

RegenesiS Remediation Services™ – PersulfOx® Treats Petroleum Hydrocarbons

In Situ Chemical Oxidation and Enhanced Aerobic Biodegradation Remediate Underground Storage Tank Site



Fowler, Indiana

RegenesiS Remediation Services (RRS) was contracted to design and implement an in situ chemical oxidation (ISCO) treatment plan to remediate a diesel gas plume from a former leaking underground storage tank (UST) on a residential farm property. The defined treatment area comprised approximately 5,280 square feet (ft²), and the treatment of the gas plume included three application events using PersulfOx®, with the final application immediately followed by an application with Oxygen Release Compound Advanced (ORC® Advanced). A total of 5,840.6 pounds of PersulfOx and 2,589 pounds of ORC Advanced were injected during the course of the project.

Utilizing PersulfOx remediation chemistry to distribute throughout the subsurface, 91 direct-push injection technology (DPT) injection points were advanced every 100 ft² over the course of three application events. ORC-A was applied in 53 discrete DPT injection points approximately every 100 ft². RRS utilized both expendable points and retractable screen-tip injection tooling to apply the PersulfOx and ORC Advanced at discrete intervals across the vertical treatment interval from 8 to 12 feet and 8 to 16 feet below ground surface (bgs) within the sandy saturated soils. Low pressures and moderate application rates were utilized to apply the remediation chemistry at up to four (4) injection point locations simultaneously. RRS personnel performed real-time reagent distribution diagnostics to optimize the distribution of the material.

Remediation Details:

Site Type: Residential, Underground Storage Tank Site

Remediation Approaches: In Situ Chemical Oxidation, Enhanced Aerobic Biodegradation

Technologies: PersulfOx, ORC-Advanced

Geology: Sand, Silt

Medium: Groundwater, Saturated Soil

COCs: Petro Hydrocarbons

Surficial Treatment: 5,280 ft²

Treatment Interval: 8-12 ft. and 8-16 ft. bgs

Cubic Yards Treated: 1,170

Cost Per Cubic Yard: \$64 applied

About RRS:

RegenesiS Remediation Services (RRS) is a dedicated team of scientists and engineers whose primary function is to provide environmental engineering and consulting firms with specialized groundwater and soil remediation planning, design, verification and application services.

This uniquely qualified group of remediation professionals combine excellence in field activity management and RegenesiS' class-leading technologies to bring sites to closure. RRS draws from REGENESIS' 19+ years of experience working with hundreds of leading environmental engineering firms on thousands of remediation projects around the world.