



SHOPPING CENTER/FORMER DRY CLEANING FACILITY

Montgomery County, TX

Contaminants:

PCE and daughter products

Treatment:

ISCO injections using iron activated sodium persulfate

Site Status:

NFA

- This site consisted of a small shopping center containing a former dry cleaner that experienced a release of PCE and breakdown products.
- Depth to water ranged from 20-30 ft-bgs and the lithology consisted of a tight clay aquitard overlying a sandy/sandy silt water bearing zone.
- Maximum VOC concentrations were in excess of 1,000ppb and PCE degradation products suggested previous biologically mediated reductive dechlorination. Treatment goals included reduction of PCE to below protective concentration limits (PCLs) established by the Texas risk reduction program.
- After reviewing the site geochemistry, an in-situ chemical oxidation (ISCO) treatment was designed utilizing sodium persulfate combined with a slow release iron activator. Three injection treatments were performed in the source area/entire plume utilizing a 15-20% solution of activated persulfate with delivery into 1" PVC injection wells.
- Persulfate quantities injected ranged from 11,000-16,000 pounds. During injection, geochemical parameters (primarily pH and conductivity) were measured indicating that the oxidant was successfully delivered to the target zones.
- Confirmatory sampling indicated results were below PCLs for respective compounds (see graph below). A No Further Action was later received, allowing redevelopment of the property.

VOC CONCENTRATIONS VS. TIME- KEY WELL

