

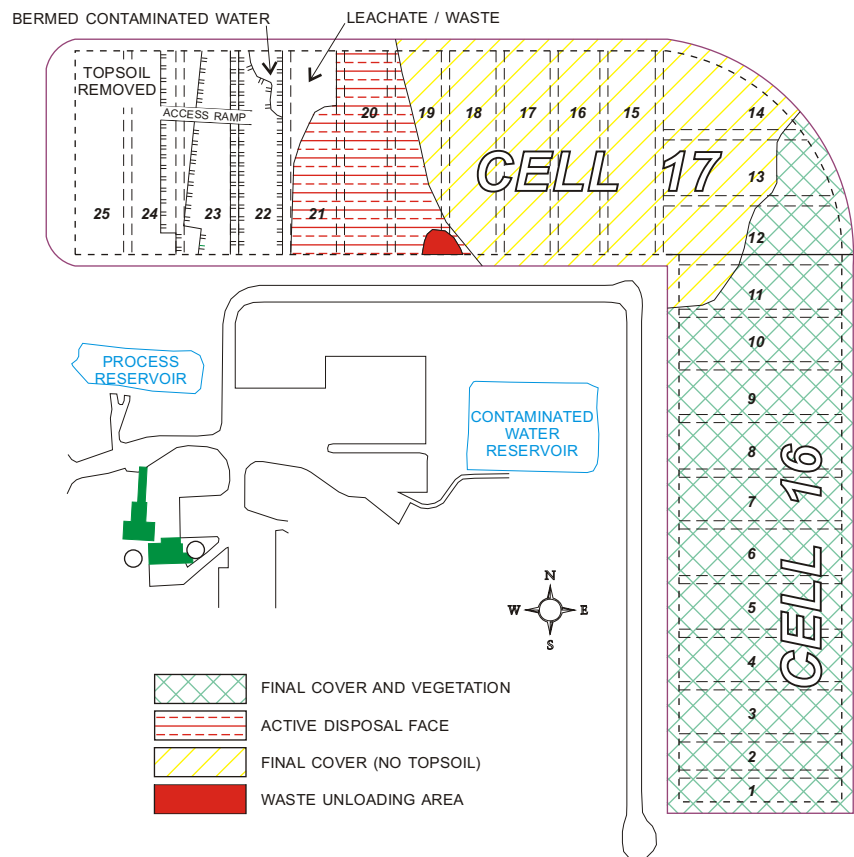
COMPLIANCE MONITORING LAMBTON FACILITY

BACKGROUND

Laidlaw Environmental Services operates a 120 hectare industrial waste management facility in the Township of Moore, Lambton County. The facility includes an incinerator, a physical chemical treatment plant and a secure landfill. The facility processes a variety of industrial wastes, which following pre-treatment, are placed in the landfill for disposal. The landfilling operations are subject to the conditions contained on the Provisional Certificate of Approval. Some of these conditions relate to the monitoring of the landfill. Laidlaw Environmental Services retained Jagger Hims Limited to oversee the annual monitoring program from 1991 to 1996.

APPROACH

Annual monitoring at the site consists of a prescribed program of groundwater sampling and analysis, site inspections and documentation of routine operational activities such as waste handling activities. Groundwater monitoring includes water level measurement, well purging, and sampling in accordance with standard protocols. Samples are typically analysed by three laboratories. Chemical analysis results are compiled and statistically analysed to determine water quality changes with time. Control chart methodology, similar to quality control charts used in the manufacturing sector, are used to evaluate the statistical significance of parameter concentration changes with time.



Jagger Hims Limited staff also conduct site inspections of newly excavated portions of the active landfill in order to access the adequacy of the cell for disposal. As shown on the 1996 layout plan, cell inspections include assessment and documentation of the landfill operations related to fill area, excavated area, slope stability, landfill cover, and berm construction. Additionally the pit face is geologically examined and mapped. The pit face mapping component involves examination of the side slopes and base for granular lenses and man-made discontinuities which may provide a pathway for contaminant migration.

RESULTS

Monitoring at the landfill site confirms that the site conditions are as predicted and that the site is in compliance with regulatory requirements. Ongoing monitoring will be carried out to ensure the site remains in compliance during active operations and post closure.