ballasts – Used	Malfunctioned fluorescent light ballasts will be generated during construction and operations	Site Services, Electrical, Pelly, Dumas	Other	Site Services/Electrical will collect and bring all ballasts to electrical shop for disposal. Once the storage container is full it will be backhauled as special waste.	Responsible Department, Responsible Contractor	Electrical Shop	Contact electrical before dropping off any ballasts at their shop	Off site
Lights - Fluorescent Light Tubes - Used	Blown fluorescent light tubes will be generated	Site Services, Electrical, Pelly, Dumas	Special Waste	Site Services/ Electrical will store fluorescent tubes in a designated area at the electrical shop. Site services/Electrical will bring fluorescent tubes to designated area at WMA. Bulbs will be crushed at WMA put into barrels and shipped off-site.	Responsible Department, Responsible Contractor	WMA	Place in totes near bulb breaker. Do not break lights. Use bulb crusher. Crushed bulbs still need to go off-site as Special waste. Bulb crusher 1st Stage Filter and HEPA filter contain mercury and will need to be sent off-site with bulbs. Call General Waste to determine how to package filters.	Off site for crushed bulbs ad crusher filters.
Lights - Fluorescent Light Fixtures	Fittings with ballasts etc	Site Services, Electrical, Pelly, Dumas	Special Waste	Take to designated container at WMA for shipping off-site				TBD
Lights - Halogen		Site Services, Electrical, Pelly, Dumas	Special Waste	Take to designated container at WMA for shipping off-site. Do not break.				
Lights - LED		Site Services, Electrical, Pelly, Dumas	Landfill/Inert Waste	Place in Landfill/Inert Waste bin	Site Services	Landfill	Place in landfill	Landfill
Lights - Metal Halide		Site Services, Electrical, Pelly, Dumas	Special Waste	Site Services/ Electrical will take bulbs to a designated area at WMA. Do not break.	Site Services	WMA	Do not break. Call General Waste on how to package for transportation.	Off site
Lights - Sodium vapour		Site Services, Electrical, Pelly, Dumas	Special Waste	Site Services/ Electrical will take bulbs to a designated area at WMA. Do not break.				TBD
Lime Bags	Lime bags - Empty	Mill	Other	Stored in labelled containers at Mill Grinding Bay Doors with the Sodium Sulphide	Site Services	Burn Pit	Will be immediately burned	Burn Pit
Metal Grease Pails	Grease Pails - Empty 20 L grease pails	Dumas, Pelly, Light Duty Shop, Exploration Laydown	Special Waste	Keep Water Out. Need to be cleaned out as much as possible; should not have globs of grease inside the metal pail. Generator should keep the plastic liner inside the metal pail and keep the pail as clean as possible.	Responsible Department, Responsible Contractor	WMA	Store . If cleaned, the metal pails can be crushed and put into the scrap pile. Pails that are have more than just residual grease but not globs of grease can be incinerated . Keep one pail at WMA to collect globs of grease and send that off-site every so often	Scrap Metal / Incinerator / Offsite depending on cleanliness
Mill Filter Cloths	Filter cloths - Used filter cloths generated from the dry tailings filter press	Mill (Back Door)	Landfill/Inert Waste	After filter jobs, filter cloths can be brought directly to the Landfill.	Responsible Department	Landfill	Cloths should be taken directly to the landfill after a filter change.	Landfill
Non-Ferrous Metals/ Light Metals	Aluminum, tin, etc.	Electrical, Pelly, Dumas, Mill	Metals	Place in " Metals bins ".	Site Services, Responsible Contractor	WMA	On the ground at the metal section of the WMA.	Offsite
Oil - (Motor, Diesel, Hydraulic, etc.)	Oil - Used oil from equipment	Dumas, Pelly, Light Duty Shop, Exploration Laydown	Special Waste	Store waste oil designated Waste Oil Tanks at Dumas, Pelly and Minto Mechanic that Pelly Lube truck can identify for dispatch to the waste oil burner. All other non-usable oils (contaminated with water or glycol etc.) will be hauled to the Pelly Waste Oil Tanker	Responsible Department, Responsible Contractor	Waste Oil Tanker	To the Pelly Waste Oil Tanker.....small amounts of waste oil can be dropped off at the WMA Pole Barn and drained into drums	Waste oil burner/Excess will be shipped offsite
Oil Absorbent Materials and Oil / Grease Rags	Oil Absorbent materials and oily rags used for hydrocarbon cleanup	Site Services, Mill, Dumas, Pelly	Incinerator	Place in containers labeled " Incinerator "	Site Services, Responsible Contractor	Incinerator	Sea can beside incinerator	Incinerator
Oil Pails - Plastic Oil Pails and Oil Containers (20L)	Oil Pails - Empty 20 L oil pails and smaller oil containers from equipment servicing	Dumas, Pelly ,Light Duty Shop, Exploration Laydown	Special Waste	Keep Water Out	Responsible Department, Responsible Contractor	WMA	Lids must be removed and buckets turned upside down to drain on a wire grate over drip tray located in covered area of Special Waste Pole Barn. Pails that are have more than just residual grease but not globs of grease can be incinerated ,Stack buckets neatly to be shipped offsite.	Offsite (General Waste will accept; Raven Recycling will not accept)

