

## RegenesiS Remediation Services™ – TCE Impacted Soil Treated with RegenOx®

Soil Mixing Using In Situ Chemical Oxidation Reduces Contamination Concentrations at Former Manufacturing Facility



*Columbus, Ohio*

RegenesiS Remediation Services (RRS) was asked to design and implement a pilot test as well as a full scale design for a soil mixing project using in situ chemical oxidation (ISCO) technology. The specific goal of the remediation plan was to reduce trichloroethylene (TCE) levels to less than .5 ppm, to meet standards for off-site removal as non-hazardous waste. The design included the use of RegenOx® Part A and B as an oxidant in a pug mill system. The TCE at this former manufacturing facility was present from two (2) feet below ground surface (bgs) down to eleven feet bgs in certain areas. A total of 27,950 pounds of RegenOx Part A and 7,260 lbs of RegenOx Part B were applied over 39 discrete treatment cells during the course of the remediation project.

Using an excavator, the top two feet of soil was removed and stored separately, after which the contaminated soil could be excavated and treated with RegenOx Part A and B in a pug mill system. Using RegenOx as an oxidizer, TCE on site was remediated using oxidation to dechlorinate TCE to dichloroethene (DCE), vinyl chloride (VC), and finally to ethene, a benign end product. Two years later, soil samples came back clean and the soil could be trucked off site as non-hazardous waste.

### Remediation Details:

**Site Type:** Former 3M Site, Manufacturing

**Remediation Approaches:** In Situ Chemical Oxidation

**Technologies:** RegenOx

**Geology:** Sand, Silt, Clay

**Medium:** Saturated Soil, Vadose Soil

**COCs:** Chlorinated VOCs

**Surficial Treatment:** 12,202 ft<sup>2</sup>

**Treatment Interval:** 0-12 ft. bgs

**Cubic Yards Treated:** 2,165

**Cost Per Cubic Yard:** \$11.09 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.