

## ENVIRONMENTAL WASTE PROCESSING FACILITY

### PROJECT SUMMARY

Qikiqtaaluk Environmental Inc. (QE) was established in Iqaluit, Nunavut in 2003. Its activities consist of managing hazardous and non-hazardous waste, contaminated water treatment and contaminated soil management. QE will move its operations to a property, located at Lot 666, Plan 1673, Parcels O and Q (the Site). This move will allow QE to add a treatment facility for the remediation of hydrocarbon impacted soils to its existing operations. As part of its mission and field of expertise, QE will safeguard against contaminants escaping the Site. Monitoring wells, watertight lined cells, storage in proper containers, controlled drainage of the Site and regular inspections are part of the measures taken by QE to prevent contaminants from escaping the Site.

Hazardous and non-hazardous waste is collected from various clients in Iqaluit. Waste consists of, but is not limited to, batteries, waste oil, fuel and gasoline, hydrocarbon contaminated sludge and solids (absorbents, rags and filter media), waste glycol, ACMs<sup>1</sup>, lead paint and other lead-containing materials, among others. These types of waste are often improperly packaged and/or stored in containers that are in poor condition. QE's business consists of identifying, repackaging, safely storing, the marine transport and final disposal of this waste. The Site will ultimately be used for this purpose.

Hydrocarbon impacted water is often collected from spills, site remediation projects or fuel storage containers during the cleaning process. QE is licensed by the Nunavut Water Board (NWB) to collect, store, treat and discharge this water. The water treatment unit consists of a water/oil separator and a series of filters activated by diaphragm pumps. The contaminated and treated water is stored in separate holding tanks with capacities ranging from 5,000 to 15,000 L. After treatment, confirmatory samples are taken and analyzed for comparison with the discharge criteria as defined by the NWB Licence. Following receipt of results that respect the criteria, the clean water is then discharged at a location authorized in the water licence. QE is requesting an amendment to its current NWB licence to allow for the treatment of all possible contaminants that may be found in water to be managed as well as to change the location of our treatment facility and discharge location.

QE will treat hydrocarbon contaminated soils using a combination of physical (screening and washing), chemical (oxidation) and biological (biopile and/or landfarm) techniques. The contaminated soils are screened to remove rocks. The remaining soils which hold the contamination are then placed in a lined treatment cell. A biopile is comprised of a lined cell with a grid of screened piping that injects air into the soil pile. Amendments are added to the soils to stimulate the bacterial activity that, over time, degrades and removes the contaminants from the soils. The soils are covered with a black semi-permeable tarp to maintain higher temperatures and minimize infiltration of precipitation water. A land farm operation is the same as a biopile, except that there is no forced aeration of the pile and there is no cover over the contaminated soils. Chemical oxidation may also be used for removing contamination that is more difficult to biodegrade. QE will launch a research and development project for new technologies and treatment techniques that could provide better soil remediation results in the Arctic.

Monitoring measures put in place by QE consist of on-site groundwater monitoring wells and an environmental monitoring program to ensure that no contamination migrates off-site.

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1. Asbestos-containing materials