Auto Salvage Site Brownfields Site Investigation – RIDEM Voluntary Remediation Program North Providence, RI

A developer was interested in purchasing a 5-acre automobile salvage yard in North Providence to redevelop as residential condominiums. A preliminary site assessment indicated surficial soil contamination by petroleum hydrocarbons and metals. The development group retained Lake Shore Environmental (LSE) to characterize the Site and evaluate various remedial alternatives.

LSE prepared a Site Investigation Work Plan and completed a Site Investigation under the Rhode Island Department of Environmental Management (RIDEM) Voluntary Remediation Program. LSE's initial investigations identified the widespread presence of lead and total petroleum hydrocarbons (TPH) in shallow soil and areas of impacted groundwater. In order to provide sufficient resolution of contaminant impacts in soil to assess risks associated with residential development, LSE conducted an interactive field screening program involving the excavation of test pits on a 100-foot grid. Field screening for multiple contaminants was utilized to provide real-time data at a manageable cost. Field screening for VOCs utilized a photoionization detector (PID) with jar-headspace methods; screening for TPH utilized PetroFlag test reagents. Heavy metals screening was accomplished using a portable X-ray fluorescence analyzer. LSE's investigations produced a threedimensional delineation of contaminant impacts in shallow soil which is the basis of a remedial cost estimate for a soil excavation remedy. LSE will be assisting its client with obtaining a Brownfields Revolving Loan for remediation, preparing a soil



management plan and directing soil excavation activities utilizing XRF equipment.

Pertinent Features:

- Interactive soil screening approach for multiple contaminants providing real-time data.
- XRF analyzer provided hundreds of data points for lead distribution and other metals.
- Depths of lead-impacted soil were shown as contours overlain on AutoCAD Survey of the Site which assisting Site development engineers with projecting cut/fill requirements for grading plan.