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Oil Pails - Plastic Oil pails and Oil Containers (1L or 5L)	Oil Containers - Empty 1L-5L plastic oil containers	Dumas, Pelly ,Light Duty Shop, Exploration Laydown	Incinerator	Keep lids or caps on Water Out must be empty	Site Services	Incinerator	Place in incinerator	Incinerator
Paints and Coatings - empty containers (Latex, Alkyd, and Epoxy) or unusable paint	Empty (or unusable) paint and/or coatings containers	Site Services, Pelly	Special Waste	Temporarily store in the Special Waste pole barn with the lids loosened to permit the curing process. Cured product and containers will be land filled. Where the curing of product is inhibited, these containers will be shipped off site for processing.	Site Services	WMA	Material should be placed in the metal cage located at the special waste pole barn. Lids should be slightly cracked to allow paints to cure then moved to landfill.	Landfill
Piping – Poly / ABS / PVC	Piping - Scrap Poly, ABS, and PVC piping will be generated during construction and maintenance operations	Pelly, Mill, Dumas, Site Services, Water treatment plant	Landfill/Inert Waste	Place in containers labelled " Landfill/ Inert Waste ".	Site Services, Responsible Contractor	Landfill	Place in active landfill	Landfill
Plastics - Light Plastics	Bags, scrap plastic, plastic bottles	Entire site	Incinerator	Place in containers labeled " Incinerator "	Site Services, Responsible Contractor	Incinerator	Sea can beside incinerator	Incinerator
Razor blades (used)	Tubs of used blades	Camp washrooms	Other	Sodexo places tubs with slotted lids in wash rooms labelled "used razor blades"	Site Services	Landfill	Place in active landfill	Landfill
Rubber Tires (rim size <24.5")	Rubber Tires - used rubber from light vehicles	Light Duty Shop, Dumas, Pelly	Other	No special instructions	Responsible Department, Responsible Contractor	WMA	Store under labelled Lean-To	Off site
Rubber Tires (rim size >24.5")	Rubber Tires - used rubber tires from heavy equipment	Pelly, Dumas	Other	No special instructions	Responsible Department, Responsible Contractor	Pelly Yard	Fountain tire will store all used tires at Pelly Laydown. Tires that cannot be repaired will be available to site for other uses.	On Site
Shotcrete	Bags or Supersacs of waste or unusable Superstick Shotcrete	Dumas	Landfill/Inert Waste	No special instructions	Responsible Department, Responsible Contractor	Landfill, if not in vary large volumes.	Place in acrive landfill, if in suitable quantities. If in large volumes, bury in a pit at the buttress.	Landfill
Sodium Sulphide Bags	Sodium Sulphide bags - empty	Mill	Other	Stored in labelled containers at Mill Grinding Bay Doors	Site Services	Burn Pit	Will be immediately burned	Burn Pit
Steel – Structural Steel	Reinforcing steel (rebar), Sag liners, Tube Steel, Sheet metal, etc.	Mill, Dumas, Pelly	Metals	Place into " Metals " bins, and transport large items seperately	Site Services, Responsible Contractor, Responsible Department	WMA	Separate White Iron brass and copperfor separate backhaul. On the ground at the metal section of the WMA.	Offsite

Appendix B

Incinerator and Waste Oil Burner Specifications

WESTLAND

SINGLE CHAMBER CYCLONATOR INCINERATOR SERIES CY1000



CY-1020-FA "N"

CY-1020-FA "D"

- Built In Safety Features
- Readily Transportable
- Economical Operation
- Clean Burning

Designed for Petroleum, Mining, and Lumber Industries

Capacity

0.6 m³, 64 Kgs per hour
Type No. 1, 2, & 3 waste.

Power Requirements

115 volts 60 cycle single phase

Stack

Stainless Steel - 14 gauge
- 33 cm diameter
- 3 m high
- c/w stainless steel
Spark arrester
- a hinged base plate
For moving

Casing

12 gauge steel
Lining: high heat duty castable
Refractory over high temperature
Insulation

Hearth

Refractory hearth over 6.35 mm steel base

Doors

6.35-mm steel plate c/w heavy-duty blade
Latch.

Charging: - 46 cm x 61 cm clear opening
- Refractory lined over steel
plate

Ash: - 46 cm x 30 cm clear opening

- Refractory lined over steel plate

Air Supply

Forced air fan c/w duct to primary
air jets and to secondary and over-
fire air jets.

Timers

Cycle timer interconnected to air
supply fan and gun type burner
enclosed in burner housing

Burner

500,000 BTU gun type oil burner
Gun burner enclosed in protective
plate steel housing

Fuel Supply

450-liter fuel storage tank c/w filter
And flexible hose type connection.

Transporter

Incinerator and fuel storage mounted
On skid type frame 365 cm long x 152 cm
Wide.
Height: 2.13 M tall, with stack folded.
constructed of 15 cm I Beam c/w
bumper posts.

Weight

1815 Kg.

Options

- * Double chamber cyclonator 2000 series
- * LPG Fired burner
- * Natural gas fired burner
- * 23 m Electric power cord
- * Stack winch
- * 1.4 m³ model 1050.
- * Cold climate assembly.

MANUFACTURED BY:

WESTLAND

INCINERATOR CO. LTD.

20204 - 110 Avenue, Edmonton, AB Canada T5S 1X8

Phone: (780) 447-5052 Fax: (780) 447-4912

E-MAIL westland@ketek.ca

DISTRIBUTED BY:

INPROHEAT

INDUSTRIES LTD.

680 Raymur Ave., Vancouver, B.C., V6A 2R1

Phone: (604) 254-0461 Fax: (604) 254-6377

WESTLAND

DOUBLE CHAMBER CYCLONATOR INCINERATOR SERIES CY-100-CA



CY-100-FA "N"

- **Built In Safety Features**

- **Surpasses Clean Air Guidelines In Most Areas**

- **Economical Operation**

- **Controlled Air Supply**

- **Stacked Secondary Chamber**

Designed to be Used in Permanent Locations for Types I, II, & III Wastes

Capacity

1.1 m³, 100 kgs per hour type one waste
1.1 m³, 75 kgs per hour type two waste
1.1 m³, 55 kgs per hour type three waste

Power Requirements

115 volts 60 cycle single phase

Stack

Stainless Steel - 14 gauge
- 38 cm diameter
- 3 m high
- c/w stainless steel spark arrester

Casing

12 gauge steel
Lining: high heat duty castable refractory
Over high temperature insulation.

