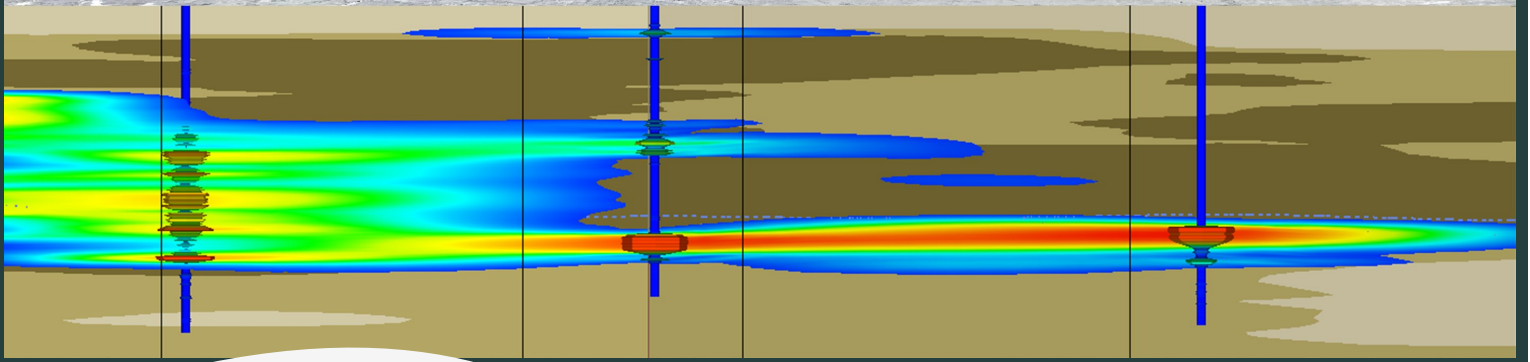


Membrane Interface Probe

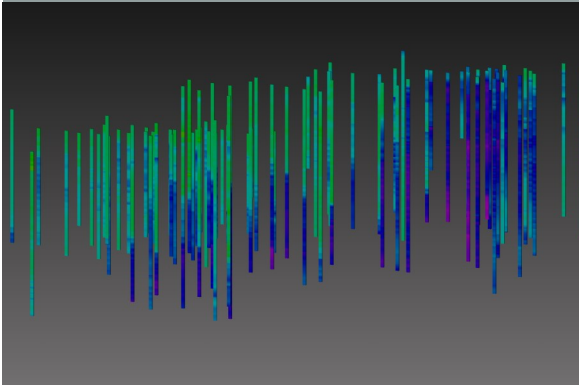


S2C2

HRSC Specialists

47 East Main Street
Building 1
Flemington, NJ 08822
908-270-0272

HRSC Specialists | Direct-Sensing • Direct-Push • 3D Visualization



Advantages of the MIP

- Detects VOC in gaseous, dissolved or free phases
- Operates in both saturated and unsaturated materials
- Provides real-time graphical representation of contaminant distribution and soil lithology
- Allows for rapid decision making in the field
- Accurately defined contaminant zones
- Provide water table elevation
- Estimate K

S2C2 is an environmental services firm that focuses on providing High Resolution Site Characterization (HRSC) support. At S2C2, we stand committed to excellence in environmental services, setting a benchmark that elevates us above our competition. Our team comprises top environmental specialists and experts who possess a deep understanding of the industry's latest advancements and best practices, enabling us to provide innovative, customized solutions that outpace traditional approaches. S2C2 has been providing MIP services throughout the United States since 2005 and has been a Geoprobe® Certified Direct-Image Contractor since 2008. S2C2 is a full service High Resolution Site Characterization (HRSC) company with Geoprobe® direct-push units and custom MIP systems. S2C2 has the experience and personnel to handle even the most complex site characterization programs.

Gain invaluable insights into complex subsurface conditions, enabling smarter decision-making and more effective remediation strategies

Membrane Interface Probe (MIP)

S2C2 is unique in that we bring over 25 years of mobile laboratory experience to our Direct-Sensing jobs. Geoprobe's® MIP acts as an interface between the VOCs present in the subsurface and gas-phase detectors located at the ground surface. The membrane is semi-permeable and consists of a thin-film polymer impregnated into a stainless-steel screen for support. Diffusion of gases occurs due to a concentration gradient between the impacted matrix and the clean carrier gas (e.g., nitrogen) behind the membrane. A constant gas flow of 30-45 milliliters per minute (mL/min) sweeps behind the membrane and carries the diffused VOCs to the gas phase detectors at the ground surface via the trunkline.

