

Site Characterization/Planning Services
Post Road Reconstruction project
East Greenwich/No. Kingstown, RI

A RIDOT Engineering firm under contract to the Rhode Island DOT to design drainage, utilities, and roadway surfaces along a one mile segment of Post Road subcontracted Lake Shore Environmental, Inc. (LSE) to provide various environmental services in support of the project.

Previous subsurface investigations dating back to 1998 had identified several locations along the project corridor that have documented releases of petroleum hydrocarbons from leaking underground storage tanks (USTs).

Due to the potential for encountering petroleum-impacted soil and groundwater, LSE conducted an updated Phase I environmental site assessment and developed a soil management plan for submission to RIDEM detailing procedures for screening, segregating, stockpiling and disposing of contaminated soil during construction.

At several locations along the project, excavation depths were expected to intersect the groundwater table and therefore, dewatering would be required. Both the construction dewatering discharge as well as the post-construction stormwater would be directed to a detention pond. Due to the potential for gasoline to be present as vapors within the construction trench or as dissolved gasoline constituents within underlying groundwater, LSE developed a plan to install and operate a mobile groundwater treatment system and submitted a Notice of Intent to the RIDEM to discharge treated gasoline wastewater under the RIPDES Program.

In order to confirm if petroleum-impacted soil and groundwater would be intersected during construction activities, LSE was also retained to drill and install seven monitoring wells at various locations in the right-of-way along the project corridor. LSE characterized soil stratigraphy, soil grain size distribution, conducted depth to groundwater gauging and collected/analyzed groundwater quality samples.



LSE also assisted the engineer with drafting bid specifications outlining how the contractor would be required to manage contaminated/hazardous media during construction.

LSE's data reports allowed the design engineer to evaluate other design alternatives and potentially avoid costly soil disposal, worker protection and/or groundwater treatment expenses during construction.

Pertinent Features:

- Precharacterized soil and groundwater quality in advance of construction to avoid costly and time consuming change orders and delays.
- Obtained advanced RIDEM approval of soil management plan to facilitate management of contaminated soil during construction.
- Obtained RIDEM approval of dewatering plan under RIPDES Program.