Hearth

Refractory hearth over 6.35 mm steel Base.

Doors

6.35 mm steel plate c/w heavy clamp
Type latches.
Charging: - 61 cm x 61 cm clear opening
- Refractory lined over steel Plate

Ash: - 61 cm x 30 cm clear opening
- Refractory lined over steel plate

Air Supply - Adjustable

Forced air fan c/w ducts to primary air jets
And to secondary over-fire air jets.

Timers - Adjustable

Cycle timers interconnected to air supply fan and gun type burners enclosed in Burner housings.

Burners

650,000 BTU, gun type Primary Burner. Gun burner enclosed in Protective plate steel housing.
390,000 BTU in secondary chamber,

Fuel Supply: Oil Fired Unit Only

1350 liter fuel storage tank c/w filter and Flexible hose type connection.

Transporter

Incinerator mounted on skid type frame
1.8 m wide x 4.5 m long.

Height

3.9 m tall, with stack folded.

Weight

6000 Kg.

Options

- * LPG Fired burners
- * Diesel Fired burners
- * 2.3 m Electric power cord
- * Temp. controllers in Primary and Secondary chambers.

NOTE: Some waste streams may require
The use of waste gas scrubbers.

MANUFACTURED BY:

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For Your Safety... (continued)

CB-3500/CB-5000 Furnace Cabinet Safety Labels

CLEAN BURN, INC.
LEOLA, PA

MH 15393  

USED-OIL BURNING APPLIANCE USED-OIL-FIRED FURNACE

NO.

**MULTI-OIL BURNING UNIT HEATER
MULTI-OIL BURNING CENTRAL FURNACE
WHEN USED WITH THE FOLLOWING LISTED FUELS**

MODEL NO.

INPUT RATING W/NO 2 FUEL OIL (BTU/HR)

LISTED FUELS	INPUT	ATOM AIR PRESS	OIL PRESS
	-GPH-	-PSIG-	-PSIG-
NO 2 OIL	<input type="text" value="2.3"/>	<input type="text" value="16.0"/>	<input type="text" value="7.0"/>

USED

CRANKCASE OIL	<input type="text" value="2.3"/>	<input type="text" value="16.0"/>	<input type="text" value="9.5"/>
HYDRAULIC OIL	<input type="text" value="2.3"/>	<input type="text" value="16.0"/>	<input type="text" value="8.0"/>
ATF	<input type="text" value="2.3"/>	<input type="text" value="16.0"/>	<input type="text" value="8.5"/>

MAX. DISCHARGE AIR TEMP-F FLUE DRAFT IN W.C.

CLEARANCE TO COMBUSTIBLE SURFACES: (INCHES)

ABOVE BLOWER	<input type="text" value="2"/>	CHIMNEY	<input type="text" value="18"/>	SIDES	<input type="text" value="24"/>
		REAR	<input type="text" value="18"/>		
FRONT	<input type="text" value="60"/>	BOTTOM	<input type="text" value="24"/>		



	POWER	VOLTS	AMPS	HZ
BLOWER MOTOR HP.	<input type="text" value="2"/>	<input type="text" value="230"/>	<input type="text" value="10.0"/>	<input type="text" value="60"/>
OIL PUMP MOTOR HP.	<input type="text" value="1/20"/>	<input type="text" value="120"/>	<input type="text" value="0.75"/>	<input type="text" value="60"/>
BURNER MOTOR HP.	<input type="text" value="1/10"/>	<input type="text" value="120"/>	<input type="text" value="1.4"/>	<input type="text" value="60"/>
BURNER HEATER WATTS	<input type="text" value="400"/>	<input type="text" value="120"/>	<input type="text" value="3.3"/>	<input type="text" value="60"/>
DRAFT IND. (OPT) HP	<input type="text" value="1/3"/>	<input type="text" value="120"/>	<input type="text" value="3.9"/>	<input type="text" value="60"/>
AIR COMPRESS. (OPT) HP.	<input type="text" value="1/3"/>	<input type="text" value="120"/>	<input type="text" value="3.5"/>	<input type="text" value="60"/>
TOTAL CIRCUIT AMPACITY W/BLOWER (UNIT HEATER)	<input type="text" value="22.9"/>			
MAXIMUM FUSE SIZE	<input type="text" value="30"/>			
TOTAL CIRCUIT AMPACITY W BLOWER (CENTRAL FURNACE)	<input type="text" value="22.9"/>			
MAXIMUM FUSE SIZE	<input type="text" value="30"/>			

BURNER REQUIRES A MINIMUM AIR SOURCE OF 2 S.C.F.M. AT 25 P.S.I. THIS APPLIANCE IS NOT TO BE USED WITH AIR FILTERS AND SHALL INCORPORATE NO PROVISIONS FOR MOUNTING AIR FILTERS. INSTALL AND USE ONLY IN ACCORDANCE WITH THE MFR'S INSTALLATION AND OPERATING INSTRUCTIONS. FOR COMMERCIAL OR INDUSTRIAL USE ONLY.

AUTHORITIES HAVING JURISDICTION SHOULD BE CONSULTED PRIOR TO INSTALLATION.

42174

CLEAN BURN, INC.
LEOLA, PA

MH 15393  

USED-OIL BURNING APPLIANCE USED-OIL-FIRED FURNACE

NO.

**MULTI-OIL BURNING UNIT HEATER
MULTI-OIL BURNING CENTRAL FURNACE
WHEN USED WITH THE FOLLOWING LISTED FUELS**

MODEL NO.

