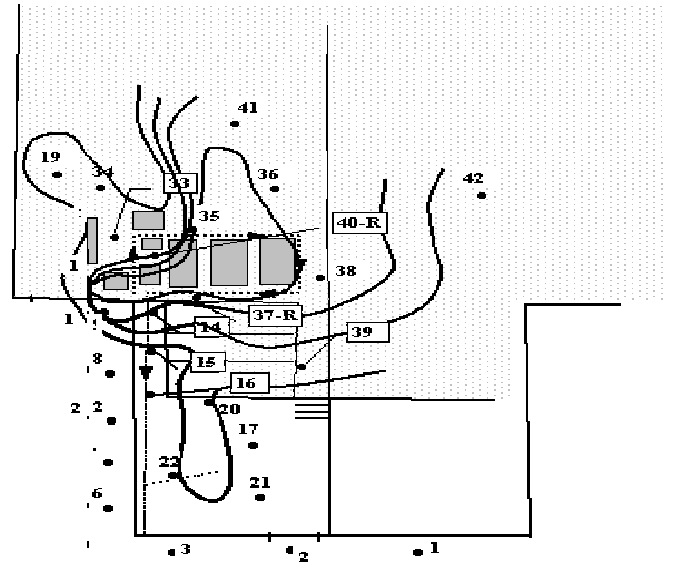


Dry Cleaner Site
RIDEM Voluntary Remediation Program
Middletown, RI

The owner of a commercial building in Middletown, Rhode Island, historically used by a dry cleaning business, was responsible for identifying the location where chlorinated solvents had been released and determining the extent of PCE migration in groundwater. The owner retained Lake Shore Environmental (LSE) to characterize the Site and evaluate various remedial alternatives.

LSE conducted a 48-point soil gas survey inside and outside of the building in conjunction with on-site mobile laboratory analysis using GC/MS analytical methods. The soil gas data identified a floor trench as the pathway through which past PCE spills had entered the subsurface. LSE conducted sub-slab soil sampling using direct-push sampling tools to confirm the concentrations of residual PCE in the release area. LSE also directed the drilling and installation of nested, off-site monitor wells and completed a round of groundwater quality sampling using low-flow sampling techniques. The groundwater data served to delineate the extent of the PCE plume and the down-gradient wells will serve as sentinel wells.

LSE has recommended that an in-situ remedy consisting of multi-phase extraction (MPE) be implemented for PCE source area remediation. Angular drilling will be used to target soil zones which are inaccessible to traditional drilling techniques. LSE will develop the MPE system design and deliver the project on a design/build basis.



Pertinent Features:

- Interactive soil gas survey in conjunction with on-site mobile laboratory analysis providing real-time data and a high level of resolution.
- Direct-push soil sampling within the building to confirm mass concentrations of PCE in source area soils (vertically and horizontally).
- Drilling and installation of nested, off-site monitor wells to confirm extent of plume migration and vertical hydraulic gradients.
- Low flow sampling of groundwater to provide maximum data usability and minimize waste disposal costs.