



## ***WASTE MANAGEMENT PLAN***

***NOVEMBER 2012***

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## *1.0 Introduction*

Aurchem Exploration Ltd. is pleased to submit this Waste Management Plan as part of its application for a QML. This plan contains procedures for managing domestic/industrial wastes generated through camp/mill operations which may include:

- Food wastes from kitchen;
- Packaging materials from kitchen and mill;
- Used consumer batteries;
- Used engine oil;
- Waste hydrocarbon fuels (e.g. diesel, gas);
- Used sorbent pads and rags;
- Empty motor lubricant and hydraulic fluid containers;
- Waste packaging (paper/plastic)
- Used antifreeze;
- Used vehicle batteries;
- Used tires;
- Scrap metal; and
- Scrap wood (treated and untreated).
- Hydrocarbon contaminated sorbents;
- Hydrocarbon contaminated soil; and,
- Hydrocarbon contaminated snow.

The Vic Project is located approximately 65km west of Carmacks and 180km northwest of Whitehorse in the Yukon Territory [latitude: 62° 07' N, longitude: 137° 08' W, within the Mount Nansen range, the property lies approximately 15km north of the former operating BYG Natural Resources mine and facility. The property is easily accessible from Carmacks by an all weather gravel road maintained up to the mine site by the Government of Yukon Highways and Public Works Department and within the property a network of roads and trails provides access to all of the workings and showings on the claims. The Klondike Highway connects Whitehorse to Carmacks and other points north and east.

Aurchem will operate a small 50t/day floatation mill on its Vic property. The project activities include ore obtained from an open vein, processing ore, camp construction for up to 10 people, use of up to 500 m<sup>3</sup>/day of water for milling purposes, use and upgrades on existing roads, and storage of water in settling ponds. The estimated mine life is approximately 5 years, but could be extended should ore grades warrant.

## ***2.0 Waste Facilities***

The Vic Project camp is seasonal and temporary. The camp consists of 3 RV units for up to 10 people. A pit privy is used to manage sewage and water for camp is obtained from Klaza Creek near the camp. Cooking is conducted inside RV units, and there is no common kitchen area. All food is kept inside RV units.

All fuel is stored in a bermed/lined area at least 30m from the nearest water source. Wobble pumps or small electric pumps will be used for re-fuelling. Spill kits are located at each fuelling station and all personnel are aware of and knowledgeable about the spill response plan.

Kitchen wastes, putrescibles and other combustibles will be burned in empty metal drums. Non-combustibles are transported off-site to the Carmacks Landfill. Waste petroleum products are stored in specifically marked 205L drums until disposed by Yukon Environment's special waste program to an approved regulatory disposal site.

Human-wildlife interactions are minimized based on the following camp design and layout criteria:

- Camp area is cleared of brush for improved visibility;
- Linear alignment of RV's and camp facilities rather than a circle;
- All RV's evenly spaced and distributed;
- Portable electrical fence will be installed around RV staging area.

## ***2.1 Inspections and Record Keeping:***

Daily inspections on the burn barrels will be made to ensure complete burn, cleanliness of area, and reduction of wildlife attractants. Burned material (ash) from waste barrels will be buried on site near camp, but away from RV units . Ash can be dumped into pit privies as well.

## ***2.2 Special Waste Management***

Aurchem does not anticipate the use/storage of special waste. However, in the event this occurs, Aurchem will transport special waste (anti-freeze, used diesel, used batteries, etc) in the following manner:

- No special wastes will be transported by Aurchem other than within the site location
- 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.
- 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.

Aurchem will store special waste in the following manner to prevent special waste from endangering public health and the environment:

- All drums, and any other portable containers containing the listed special wastes, will be covered or stored out of the weather to prevent container degradation from the sun or contamination by water from snow or rain. They will also be stored off the ground to prevent container degradation by ground moisture.
- Incompatible substances will be stored separately to prevent contamination, fires, explosions, gaseous emissions, leaching or other discharges, or other dangerous conditions.
- The contents of all storage containers will be clearly marked and visible on each container.
- The residue at the bottom of any container used for the storage of dangerous goods or special wastes will not be drained to the environment. Such residue will be segregated and treated as a special waste until proven otherwise.
- During storage or transport of any special waste, the container is closed at all times and not opened, handled or stored in a manner which may cause it to leak.

#### **2.2.1 WASTE OIL AND FILTERS**

The primary 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 be collected and transported off site to an approved collection facility. Before disposing of waste oil filters, as much oil as possible will be eliminated from them. Steps required to ensure proper disposal include puncturing the top of the filter, setting the filter in a tray and allowing the oil to drain for approximately 24 hours, and crushing the filter to increase waste oil recovery.

#### **2.2.2 WASTE ANTIFREEZE**

Used antifreeze will be stored in good quality containers that are leak-free and have tight closures to prevent spills, stored on a wooden pallet in a bermed area, and periodically shipped to a disposal facility.

#### **2.2.3 SOLVENTS AND LUBRICANTS**

Small quantities of miscellaneous waste solvents and lubricants will be generated through routine maintenance and repair of equipment. Solvents are liquid substances that can dissolve other substances and can be recycled (e.g., paint thinners and strippers, varsols, degreasing fluids, mineral spirits and petroleum distillates). 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 to protect them from precipitation and will be kept apart from other waste products. When transporting solvents, the container will be labelled according to the Transportation of Dangerous Goods Regulations (SOR/2008-34).

#### **2.2.4 USED BATTERIES**

Alkaline batteries are to be placed in designated household battery disposal bins, located at the camps, to be disposed of by the Environmental Department. Lead/acid batteries, including vehicle batteries will be collected in and stored in designated Special Waste Storage area on site. These will be periodically shipped to a licensed recycle or disposal facility. They will be stored on wooden pallets; however the following steps must be adhered to in order to prevent acid leaks and spills, and to avoid contamination of the storage site:

- Batteries will be placed on wooden pallets.
- Before putting waste batteries on the pallet, plastic sheeting will be placed on it to completely enclose all of the batteries in a continuous sheet of plastic. All sides will be wrapped to protect the batteries from the weather and to prevent any acid from being discharged into the environment.

#### **2.2.5 CONTAMINATED MATERIAL FROM SPILLS**

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

- Hydrocarbon contaminated soil and snow will be collected and stored in 205L drums for off site removal to an approved facility.
- Hydrocarbon-contaminated absorbent pads will collected and stored in 20L pails for off site removal to an approved facility.
- Antifreeze contaminated soil and snow will collected and stored in 20L pails for off site removal to an approved facility.

### ***3.0 Spill Prevention and Response***

See attached Spill Contingency Plan.