INPUT RATING W/NO 2 FUEL OIL (BTU/HR)

LISTED FUELS	INPUT	ATOM AIR PRESS	OIL PRESS
	-GPH-	-PSIG-	-PSIG-
NO 2 OIL	<input type="text" value="3.0"/>	<input type="text" value="16.0"/>	<input type="text" value="3.5"/>

USED

CRANKCASE OIL	<input type="text" value="3.0"/>	<input type="text" value="16.0"/>	<input type="text" value="4.5"/>
HYDRAULIC OIL	<input type="text" value="3.0"/>	<input type="text" value="16.0"/>	<input type="text" value="4.0"/>
ATF	<input type="text" value="3.0"/>	<input type="text" value="16.0"/>	<input type="text" value="4.0"/>

MAX. DISCHARGE AIR TEMP-F FLUE DRAFT IN W.C.

CLEARANCE TO COMBUSTIBLE SURFACES: (INCHES)

ABOVE BLOWER	<input type="text" value="2"/>	CHIMNEY	<input type="text" value="18"/>	SIDES	<input type="text" value="24"/>
		REAR	<input type="text" value="18"/>		
FRONT	<input type="text" value="60"/>	BOTTOM	<input type="text" value="24"/>		

	POWER	VOLTS	AMPS	HZ
BLOWER MOTOR HP.	<input type="text" value="2"/>	<input type="text" value="230"/>	<input type="text" value="10.0"/>	<input type="text" value="60"/>
OIL PUMP MOTOR HP.	<input type="text" value="1/20"/>	<input type="text" value="120"/>	<input type="text" value="0.75"/>	<input type="text" value="60"/>
BURNER MOTOR HP.	<input type="text" value="1/10"/>	<input type="text" value="120"/>	<input type="text" value="1.4"/>	<input type="text" value="60"/>
BURNER HEATER WATTS	<input type="text" value="400"/>	<input type="text" value="120"/>	<input type="text" value="3.3"/>	<input type="text" value="60"/>
DRAFT IND. HP.	<input type="text" value="1/3"/>	<input type="text" value="120"/>	<input type="text" value="3.9"/>	<input type="text" value="60"/>
AIR COMPRESS. (OPT) HP.	<input type="text" value="1/3"/>	<input type="text" value="120"/>	<input type="text" value="3.5"/>	<input type="text" value="60"/>
TOTAL CIRCUIT AMPACITY W/BLOWER (UNIT HEATER)	<input type="text" value="22.9"/>			
MAXIMUM FUSE SIZE	<input type="text" value="30"/>			
TOTAL CIRCUIT AMPACITY W BLOWER (CENTRAL FURNACE)	<input type="text" value="22.9"/>			
MAXIMUM FUSE SIZE	<input type="text" value="30"/>			

BURNER REQUIRES A MINIMUM AIR SOURCE OF 2 S.C.F.M. AT 25 P.S.I. THIS APPLIANCE IS NOT TO BE USED WITH AIR FILTERS AND SHALL INCORPORATE NO PROVISIONS FOR MOUNTING AIR FILTERS. INSTALL AND USE ONLY IN ACCORDANCE WITH THE MFR'S INSTALLATION AND OPERATING INSTRUCTIONS. FOR COMMERCIAL OR INDUSTRIAL USE ONLY.

AUTHORITIES HAVING JURISDICTION SHOULD BE CONSULTED PRIOR TO INSTALLATION.

42175

Stainless Steel Heat Exchanger EXCLUSIVE

Designed to prevent corrosion, warping and weld breakage. Built to last decades, not years.

Digital Hour Meter STANDARD

Tracks runtime

Accutemp Preheater PATENTED

Rapidly heats the widest range of viscosities of used oil, synthetic oils and other acceptable fuels.

Integrated Air Compressor STANDARD

Built in so you don't have to connect to and rely on shop air. Providing 24/7 heating availability.

Side Suction Metering Fuel Pump PATENTED

Reliable, consistent fuel delivery regardless of fuel type (up to 90W) with no manual adjustments.

Low Fuel Cut Off EXCLUSIVE*

Turns off the furnace before running out of fuel – preventing time-consuming troubleshooting, shutdowns and repriming.

*included with fuel delivery kits, complete systems and with furnace only.



Elevated Fuel Pick Up EXCLUSIVE

- 1) Pump can be mounted at the fuel source—instead of on top of the tank—so the pump is flooded with used oil, not air!
- 2) Fuel pick up is six inches above the bottom of the tank, above water and sludge, ensuring only used oil is sent to the furnace.
- 3) Easy spin-on stainless mesh filter.



Flame Retention Head PATENTED

This patented design creates a hotter flame than competitor brands for complete fuel combustion and highest heat output. Less ash is produced resulting in longer maintenance intervals than competitor brands.

Swing Away Burner and Ash Removal Port STANDARD

This convenient combination makes cleaning the chamber faster and easier than any other brand. One tool, 30 minutes or less.

Fuel Gauge STANDARD

Visual indicator of how much used oil is in your tank.

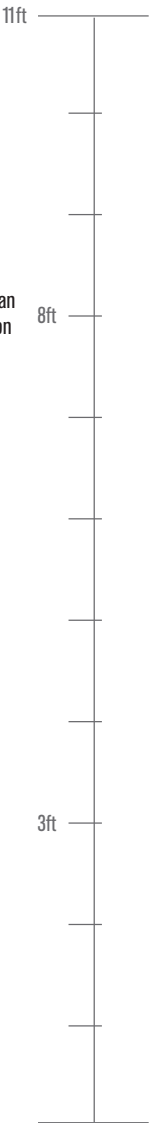
Drain Valve EXCLUSIVE

Makes it simple to purge water or other contaminants that naturally settle in the bottom of the tank.

