

APPENDIX B

SITE MONITORING PLAN



Site Monitoring Plan – Soil Remediation Facility

Location of Monitoring Stations, and Proposed Monitored Parameters

Several soil samples were collected in strategic locations in the area of the soil remediation facility prior to its current development. These samples were analyzed with the use of on-site PetroFlag™ TPH test kits, and a select representative samples were sent to Paracel Laboratories in Ottawa, Ontario, for benzene, toluene, ethylbenzene and xylenes (BTEX) and petroleum hydrocarbon fractions F1 to F4 (PHC F1 to F4) analysis. These approximate locations will be sampled throughout the lifespan of the soil remediation facility, and once the facility has been decommissioned (pending complete soil remediation within the biopiles), in order to monitor and compare the soil quality of the soil within the area of the biopiles.

With regards to the soil quality within the biopiles themselves, a 6 kilogram composite soil sample (providing an average sample of the contaminated material at the site) was collected by Jacques Whitford personnel. The soil sample was then sent to the National Research Council of Canada (NRC) – Biotechnology Research Institute (BRI) for a number of laboratory analyses concerning bacterial populations. NRC-BRI will continue to monitor soil conditions data from the composite soil samples that Jacques Whitford will provide from the biopiles, and they will recommend amendments to the soil conditions, as required.

There are three proposed monitoring wells to be monitored/sampled during the duration of the soil remediation facility activity to be located around the periphery of the soil remediation facility (see Drawing No. 4, **Appendix A**). The proposed monitoring wells are located down gradient of the soil remediation facility (east, south and west) in order to monitor groundwater quality in the area. Parameters to be monitored include BTEX, and PHC F1 to F4.

Sampling Frequency

The frequency of soil and groundwater sampling will be as follows. Sampling will be carried out following the winter freeze period while soils and groundwater are accessible and have the potential to be mobile. Sampling will be performed while Jacques Whitford field staff is on-site between the months of May and September. Once the wells are in place and produce an active groundwater, they will be monitored and sampled initially and monthly thereafter until site closure in September. Annual sampling will continue in this manner until facility closure (currently estimated as 2012). The groundwater samples will be submitted to Paracel Laboratories for analysis. Soils collected from the biopiles will be monitored annually for the determination of target soil remediation criteria and biological activity, and local background control samples will also be taken annually and submitted for BTEX, TPH and PHC analyses by Paracel Laboratories.

QA/QC Programs

When the PetroFlag™ TPH test kits are utilized on-site, one field blank and one laboratory duplicate are incorporated into each set of 10 tests in order to estimate the level of accuracy within the target results. With respect to Paracel laboratories and their QA/QC policies, Paracel is accredited by the Standards Council of Canada (SCC) in cooperation with the Canadian Association for Environmental Analytical Laboratories (CAEAL) for specific environmental tests listed in the scope of accreditation approved by the SCC and registered with the association. Paracel is accredited to the ISO/IEC 17025 standard and employs in-house quality assurance and quality control programs to govern sample analysis including the analysis of method blanks, spiked blanks, and the analysis of duplicates (10%) for each sample batch.

