

Exo Tech performed a treatability study followed by a source area ISCO treatment at an active UST site located at a marina in the Savannah, Georgia area. The site is situated in the coastal plain province immediately adjacent to the Ogeechee River with an approximate depth to groundwater of 5-7 feet with tidal influences. A gasoline/petroleum release was discovered during corrective action plan development around the UST system. Due to the close proximity of the active tank system and high salinity of groundwater (10,000+µS), Exo Tech recommended performing a treatability study to identify a non-corrosive oxidant blend suitable for this environment. The location of the site required site treatment at or near In-Stream Water Quality Standards (ISWQS).

The treatability study evaluated the use of catalyzed hydrogen peroxide (CHP) using a higher pH buffered catalyst/chelator along with alkaline activated sodium persulfate. The results indicated sufficient reduction using both oxidant mixtures; however, in order to meet the stringent treatment goals, Klozur-CR (a proprietary blend of sodium persulfate and calcium peroxide) was selected. This product offers a “treatment train” approach, combining chemical oxidation and aerobic biostimulation through a follow-up release of oxygen.

The ISCO injection was performed into -21- injection points using 180 pounds of Klozur-CR per point. Prior to injection, BTEX was detected in excess of 44,000 µg/L, with benzene detected as high as 3,280 µg/L. Post injection results showed significant reduction in dissolved benzene/total BTEX, as shown in graphs for MW-3 and MW-4, located 10 feet from the river. The total cost of this project was <\$33,000. A No Further Action was received from the Georgia EPD in November 2010, **with site closure achieved after only one injection.**