Class A Flue Kit STANDARD*

Stainless steel interior, double-wall flue kits are UL-listed and meet local codes.

*standard for complete system or sold separately.



Pictured: 200H on 250 tank and Class A Flue Kit.

140H

Heats up to 3,500 square feet



200H

Heats up to 5,000 square feet



350H

Heats up to 9,000 square feet



Furnace Only

	ENGLISH	METRIC	ENGLISH	METRIC	ENGLISH	METRIC
Fuel Flow Rate	1.0 gallons/hour	3.78 liters/hour	1.4 gallons/hour	5.3 liters/hour	2.5 gallons/hour	9.4 liters/hour
BTU Input	140,000 BTU per hour	41.6 kW per hour	200,000 BTU per hour	58.3 kW per hour	350,000 BTU per hour	102 kW per hour
Heat Rise Over Input Air	100° - 120° F	37.8-48.9 C	100° - 120° F	37.8-48.9 C	100° - 120° F	37.8-48.9 C
Air Flow	1000 cfm	28cu. m/min	1500 cfm	42cu. m/min	2600 cfm	74 cu. m/min
Warm Air Outlet Dimensions	15"W x 15"H	38cm W x 38cm H	15"W x 15"H	38cm W x 38cm H	15"W x 15"H	38cm W x 38cm H
Exhaust Flue Diameter	6" or 8" diameter	15cm or 20cm diameter	6" or 8" diameter	15 cm or 20cm diameter	8" diameter	20cm diameter available
Furnace Dimensions	18"H x 18"W x 92"L	46cm H x 46cm W x 234cm L	18"H x 18"W x 103"L	46cm H x 46cm W x 262cm L	22"H x 22"W x 117"L	56cm H x 56cm W x 297cm L
Furnace Weight	295 lbs	132 kg	315 lbs	142 kg	415 lbs	188 kg

Complete Systems

140H Furnace +
Storage Tank, Draft Gauge and Class A Flue Kit

200H Furnace +
Storage Tank, Draft Gauge and Class A Flue Kit

350H Furnace +
Storage Tank, Draft Gauge and Class A Flue Kit

	ENGLISH	METRIC	ENGLISH	METRIC	ENGLISH	METRIC
130 Gal Storage Tank (single wall)	130 gallons	492.10 liters	130 gallons	492.10 liters	NA	NA
Tank Dimensions	32"H x 30"W x 38"L	81 cm H x 76cm W x 96cm L	32"H x 30"W x 38"L	81 cm H x 76cm W x 96cm L	NA	NA
Shipping Weight	698 lbs	317 kg	720 lbs	327 kg	NA	NA
200 Gal Storage Tank (single wall)	200 gallons	757 liters	200 gallons	757 liters	NA	NA
Tank Dimensions	32"H x 30"W x 48"L	81 cm H x 76cm W x 121cm L	32"H x 30"W x 48"L	81 cm H x 76cm W x 121cm L	NA	NA
Shipping Weight	750 lbs	340 kg	770 lbs	349 kg	NA	NA
250 Gal Storage Tank	250 gallons	946 liters	250 gallons	946 liters	250 gallons	946 liters
Tank Dimensions (single wall)	32"H x 30"W x 61"L	81cm H x 78cm W x 152 cm L	32"H x 30"W x 61"L	81cm H x 76cm W x 152 cmL	32"H x 30"W x 61"L	81cm H x 76cm W x 152 cmL
Tank Dimensions (double wall)	40"H x 31"W x 61"L	102 cm H x 79cm W x 155cm L	40"H x 31"W x 61"L	102 cm H x 79cm W x 155cm L	40"H x 31"W x 61"L	102 cm H x 79cm W x 155cm L
Shipping Weight (single wall)	749 lbs	340 kg	770 lbs	349 kg	899 lbs	408 kg
Shipping Weight (double wall)	976 lbs	442 kg	998 lbs	453 kg	1127 lbs	511 kg

Approved Fuels

Used crankcase oils, ATF, No. 2 fuel oil, up to 90 weight gear oil and diesel fuel

Electrical Req.

115 VAC 60Hz, 25 amps | maximum dedicated circuit

Warranty

10 years on heat exchanger, five years full and five years prorated
Up to 2 years on parts*

*One year warranty standard. Second year warranty requires product registration within 30 days of product receipt.

