



PROJECT HIGHLIGHT

IN SITU CHEMICAL OXIDATION PILOT STUDY FOR CONTAMINATION REDUCTION

LOCATION: OLD BRIDGE, NJ

PROJECT: OXIDATION/REDUCTION

CONTAMINATION: 1,4 DIOXANE, PFAS, VOC'S

PROJECT DURATION: 1 MONTH

PROJECT VALUE: \$400,000

PROJECT OVERVIEW

When BASF faced a complex contamination issue in Old Bridge, NJ – a plume containing 1,4-Dioxane, PFAS, and VOCs – they needed an experienced partner for in situ chemical oxidation/stabilization (ISCO/ISS). Leveraging our expertise in ISCO and ISS, and our cost-effective approach, we designed and implemented an ISCO pilot study to evaluate different chemical treatments for full-scale remediation. For this pilot, we treated approximately 350 cubic yards of soil using in situ bucket mixing, incorporating hydrated lime, sodium persulfate, and Portland cement. Our team utilized an excavator and skeleton bucket to reach depths from 6 to 14 feet below grade. Our objective was to pinpoint the optimal treatment strategy to minimize contaminant levels across the entire plume and inform a larger, more comprehensive remediation effort.



RESULTS

Despite a tight schedule and the potential for weather disruptions during the rainy season, crews successfully completed the project on time and under budget, with an outstanding safety record of zero incidents and approximately 1,500 safe working hours. Our team's success stemmed from exhaustive planning of field activities, constant communication with the field team and BASF, and meticulous schedule execution. To ensure accurate amendment dosage, we developed multiple planning and execution methods and worked closely with our vendors to guarantee proper packaging and timely delivery of chemical amendments. While the pilot study's long-term effectiveness is still under evaluation through ongoing sampling and analysis by BASF, the project's flawless execution provides a strong foundation for potential full-scale application.

