

**RegenesiS Remediation Services™ – TCE Plume Treated at Kentucky Site**

Former Manufacturing Facility Remediated Through Use of 3-D® Microemulsion and BDI® Plus



*Louisville, Kentucky*

A real estate developer and their environmental consultant selected RRS to design and implement an in situ enhanced reductive dechlorination (ERD) remediation plan. The site had two groundwater plumes averaging 300 ug/L trichloroethene (TCE).

The remedy included the use of 3-D Microemulsion as the slow release electron donor and bioaugmentation using BDI Plus. The two TCE plumes at this former manufacturing facility covered an area of 58,000 square feet (ft<sup>2</sup>). A total of 26,000 pounds of 3-D Microemulsion and 22 liters of BDI Plus with over 10<sup>11</sup> cells DHC per liter were injected over a period of less than two week on site.

Taking advantage of 3-D Microemulsion's unique subsurface distribution characteristics through micellar movement, direct push technology (DPT) injection points were advanced every 480 ft<sup>2</sup>. RRS utilized screen point injection tooling to apply the pH neutral 3-D Microemulsion with BDI Plus at discreet two and four foot intervals across the injection zone down to 34 feet below ground surface. The RRS remediation trailer allowed for low pressure application of the remediation chemistry at two to three injection points simultaneously while monitoring flow rates and injection pressures at each application point.

**Remediation Details:**

**Site Type:** Former Manufacturing Facility

**Remediation Approaches:** Enhanced Anaerobic Bioremediation, Bioaugmentation

**Technologies:** 3-D Microemulsion, BDI Plus

**Geology:** Sand

**Medium:** Groundwater

**COCs:** Chlorinated VOCs

**Surficial Treatment:** 58,000 ft<sup>2</sup>

**Treatment Interval:** 24-34 ft. bgs

**Cubic Yards Treated:** 21,481

**Cost Per Cubic Yard:** \$7.40 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.