

# Successful Performance-Based Remediation Program at DOD Facility

Former Air National Guard Base in Ohio Treated for High TCE Levels

## Project Highlights

- Highly technical design included three different remediation approaches requiring 105 injection points
- 87,000 lbs of PersulfOx successfully applied while not impeding operations at active military site
- Treatment area included injections through an 18-inch-thick concrete tarmac
- State-of-the-art mixing and application equipment allowed for optimal reagent injection in sub-zero temperatures

## Project Summary

REGENESIS Remediation Services (RRS) partnered with an environmental consulting firm on a performance-based contract for a Department of Defense site remediation project in Ohio. A TCE plume was detected below the Air National Guard base with concentrations as high as 14,000 ppb. REGENESIS designed the remediation program and performed turn-key application services, including on-site treatment of excavated soils, *in situ* chemical oxidation through galleries within the subsurface, and injection points across the 16,000-square-foot plume. All operations were accomplished within an active military installation and included injecting through an 18-inch-thick tarmac into a sandy aquifer.

Injections took place during the winter months in below freezing conditions. RRS used heaters around the water supply and utilized their heated trailers to prevent the product and water from freezing. Over the course of two injection events, over 80,000 pounds of PersulfOx<sup>®</sup> Catalyzed Persulfate was applied to the contaminated area. Three application areas called for different remediation approaches with three horizontal injection galleries below a former excavation, nine injection wells down 27 feet below ground surface and a grid of 105 injection points around a hot spot source area. An additional 7,000 pounds of PersulfOx was applied to the bottom of the excavation site to treat the impacted soil. Application monitoring data collected throughout the field work documented the area of influence impacted by each application point.

## Technology Description

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.

## Results

Employing a highly technical remediation strategy, RRS successfully applied PersulfOx to three different areas using targeted remediation approaches resulting in performance-based remediation goals sequentially being met and ensuring a high level of client satisfaction.



## Site Details

Site Type: Department of Defense

Contaminant of Concern: TCE

Concentration: 14,000 ppb

Remediation Approach: *In Situ* Chemical Oxidation (ISCO)

Soil Type: Sand

Treatment Area: 16,000 sq. ft.

Technology Used: **PERSULF** 



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