Regulation and Certification

EPA approved
UL-Listed - U.S. and Canada

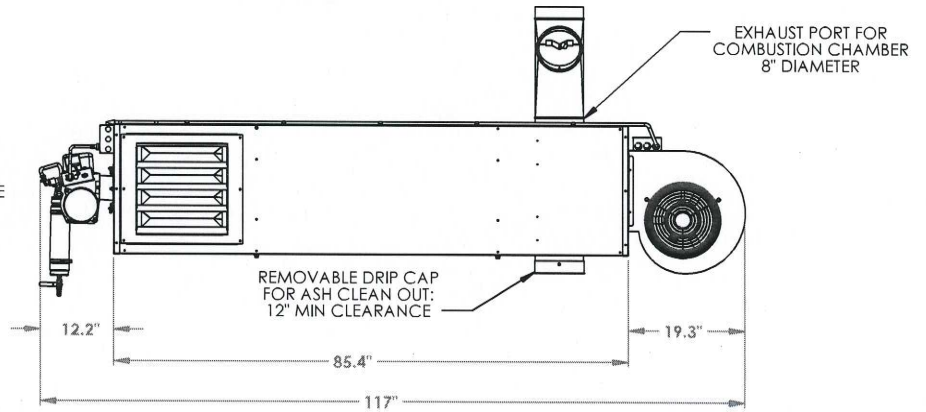
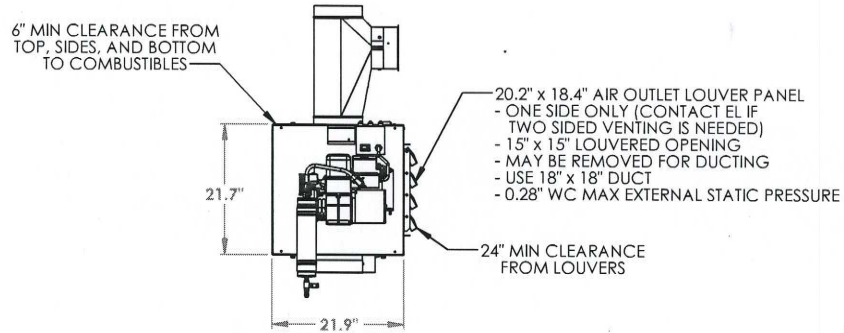
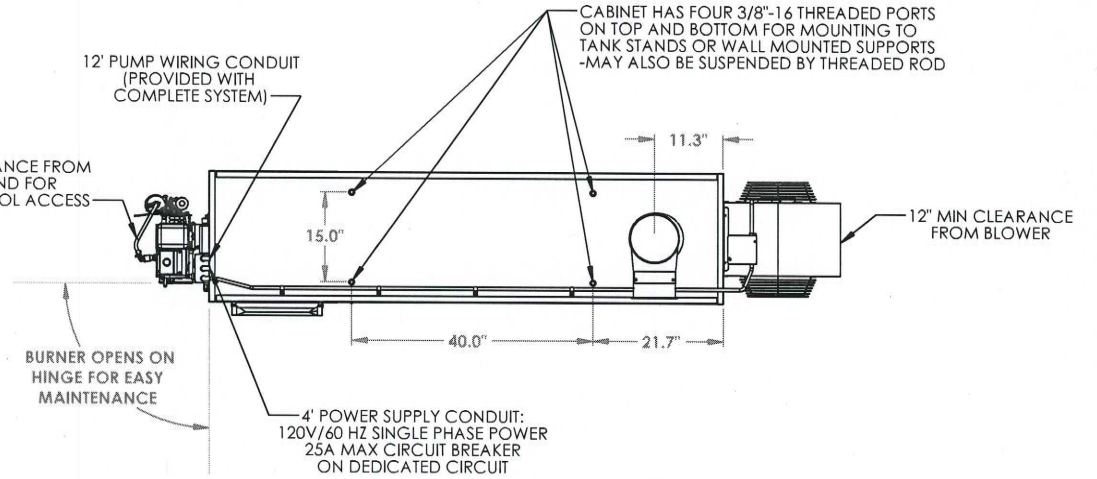
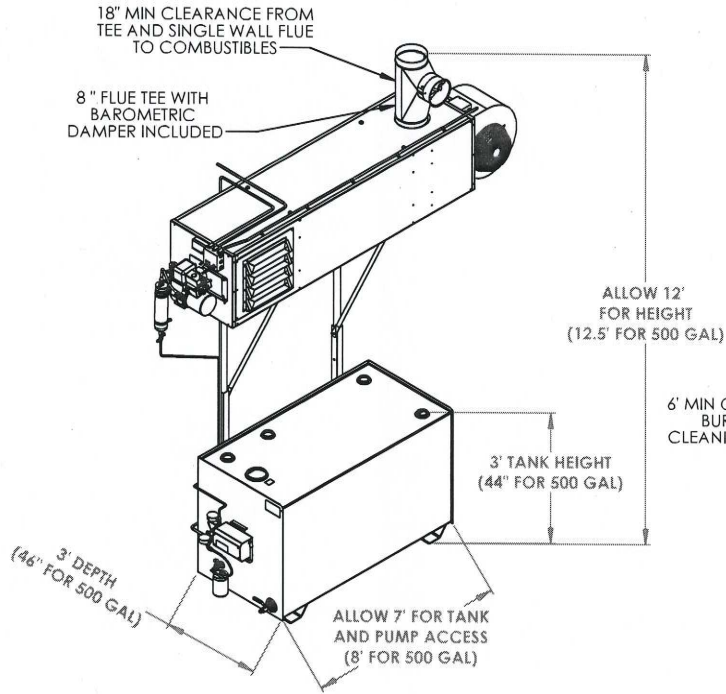


5901 Crossings Boulevard | Antioch, TN 37013
(800) 335-3092 | www.energylogic.com



MODEL EL-350H (SHOWN WITH 250 GALLON SINGLE WALL TANK)

- CABINET WEIGHT WITH BURNER AND BLOWER: ~ 415 LBS
- TANK WEIGHT EMPTY: ~ 425 LBS (600 LBS FOR 500 GALLON SW)
- FLUE DIAMETER: 8 INCH
- FREE AIR DELIVERY: ~2600 CFM
- HEATING AREA: UP TO 9000 SQ FT WITH 16' CEILINGS

