

REGENESIS® Achieves MCL Cleanup Goals at New York Manufacturing Facility

cVOC Contamination Successfully Treated Using PersulfOx® and 3-D Microemulsion®

Project Highlights

- 99% reduction of target compounds achieved on-site
- TCE levels reduced from 8,000 ug/L to <5 ug/L to meet site goals
- Integrated remediation approach using PersulfOx® and 3-D Microemulsion® (3DME)

Project Summary

A manufacturing facility in New York was contaminated with high levels of chlorinated solvents. TCE levels were as high as 8,000 ug/L. A combined remedies approach was established to address the migrating plume. The goal of the application design was to reduce cVOCs in the source area, reduce potential for vapor intrusion and address any cVOCs that may migrate into the area downgradient of the manufacturing facility.

An integrated remediation strategy using PersulfOx and 3DME was implemented on-site. Two PersulfOx applications were completed. Results from the *In Situ* Chemical Oxidation (ISCO) treated area showed >99% reduction of target compounds. A total of 11,600 pounds of PersulfOx was applied on-site. 3DME was applied to enhance anaerobic biodegradation in downgradient locations and within the PersulfOx-treated area. A total of 8,400 pounds of 3DME was applied. While groundwater contamination in the ISCO treated area was reduced to clean-up standards, the goal of the 3DME application was strictly preventative. The client wished to address any potential plume migration from any cVOCs that may be present beneath the building.

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.

3-D Microemulsion is an engineered electron donor material that offers a novel 3-stage electron donor release profile, pH neutral chemistry and is delivered on-site as a factory-emulsified product.

Results

The use of PersulfOx safely and effectively reduced TCE levels to regulatory standards providing a 99% reduction of cVOC's achieved on-site. In addition, the integration of 3DME as a precautionary safety measure addressed the potential for plume migration that was thought to be present.



Site Details

Site Type: Industrial

Contaminant of Concern: TCE

Concentration: TCE -8,000 ug/L

Remediation Approach: *In Situ* Chemical Oxidation (ISCO), Enhanced Anaerobic Biodegradation

Soil Type: Silty Sand

Treatment Area: 10,000 sq. ft.

Technology Used: PERSULF Ox

3-D MICROEMULSION



1011 Calle Sombra San Clemente, CA 92673
T: (949) 366-8000 | www.regenesis.com