



ACTIVE GASOLINE STATION

STATION

Hillsborough County, FL

Contaminants:
BTEX and naphthalene

Treatment:
ISCO injections using alkaline activated sodium persulfate and Klozur CR®

Site Status:
NFA pending monitoring

- This site is an active gasoline station in Florida with dissolved BTEX (primarily benzene) and naphthalene in the groundwater detected above 7,000 µg/L. The goal of the treatments was to reduce contaminant levels to state target levels (Natural Attenuation Default Concentrations- NADCs). Soils at the site consisted of clay rich sands followed by fine sands with the water table at 5-10 feet.
- Based on a review of site contaminants and conditions, Eden personnel designed an ISCO approach as a low cost alternative to air sparging/soil vapor extraction. Due to the close proximity of the active UST system and low treatment thresholds, a two-stage treatment process was designed using alkaline activated sodium persulfate followed by injection of Klozur CR® to allow for additional chemical oxidation and aerobic bioremediation.
- Approximately 2,000 pounds of persulfate was injected into 10 delivery points surrounding key well MW-2. 3 months following, 1,800 pounds of Klozur CR® was injected into 10 offset delivery points. Results indicated a significant reduction in dissolved BTEX, total petroleum hydrocarbons, and naphthalene. Following treatment, the only constituent exceeding NADCs was naphthalene, with a concentration of 160 ug/L, slightly above the NADC of 140 ug/L (see graph).

- Sampling results showed a sustained release of oxygen over a year following injection, which aided biodegradation (see graph below). A NFA is pending further monitoring and review.