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MiHPT - MIP with HPT

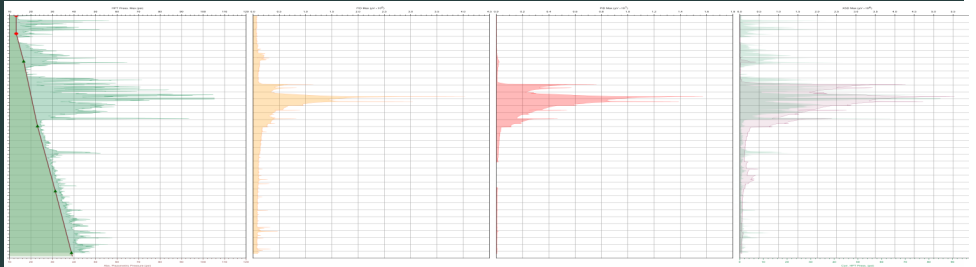
The MiHPT probe is the industry standard MIP probe used to log VOC contaminants, soil conductivity (EC) and permeability (HPT) with depth. MIP technology has been used world-wide since

Low-Level (LL-MIP)

Low Level MIP greatly increases the sensitivity of the MIP logging tools. A Pulse Flow Controller is used to send a pulse of gas to the detectors resulting in a more concentrated slug of VOC contaminant delivered to the detectors. Due to the increases sensitivity we recommend using LL MIP only for very low dissolved phase plume delineation

Heated Trunkline (HTL-MIP)

Heated trunkline is an option to MIP logging which provides a heated transport of carrier gas from the probe to the detectors. The heated trunkline helps improve resolution of detector response by decreasing baseline slur and also reduces the chance of water vapor condensing in the trunkline during cold weather operation.



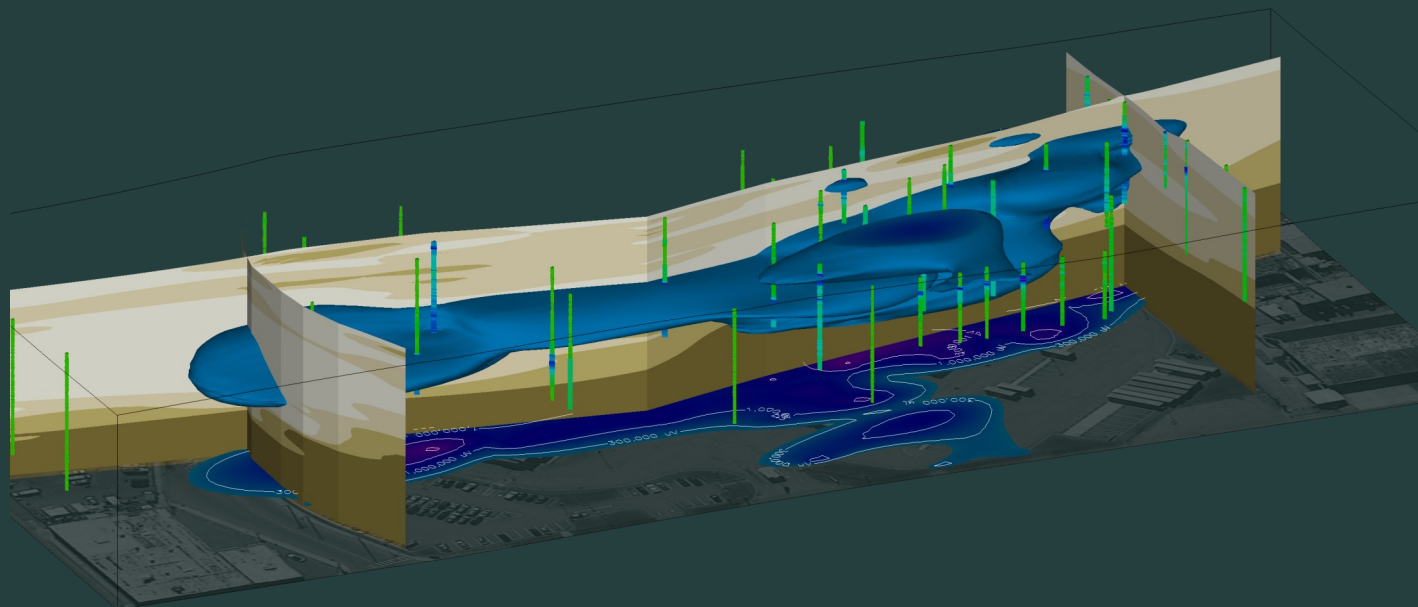
MIP provides unparalleled contaminant and geologic data for rapidly advancing conceptual site models

We utilize three detectors on our MIP systems including: a Flame Ionization Detector (FID), a Photo-Ionization Detector (PID), and a Halogen-Specific Detector (XSD). The FID and PID detect total VOCs ([Geoprobe's Detectable Compounds](#)) with the PID more sensitive to aromatic compounds. The XSD only detects halogen-containing hydrocarbons (i.e., chlorinated VOCs). Typical detection limits for chlorinated compounds with our MIP configuration are 150-250 ppb or less. The MIP response is dependent on a number of factors including lithologic properties, chemical constituents, and the concentration within the formation. The MIP response provides a gross semi-quantitative response to VOCs in the subsurface.

MIP data seamlessly Integrates into our 3D visualization packages - Providing a comprehensive HRSC solution.

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S2C2 is committed to working with our clients through all project phases—from initial proposal, through field implementation to project completion. Contact us to discuss how our services can help you solve complex environmental problems.

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