



## ISCO Treatment Program: Chlorinated Solvents

### Site

- Former Electronic Transformer Manufacturing Facility, Ocean County, New Jersey.

### Contaminants of Concern

- Trichloroethene (TCE)  
493 ppb
- Tetrachloroethene (PCE)  
212 ppb
- Chloroform (CF)  
25 ppb
- 1,1,1-Trichloroethane (1,1,1-TCA)  
33 ppb

### Geology/ Hydrology

- Sandy, silty, clay stratum from 3-18 feet bgs; overlying basalt bedrock.
- High permeability and groundwater velocity.

### ISCO Treatment Program

- Modified Fenton's Reagent (MFR).
- 1,400 sq. ft treatment area.
- Multiple injection events.
- Permanent injection wells.

### Results

- Site-wide total VOCs were reduced by >70% with chlorinated VOCs decreased from 793 ppb to 269 ppb.
- NJDEP issued **No Further Action** letter.

## ISOTEC Case Study No. 3

### ISCO TREATMENT PROGRAM: CHLORINATED SOLVENT IMPACTED GROUNDWATER

Former Electronic Transformer Manufacturing Facility  
Ocean County, New Jersey

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### INTRODUCTION

A former Electronic Transformer Manufacturing facility located in Ocean County, New Jersey was the site of continuous discharges of hazardous substances for over twenty-five years. Areas of environmental concern on site consisted of a former drum storage area, a dry well and septic systems. Groundwater was found to be contaminated with high concentrations of **chlorinated solvents**. ISOTEC was retained by the property owner to clean up high levels of **1,1,1-trichloroethane, trichloroethene (TCE), tetrachloroethene (PCE), and 1,1-dichloroethane** found in the groundwater beneath the site.

### GEOLOGY

Subsurface geology revealed the contaminant plume resided within a **sandy gravel layer**, with high permeability and groundwater velocity rates.

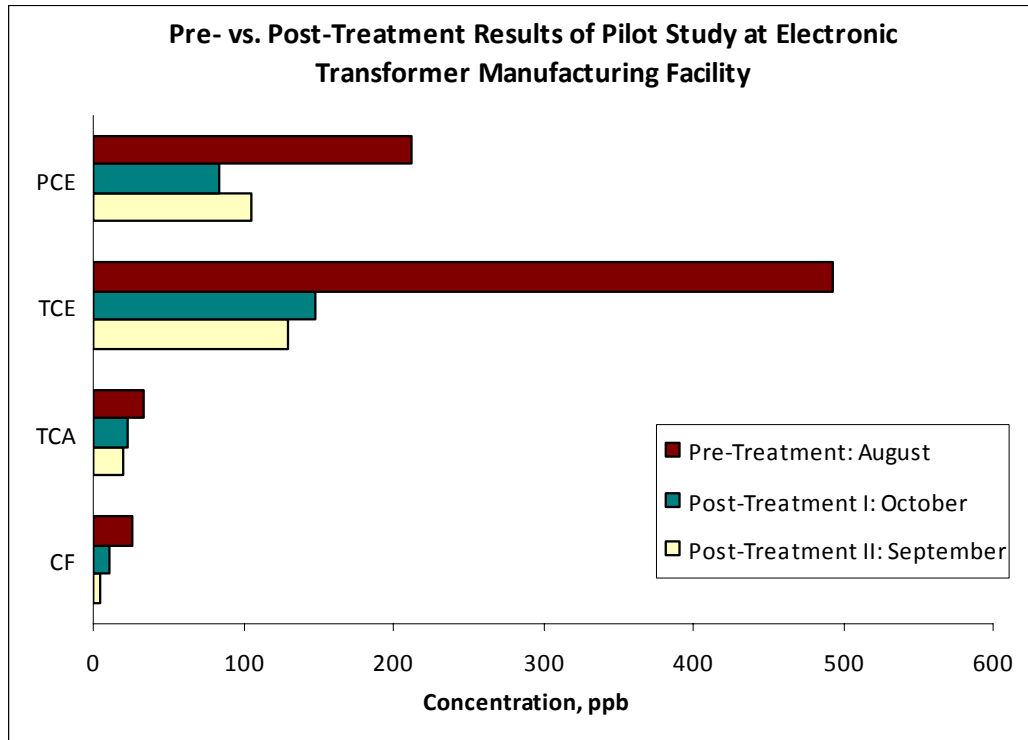
### ISCO PILOT PROGRAM AND IMPLEMENTATION

A **field pilot program** was designed to target the source area of contamination. **One year** post-treatment results indicated that ISOTEC maintained **over a 70% decrease** in total VOC concentrations in the groundwater contaminant plume. Concentrations of chlorinated VOCs decreased **from 793 ppb to 269 ppb** within the source area.

### CURRENT PROJECT STATUS

Based on the pilot program results and decrease of VOC contamination within the source area, the NJDEP case manager issued a **No Further Action/Classification Exemption Area** letter.

The case had been open since the late 1980s. ISOTEC's treatment program activities were completed over several days within a **two month period**, with case **closure achieved in fifteen months** from start to finish.



**NOTES:**

- (1) PCE = Tetrachloroethene; TCE = Trichloroethene; TCA = 1,1,1-Trichloroethane; and CF = Chloroform.
- (2) Post-I Sample is 4 weeks after second treatment application was completed.
- (3) Post-II Sample is 1 year after initial treatment application was completed.
- (4) ppb - parts per billion or micrograms per liter (ug/L).