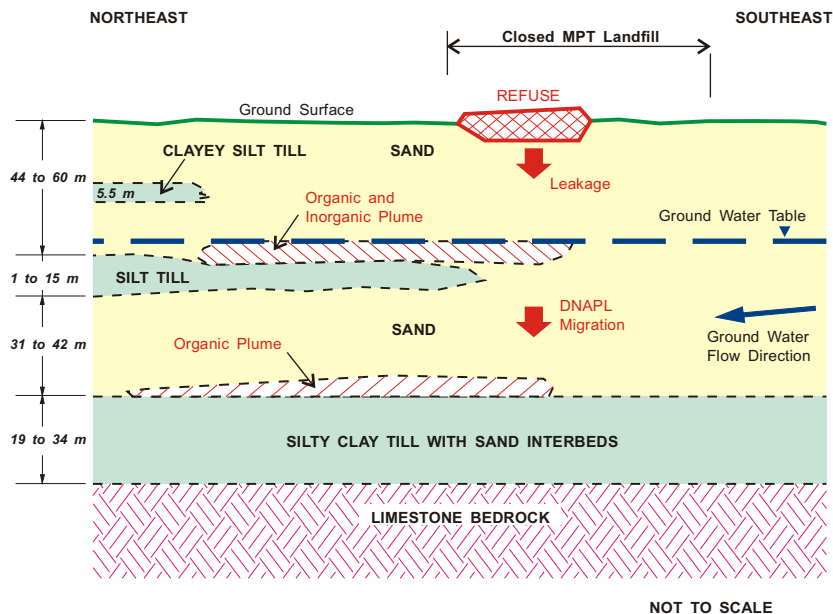


PROBLEM

The MPT Landfill Site, located about 3 kilometres west of the Town of Midland in the County of Simcoe, was used for disposal of various wastes through the 1960's until 1970. The site was abandoned until 1989 when it was proposed to use the property for disposal of snow from municipal roads. A study was commissioned to address any impacts of snow disposal on the ground water setting.



APPROACH

A phased approach was used to increase the level of detail with respect to the identified need. This approach then provided the rationale for increased expenditures. The first phase was reconnaissance in nature and involved mainly office work. Based on potential for contaminant migration, borehole drilling and monitoring was conducted to confirm the presence of contaminants in Phase 2. In Phase 3, the problem was quantified through additional drilling and monitoring.

RESULTS

As shown on the hydrogeologic section, the geology consists of a 90 m to 100 m thick layer of sand with an interbed of glacial till approximately midpoint. Glacial till is also the basal unit. There is an inorganic contaminant plume originating from the refuse which extends approximately 400 m downgradient above the middle till unit. Trichloroethylene (TCE) and degradation products also originating from the site are migrating in two plumes one on each of the till layers. The lower plume is just detectable at 400 m from the source. The concentration of some parameters exceeded water quality guidelines.

SOLUTION

The remedial action strategy consisted of the continued attenuation through natural processes within an established contaminant attenuation zone. Such an approach was feasible due to the remote site location with respect to downgradient wells and the presence of municipally owned lands adjoining the site. Annual monitoring is conducted for verification purposes.