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LANDFARM MANAGEMENT PLAN
JERICHO DIAMOND MINE, NUNAVUT

EXECUTIVE SUMMARY

Introduction
The Landfarm Management Plan (LFMP) provides operating guidelines for the remediation of petroleum hydrocarbon (PHC) impacted soils generated on site, as well as guidelines for the disposal of contaminated snow resulting from PHC spills occurring in the winter months.

Landfarm Processes and Principles
Landfarm treatment uses naturally occurring microorganisms to metabolize and breakdown PHC in affected sediments and soils. Remediation is achieved through spreading impacted soils in a thin layer across the landfarm area. Microbial growth is encouraged mainly through the addition of air and nutrients. Cold climates do decrease remediation rates, however, breakdown of PHC's has been documented to occur in temperatures below zero (0) degrees Celsius (Rike et al. 2003).

Expected landfarm remediation time for contaminated soils at Jericho is approximately six months to two years (Paudyn et al. 2007).

Design Overview
At the time that this plan was prepared and submitted, a final location for the landfarm had not yet been selected. The location will be finalized during field investigations in 2011 and will be incorporated into the final design of the facility.

The concept of the Jericho landfarm design consists of a lined, bermed enclosure that provides an up-gradient area for remediation of hydrocarbon-impacted soils and a down-gradient sump area to collect runoff. This is described in the Preliminary Landfarm Design Plan (EBA 2011).

The landfarm has been sized to accommodate approximately 3,500 m^3 of contaminated soil and limited quantities of contaminated snow.

Safety Procedures
Training and personal protective equipment will be provided to personnel in charge of operating the landfarm. This training will include: appropriate certification, use of safety equipment, emergency response procedures, soil tilling, record-keeping, soil and water sampling and groundwater monitoring.

Remediation Objectives and Reference Standards
Soil sampling will be conducted to verify the completion of landfarm treatment. Soils that do not respond to bioremediation treatment may be disposed of off site or, with approval, be used as intermittent fill within an engineered on-site facility.

Contact water will be sampled and, if need be, treated prior to discharge to the Processed Kimberlite Containment Area (PKCA).

Landfarm Management

Following a spill, contaminated soils will be inspected for suitability for landfarming. This will be based on soil lithology and chemistry. Contaminated soils exceeding the landfarm acceptability criteria will not be approved for landfarm treatment and will be considered hazardous waste and disposed of accordingly.

Quality Control Monitoring

All samples will be collected using best industry practices and shall be submitted under a chain-of-custody protocol.