



Membrane Interface Probe

For in situ detection of volatile organic compounds (VOCs) in the subsurface.

How it works

A heated probe carrying a permeable membrane is advanced to a recorded depth in the soil by our GEOPROBE 7720DT Direct Push probing rig. VOCs in the subsurface which cross the membrane enter into a carrier gas stream and are swept to gas phase detectors at ground surface for measurement.

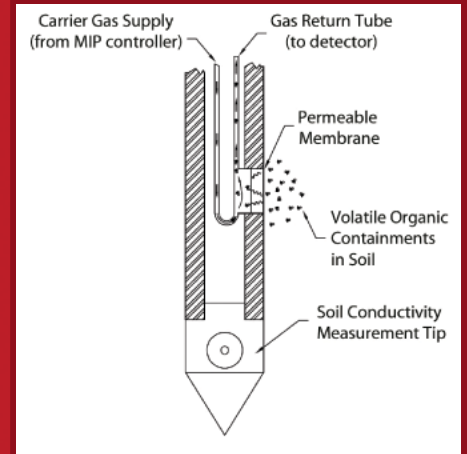
Detectors

The ability to detect a contaminant is determined by the type of detectors being used. Detectors include:

- PID - photo ionization detector used for the detection of aromatic hydrocarbons
- FID – flame ionization detector used for the detection of straight chained hydrocarbons (methane, butane)
- ECD – electron capture detector used for chlorinated (TCE, PCE) contamination detection.

Lithology

Electrical Conductivity is used to define zones of lower conductivity, equivalent to coarser grained, more permeable sediments, which will allow the movement of contaminants in the subsurface. The lithological information gathered with the EC in conjunction with the MIP data can be used to aid the investigator in understanding the movement and location of contamination in the subsurface. This information will also assist in the proper placement of monitor or extraction wells.



Probe diagram and flow path

Features of MIP

- Operates in both saturated or unsaturated materials.
- Detects volatile compounds in gaseous, sorbed, dissolved, or free phase.
- Applicable to both chlorinated and non-chlorinated species.
- Provides simultaneous log of soil electrical conductivity (EC) via the dipole electrode on the probe.

What the MIP can tell you

- Where the contaminant is encountered at depth.
- Where the contaminant is absent at depth (below the detection limit).
- How the concentration of contaminants at this location compares to the concentration at other locations
- Where the contaminant occurs in relation to lithology.

Save Time and Money

- Reducing the number of unnecessary drilled sample holes and monitor wells.
- Reducing the number of samples taken and associated laboratory costs.
- Reduced on-going monitor well sampling.
- Less time on site .



Self contained mobile laboratory trailer



HP Gas Chromotograph

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