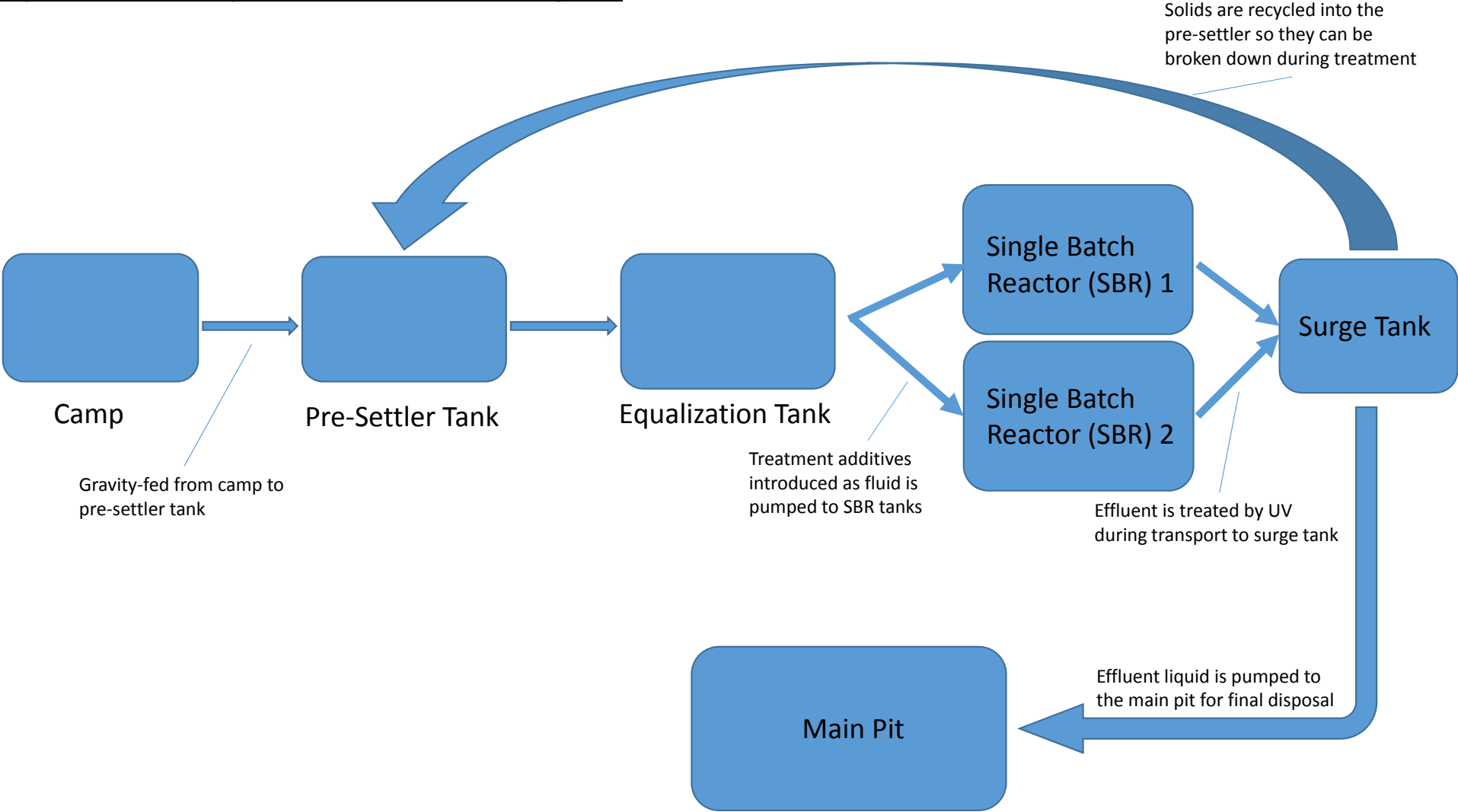


ITEM # 98030074

Appendix C

Sewage Treatment System Process Flow Diagram

Sewage Treatment System Process Flow Diagram




Appendix D

LTF, WMA and Incinerator Inspection Forms

Part A (monitor)						
Date						
Inspector Initials						
1. Is the entire facility located within Minto property? (Y/N) If N, note in comments and inform supervisor. (3.4)						
2. Is the facility secure from access by unauthorized persons? (Y/N) (3.13)						
3. Is the Contaminated Material sign at the LTF entrance present and visible? (Y/N) (3.14)						
4. Are the treatment area, staging area, and each pile are clearly marked? Piles must have origin and spill number (unless placed in SOSP) (Y/N) (3.5)						
5. Is the facility liner is properly installed and anchored, in good condition, and protected from exposure to sunlight? (Y/N) If N please describe in comments, note location in LTF, and inform supervisor (3.2, 4.3)						
6. Are berms in place around all treatment cells? (3.9) If N please describe in comments and inform Supervisor						
7. Are the berms sufficient to contain all contaminated material, runoff, and leachate? (3.9) If N please describe in comments and inform Supervisor						
8. Are diversion berms/ditches present to prevent runoff entering cells? (3.12) If N please describe in comments and inform Supervisor						
9. Did you observe damaged or degraded Berms? (Y/N) If Y describe in comments. Inform Supervisor.						
10. Did you observe contaminated material on berms? (Y/N). If Y describe in notes where the location is and inform Supervisor.						
11. Are ramps in place to allow access to the LTF without damaging berms? (Y/N) (3.11)12. Are the ramps clear of contaminated material? (Y/N) (6.7)						
12. Did you observe wildlife attractants? (Y/N) If Y please describe in comments. Inform Supervisor and make a plan for removal (4.4)						
13. Did you observe signs of wildlife? (Y/N) If Y please describe in comments, note location in LTF.						
14. Are all facility components being properly maintained? (Y/N) (4.1)						
15. Is the new material properly labeled in staging area? Y/N. If N describe location in notes and inform Supervisor.						
16. Is material from different sources and/or containing different types of contamination handled, stored, and treated separately? (Y/N) If N please describe in comments and inform Supervisor (6.1)						
17. Has contaminated material been mixed with other materials? (Y/N) If Y please describe in comments and inform Supervisor (6.3)						
18. Has all material been stored so that it cannot release to environment (Y/N)? (6.4)						
19. Has material been placed far enough from berms to prevent material, runoff or leachate from escaping the cell (Y/N)? (6.5)						
20. Is there sufficient separation between different levels or types of contamination to allow equipment access and to prevent mixing of separate materials? (Y/N) If N describe location in notes and inform Supervisor. (6.6)						
21. Are any piles higher than 0.75m? (Y/N) If Y, note in observations. (3.4)						
22. Are all contaminated liquids (if any are present), other than runoff from the facility, stored in tanks or other suitable containers with secondary containment? (Y/N) If N describe in comments and inform your supervisor. (9.1, 9.7)						
23. Did you observe signs of surface water runoff entering or leaving the LTF? (Y/N) If Y describe the surface runoff and location. Inform Supervisor. (9.2)						
24. Have any free-phase (liquid) hydrocarbons been disposed in the LTF? (Y/N) If Y describe in comments and inform your supervisor. (9.6)						
25. Is there at least 30 cm of freeboard in the water storage area? (Y/N)Spill Response:						
26. Is there sufficient and appropriate spill response supplies nearby (e.g. white and grey pads, shovel, plastic bags, PPE, etc.)? (Y/N) (10.3)						
Observations, Comments, or Actions Required:						

