

ACTIVE GASOLINE STATION

Hillsborough County, FL

Contaminants: BTEX and naphthalene

Treatment:

ISCO injections using alkaline activated sodium persulfate and Klozur CR®

Site Status:

NFA pending monitoring

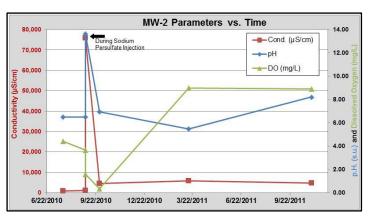
This site is an active gasoline station in Florida with dissolved BTEX (primarily benzene) and naphthalene in the groundwater detected above 7,000 $\mu g/L$. The goal of the treatments was to reduce contaminant levels to state target levels (Natural Attenuation Default Concentrations- NADCs). Soils at 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).

Sodum Persultate Injection | ### Sodum Persultate | ### Sodum P

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.



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