

HRSC SOLUTIONS WITH MiHPT & CPT

Gregg Drilling is the first and only contractor to provide Cone Penetration Testing (CPT) data in conjunction with the Membrane Interface Probe (MIP) and Hydraulic Profiling Tool (HPT) in the same sounding. This combination allows for detailed high resolution site characterization (HRSC) of contaminants with the additional stratigraphic logging of the CPT.

The probe can be advanced with any of Gregg's CPT equipment at a constant rate (when coupled with the CPT), or can be driven to depth using direct push methods. The direct push method is often useful in stiffer formations or when limited access equipment is preferable.

HOW IT WORKS

The Cone Penetration Test provides a near continuous log of the site stratigraphy. With continuous piezometric data and dissipation tests, the CPT provides detailed hydrogeologic information about the subsurface soils and groundwater.

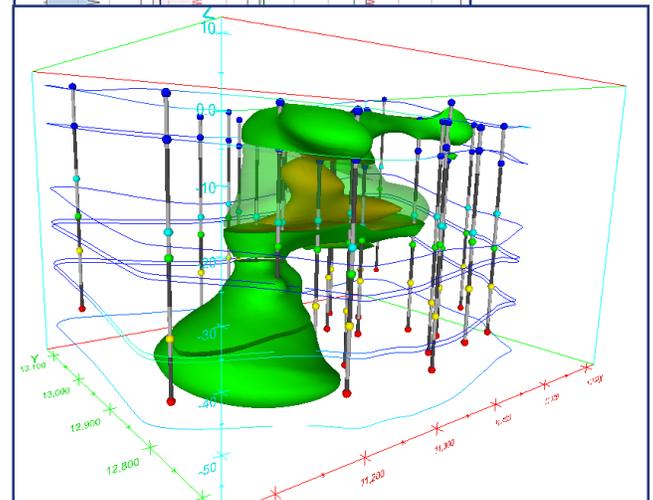
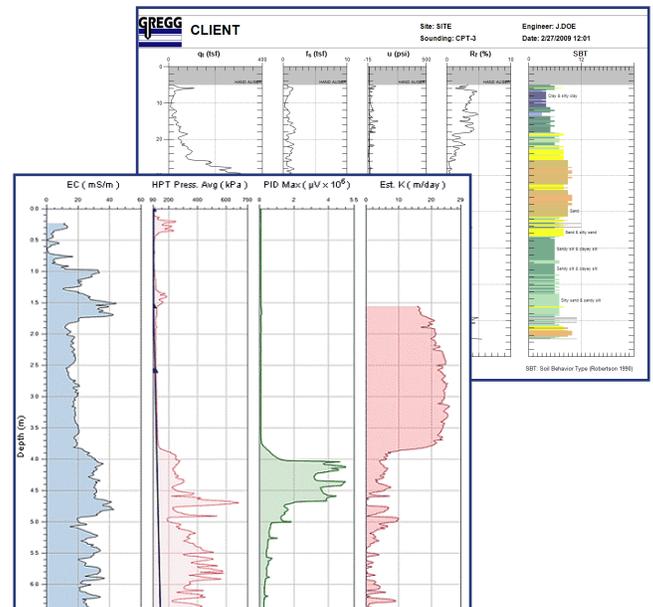
The Membrane Interface Probe is a screening tool for VOC contaminants. In particular, it is useful on sites with chlorinated solvents. The MIP works by heating a small membrane on the side of the probe to 120C. The heated membrane causes VOCs in the soil to mobilize and cross through the membrane due to diffusion. A carrier gas passing by the inside of the membrane picks up the VOCs and sweeps them to the surface to be detected. The detectors consist of a PID (BTEX), XSD (Chlorinated solvents such as TCE and PCE) and FID (hydrocarbons).

- Detection limits: BTEX 0.2-2.0ppm (PID), TCE & PCE 0.2-2.0ppm (XSD)
- Other measurements include internal nitrogen pressure and speed of probe.
- Carbon traps can be used to extract samples for speciation.

The Hydraulic Profiling Tool is a logging tool that measures the pressure required to inject a flow of water into the soil as the probe is advanced into the subsurface. This injection pressure log is an excellent indicator of formation permeability. In addition to measurement of injection pressure, the HPT can also be used to measure hydrostatic pressure under the zero flow condition. This allows the development of a hydrostatic pressure graph for the log and prediction of the position of the water table. It can also be used to predict the permeability in the vadose zone.



Gregg's CPT truck can be positioned next to the MIP control van for tandem operation.



Gregg's experienced team of HRSC operators can work with clients to combine the data collected from the MIP, HPT and CPT creating a 3D model of contaminants, permeability and soil zones in the subsurface environment.



QUALITY • SAFETY • VALUE

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