Part B (officer)						
Date						
Inspector Initials						
1. Has any material contaminated with products other than hydrocarbons and/or glycol been accepted? (Y/N) If Y, document in comments and report it to supervisor. (5.1)						
2. Has all material in the staging area been sampled and sent for analysis for all contaminants of concern within 60 days of acceptance? (Y/N) If N please ensure sampling occurs. (5.3)						
3. Has the Environmental Protection Analyst been notified prior to acceptance of any non-hydrocarbon or glycol contaminants? (Y/N) If N, document in comments and inform supervisor. (5.4)						
4. Has sample analysis been received prior to treating all material? (Y/N) (5.6)						
5. Is hydrocarbon contamination under 30,000 ppm for all sources? Are all other contaminants under CSR Industrial Land Use standards? (Y/N) If N, see question 6. (5.8)						
6. If no to question 5, has an Environmental Protection Analyst been contacted within 5 days of receipt of results? (Y/N) (5.5)						
7. Has laboratory-approved material been moved into appropriate area of treatment cell? (Y/N). Ensure dates are recorded in LTF tracking sheet.						
8. Has any Special Waste been accepted into LTF? (Y/N) If Y, document in comments and report it to supervisor. (5.7)						
9. Is any consolidated single stockpile larger than 500m ³ ? If Y document in comments and inform supervisor. (6.2)						
10. Contamination in consolidated stockpiles is hydrocarbon (or and/or glycols) only and does not exceed 30,000 ppm (6.2)						
11. Has tilling of material been completed (specify area)? (Y/N). If Y, ensure this information is on the LTF tracking sheet.						
12. Has interim testing been completed (specify area)? (Y/N). Ensure this information (dates, location) has been recorded in LTF tracking.						
13. Has a Material Removal Permit been received prior to relocating any material from the LTF? (Y/N) (8.1)						
14. Has material been tilled at least two weeks prior to collecting confirmatory samples for soil removal (8.2)						
15. Has the material to be removed been analyzed for all contaminants of concern, particularly for combined materials? (Y/N) (8.3)						
16. Has authorization been received prior to discharging any liquid from LTF? (Y/N) (9.3)						
17. Has a sample of the liquid referred to in Question 13 been taken, ensuring that no material is being or will be added to either the treatment cell or the fluid storage? (Y/N) (9.5)						
18. Has any snow removed from LTF come into contact with contaminants? (Y/N) (9.4)						
19. Has the origin and volume of all new material been recorded on the LTF Tracking sheet? (Y/N). If N please update the LTF tracking sheet.						
20. Is all required analysis complete and filed? (Y/N)						
21. Has the volume of soil removed (if any) and its location been recorded? (Y/N)						
22. Are all inspections documented including inspector, notes, and any actions taken? (Y/N)						
23. Is the total volume of contaminated material calculated and current? (Y/N). Confirm on LTF tracking sheet.						
Observations, Comments or Actions Required:						

Waste Management Area Weekly Inspection Form

Date	Inspector Name	Spill kit fully stocked	Electric fence operational, free of debris and closed (May 1-Oct 31)	Wildlife signs absent in area	Overall organization of the waste management area	Incinerator area tidy and free of wildlife attractants	Special wastes absent or stored properly	Landfill cell free of animal attractants and burnable material	Landfill materials covered with 0.1 m of material (Apr 15-Nov 15)	Open burn area in good order (safe, solid waste free of wildlife attractants)	Incinerator components, tanks, and fuel lines inspected	Steel pile in good order	Tire pile in good order	 Comments or Actions required

Incinerator Weekly Checks

Blowers **PC_B**, **SC_B**, **FP_B**

Inspect/ Clean intakes/ Clean blowers if necessary (*lockout required*)

Every Sunday		Every Sunday		Every Sunday		Every Sunday		Every Sunday	
Date	Good	Date	Good	Date	Good	Date	Good	Date	Good
	Y / N		Y / N		Y / N		Y / N		Y / N
	Y / N		Y / N		Y / N		Y / N		Y / N
	Y / N		Y / N		Y / N		Y / N		Y / N
	Y / N		Y / N		Y / N		Y / N		Y / N
	Y / N		Y / N		Y / N		Y / N		Y / N
	Y / N		Y / N		Y / N		Y / N		Y / N
	Y / N		Y / N		Y / N		Y / N		Y / N

Comments

Incinerator Monthly Checks 2018

External surfaces of PC and secondary chamber SC

" Spotty" discoloration may indicate damage to refractory and/ or insulation

1st of Each Month		1st of Each Month		1st of Each Month		1st of Each Month		1st of Each Month	
Date	Good	Date	Good	Date	Good	Date	Good	Date	Good
	Y / N		Y / N		Y / N		Y / N		Y / N
	Y / N		Y / N		Y / N		Y / N		Y / N
	Y / N		Y / N		Y / N		Y / N		Y / N

Comments

