

PST REMOVAL & CLOSURE PROJECT



PROJECT SCOPE

ESE Partners managed a ~\$500,000 project involving the enrollment of the site into the TCEQ Leaking Petroleum Storage Tank (LPST) program. Remediation technologies included in-situ & ex-situ chemical oxidation using persulfate, mobile dual phase extraction (MDPE), downhole monitoring well NAPL removal/skimming, groundwater monitoring natural attenuation, dig/haul activities, full deconstruction of the aboveground storage tank (AST) system, and installation of the new AST fuel system.

APPROACH

This project required careful navigation of both the client relationship and the existing pollution insurance policy simultaneously with TCEQ rules, regulations, and requests for additional information within the cleanup program. Environmental challenges included soil impacts above health-based standards requiring treatment and/or removal, more than a three (3) foot thickness of non-aqueous phase liquid (NAPL; diesel fuel; free product) overlying the shallow groundwater bearing unit at project initiation and persistence of pore-space NAPL following treatment of environmental media. A highly technical demonstration of the site's hydrogeology and recoverable NAPL was ultimately necessary to satisfy regulatory requirements.

BENEFITS

ESE secured LPST closure to commercial/industrial closure criteria, successfully resolving both the regulatory and client risk considerations. Additionally, the Site continued to be revenue generating for the full duration cleanup program activities were conducted.

SERVICES PERFORMED

- Regulatory Enrollment – Enrolled the site into the TCEQ Leaking Petroleum Storage Tank (LPST) program to establish the appropriate regulatory pathway for closure.
- Site Assessment – Investigate various portions of the site and surrounding properties which included the off-site Superfund site, nearby industrial properties, as well as on-site automotive repair operations and automotive fuel operations. Collection of various soil & groundwater samples to confirm/deny the presence of chemicals of concern (COCs) for comparison with the applicable regulatory limits
- Remediation Design & Implementation – Applied a combination of remedial technologies including:
 - In-situ chemical oxidation (persulfate injection) to break down contaminants in subsurface soil and groundwater
 - Mobile Dual Phase Extraction (MDPE) to remove both impacted groundwater and soil vapor from the subsurface
 - Excavation, dig & haul of highly impacted soils for proper off-site disposal and/or recycling (YES, you can recycle some types of waste which can be cheaper than disposal)
 - Old fuel system deconstruction – oversight of dismantling/removal of the above ground storage tank (AST) system
 - New fuel system installation – oversight and permitting of the newly installed AST system
 - Insurance / Client Risk Management – Coordinated with the client's pollution insurance policy while managing project costs and regulatory obligations
 - Technical Hydrogeological Assessment & Determining Response Action Effectiveness – Developed and presented a highly technical demonstration of site hydrogeology and recoverable NAPL to regulators, overcoming closure obstacles

LOCATION

- Pearland, Texas