



ISCO Pilot & Full Scale: BTEX & MTBE

Site

- Warehousing Facility, Union County, New Jersey.

Contaminants of Concern

- BTEX
28,161 ppb
- MTBE
7,240 ppb

Geology/ Hydrology

- Unconfined silty layer.

ISCO Treatment Program

- Modified Fenton's Reagent (MFR).
- 5,000 sq. ft area from 0-20 ft bgs.
- Pilot Program.
- Continued Treatment Program.
- Permanent Injection wells.

Results

- Each compound was treated to below it's NJDEP standard.
- A **No Further Action** letter was issued for the site.

ISOTEC Case Study No. 1

ISCO TREATMENT PROGRAM: BTEX & MTBE IMPACTED GROUNDWATER

Warehousing Facility
Union County, New Jersey

INTRODUCTION

The Warehousing facility located in Union County, New Jersey had areas of environmental concern including former gasoline, waste oil and fuel oil underground storage tanks. Groundwater was found to be contaminated with high concentrations of gasoline constituents. ISOTEC was retained by the property owner to remediate high levels of **Methyl tert-butyl ether (MTBE), benzene, toluene, and total xylenes** found in the groundwater beneath the site. The area treated was approximately 5,000 sq. ft from just below ground surface to 20 ft bgs.

ISCO TREATMENT PROGRAM AND IMPLEMENTATION

The field pilot program was initially conducted with results indicating **over a 98% decrease** in total targeted VOC concentrations in the groundwater contaminant plume. ISOTEC's treatment during the field pilot program resulted in decreasing total site wide groundwater contaminant concentrations from **62,222 ppb down to 1,028 ppb** approximately **four months after treatment**.

After the initial treatment application, contaminant levels were noted at the site to be **below regulatory requirements** in the groundwater plume at all monitoring points except one. All contaminants were effectively destroyed except benzene and total xylenes at the hottest source area within the plume (NJDEP regulatory level for benzene is 1.0 ppb, total xylenes 40 ppb, ISOTEC levels achieved during the pilot were 6.85 ppb and 115 ppb, respectively).

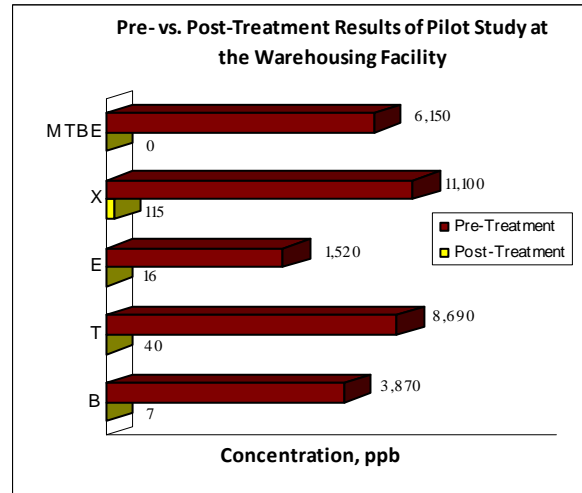
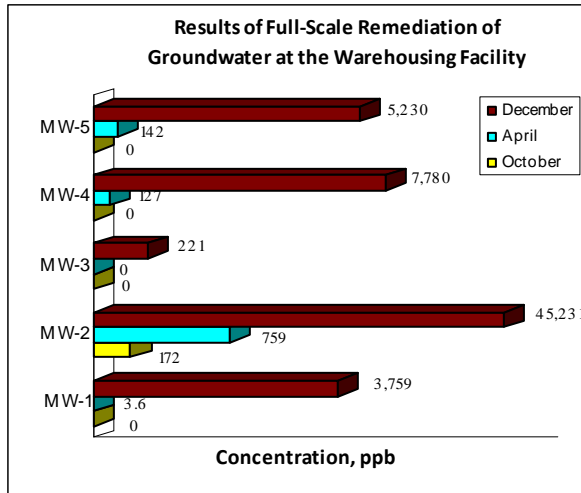
ISOTEC received approval for a continued treatment program. One additional treatment was applied six months after the pilot program, with post-treatment samples collected approximately four months later, which indicated that all COC's were treated to below regulatory levels.

CURRENT PROJECT STATUS

The NJDEP case manager issued a **No Further Action** letter with no restrictions. ISOTEC's treatment program activities were



completed over several days within a **six month period**, with the **case closed in under a year** from start to finish. Total cost of the ISOTEC treatment program was **under \$100,000.00**.



NOTES:

- (1) B = Benzene; T= Toluene; E= Ethylbenzene; X = total Xylenes; MTBE = Methyl t-butyl ether.
- (2) NJDEP GWQ criteria: B = 1 ppb; T = 1,000 ppb; E = 700 ppb; X = 40 ppb; MTBE = 70 ppb.