REGENESIS

PROJECT PROFILE

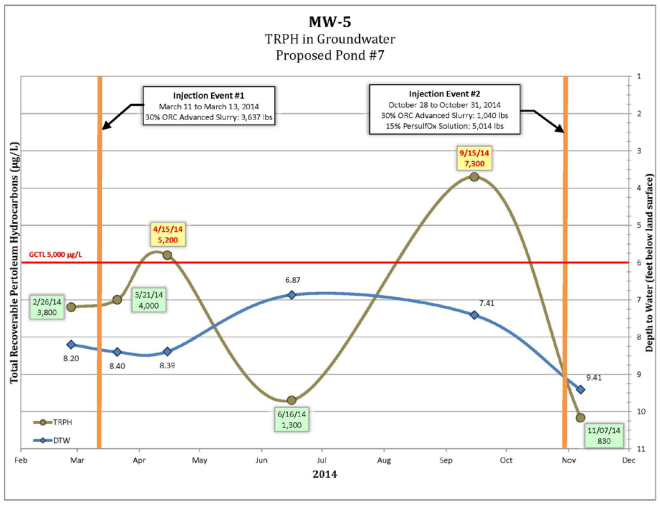
High TPH Concentrations Treated Using PersulfOx® and ORC® Advanced

Future Site of Stormwater Retention Ponds Remediated with ISCO, Enhanced Aerobic Biodegradation

Project Highlights

- Initial treatment with aerobic bioremediation effectively removed 60% of site contamination.
- PersulfOx® and ORC® Advanced were used to treat two remaining hot spot areas.
- Site closure is pending additional groundwater monitoring.
- Contamination concentrations must be reduced to meet stringent groundwater quality standards.

Groundwater Contaminant Concentration Trends



Project Summary

This site is a former commercial facility in the Southeast with high TRPH contaminant impacts to soils and groundwater. The property is currently vacant and the state department of transportation plans to create a stormwater retention pond on site. However, contaminant concentrations in groundwater need to be reduced to meet stringent groundwater quality standards before any construction can begin.

The plume was first treated via enhanced aerobic bioremediation with ORC Advanced, which effectively removed over 60% of the dissolved-phase contamination within 18 months. In two hot spot areas, residual contamination in the smear zone continued to cause impacts to groundwater. A follow-up treatment combining in situ chemical oxidation and enhacned aerobic bioremediation was employed. PersulfOx and ORC Advanced were used to bring this site towards closure by effectively treating these two hot spot areas. Initial sampling results 30 days after treatment showed attainment of groundwater quality standards.

Site Type: Commercial

Contaminant of Concern: Petroleum Hydrocarbons

Concentration: Isopropylbenzene – 22.6 ug/L, Petroleum Hydrocarbons – 236,000 ug/L

Remediation Approach: Enhanced Aerobic Remediation, In Situ Chemical Oxidation

Soil Type: Sand

Technology Used: ORC Advanced, PersulfOx

Remediation Approach

ORC Advanced was injected over 60 direct-push locations across two plume areas. A year and a half post-application, two remaining hot spot areas with residual capillary fringe contamination had caused continued issues. PersulfOx and ORC Advanced were used to bring this site towards closure by effectively treating these two hot spot areas.

Technology Description

ORC Advanced is a proprietary formulation of food-grade, calcium oxy-hydroxide that produces a controlled-release of molecular oxygen for periods of up to 12 months upon hydration.

PersulfOx is a sodium persulfate-based chemical oxidation technology which destroys both hydrocarbon and chlorinated solvent-type contaminants in the subsurface. PersulfOx contains a built-in catalyst which activates the persulfate component and generates contaminant-destroying free radicals without the need for the addition of a separate activator.