

CASE STUDY: Property Conversion - Fire House to Manufacturing/Assembly Facility.

Project Description: Underground Storage Tank (Abandoned In-Place)
Tank Closure/Decommissioning

Scope of Services: AET was contracted by a Developer to perform a Phase I Environmental Site Assessment (ESA) at a former Fire House in a large metropolitan city. The buyer planned to convert this property into a manufacturing/assembly site for speciality sport motorcycles. The Phase I ESA identified uses at the property dating back to 1862 and confirmed the previous use of an adjacent neighboring property as a dry cleaning facility.

Note: Phase I research and site reconnaissance confirmed the presence of a 1,000 gallon gasoline UST (installed in 1957) to replace a smaller 500 gallon gasoline tank in the rear of the facility. This tank was reportedly abandoned in-place (filled with sand). No other site records concerning these USTs were found.

Problem: Historic UST abandonment procedures prior to the 1980's did not meet the more stringent environmental standards of today. Current regulations require UST's which are abandoned in-place to be pumped of all remaining product, the tank cut open, the interior lining of the tank cleaned and the tank filled with a non-voidable material such as concrete or a slurry mixture. Sand, foam or other inert materials can also be used. It is not uncommon to find VOC contamination in the fill material in abandoned tanks or VOC contamination in the soil surrounding these USTs from previous leaks.

AET's Phase II Investigative Approach

1. ***Electromagnetic Imaging and Ground Penetrating Radar*** instrumentation was used to identify the exact location of the UST and area utilities.
2. ***Soil Borings*** were placed around the UST and the soil screened both visually and using direct reading photoionization detector instrumentation.
3. ***Soil and Groundwater samples*** were collected for comparison with the Statewide Non-Residential Health Standard for both petroleum compounds (i.e. gasoline) and chlorinated solvents (i.e. dry cleaning). Laboratory analysis included trimethylbenzene which is a relatively new analytical parameter for gasoline mandated by the state.

CONCLUSION: Low levels of petroleum contaminants and chlorinated compounds were found in soil and groundwater at the site but were below the Statewide Non-Residential Health Standards. Naphthalene was also found in the soil/groundwater samples. AET's professional opinion was that naphthalene contamination was not related to the previous UST used at the site, but was due to the use of uncontrolled historic fill material used at the site from adjacent industrial properties.

CAUTION: Environmental standards for abandoned in-place UST vary by state and even more by local municipality. Some municipalities require abandoned tanks to be removed from the ground (unless there is no physically practical means to remove it). Where the soil surrounding the abandoned tank is contaminated, the legal liability for the contaminated soil remains. Always check with your selected environmental consultant (**such as AET**) before initiating UST work.

When you need professional Property Redevelopment advice email Alan Sutherland, CIH, CHMM at a.sutherland@aetinc.biz or call 610-891-0114. We provide nationwide services; phone consultations are free. Check out the full range of environmental contracting/consulting services on our website www.aetinc.biz.

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