

Industrial Property – Northern NJ

Client Type/Property Type: International Consultant – Industrial Property

Contaminant: Chlorinated Solvents

Project Summary:

Recently, [S2C2 Inc.](#) - Providing High Resolution Site Characterization Services discovered a shallow and highly localized DNAPL pool at a site in New Jersey. The discovery was made using the [Membrane Interface Probe \(MIP\)](#), using the heated trunkline, manufactured by [Geoprobe Systems®](#). Prior to this field event, previous site investigations had revealed the presence of high



concentrations of dissolved phase CVOCs, but no source material. Early on the third day of the investigation, on boring number 17, the find was made. It was immediately clear from the MIP detector response that very high concentrations were present and DNAPL was likely. A logical question to be asked when using the MIP and encountering DNAPL is, “Can the MIP system “recover” when encountering DNAPL?” Yes, it can, if you are prepared, using the right equipment and your operator is alert. It should be noted that we were running our system/detectors in S2C2’s standard operating mode. While the source material certainly caused an elevated baseline, the field team was able to resume working within a reasonable time frame. The XSD (our chlorinated specific detector) baseline was usable within the hour (approximately 30 minutes longer than it normally takes to remove the tool-string, seal the borehole, decon and perform a response test and setup on the next location).

Due to the elevated baseline and stopping the log “short”, due to encountering such a high response, the MIP was unable to clearly identify a 'bottom' of the impacts. This was easily rectified by very simply collecting a discrete macro core sample through the impacted zone. The core from that interval clearly showed a free phase DNAPL on top of a thick clay, with concentration dropping off dramatically deeper in the clay. The photo of the DNAPL was from a temporary groundwater sample point, collected using [Geoprobe’s SP22 groundwater sampling system](#), right above the clay. Note the pump was shutoff after just a few seconds when only DNAPL (no water) was produced. Confirmation soil and groundwater samples were collected and upon obtaining results an initial 3D visualization will be completed. Further “source” area delineation work will be conducted in the future.