

**INNOVATIVE METHODOLOGY FOR ASSESSING THE FEASIBILITY OF
LIGHT NON-AQUEOUS PHASE LIQUID (LNAPL) HYDRAULIC RECOVERY**

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Traditionally, decisions for implementation of hydraulic recovery at LNAPL-impacted sites have been based on the presence or absence of LNAPL in groundwater monitoring wells. However, this approach has limited success due to the complexity of subsurface LNAPL distribution and mobility. A methodology utilizing CPT/ROSTTM, petrophysical and soil-characterization data was implemented to improve the assessment of LNAPL distribution and mobility and evaluate the feasibility of LNAPL hydraulic recovery.

Data used in this feasibility assessment include (1) CPT/ROSTTM at an extensive number of locations to characterize soil lithology and LNAPL distribution and (2) petrophysical and soil-characterization data at a select number of locations. Measured parameters included grain size distributions, hydraulic conductivity, initial and residual LNAPL saturations and air/water capillary pressure measurements. These data, in conjunction with a screening level LNAPL distribution and recovery model (based on API LDRM), are used to calculate (1) LNAPL specific volume, (2) LNAPL specific recoverable volume, (3) LNAPL transmissivity, and (4) LNAPL recovery rate over time.

The methodology described above has been applied at a former refinery site. The site-specific application highlights the utility of this approach in LNAPL recovery decision-making.

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