



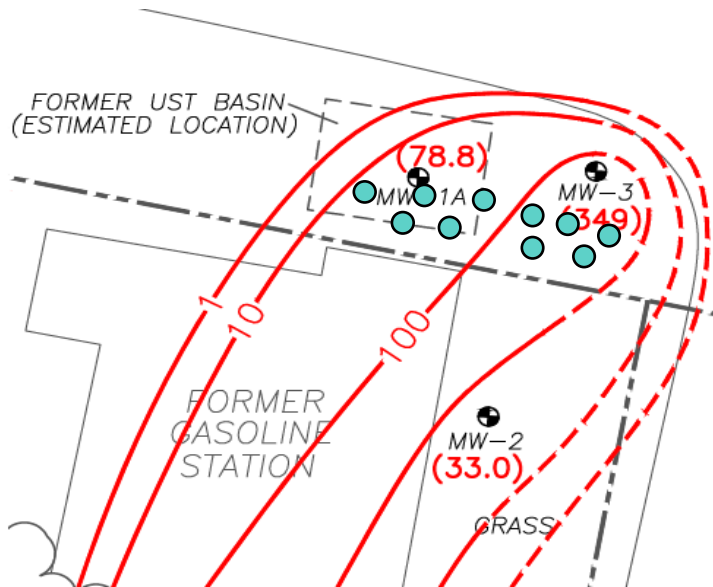
CASE SUMMARY: PETROLEUM CONSTITUENTS AT UST SITE IN DURHAM COUNTY, NC

Overview: RemRxTM CRP Persulfate was deployed at a former UST site in Durham County, NC in June 2020. The UST was abandoned in 1970 and release of petroleum constituents was identified in 1990. A Phase I Limited Site Assessment was completed in April 2011. Fifteen water supply wells were identified within 1,000 feet of the site and a surface water body was found approximately 500 feet from the site. In 2012, 944 tons of impacted soil were excavated and disposed. Contaminant plume geometry indicates migration in the back part of property is to the southwest, and front part of the property is to the north. Petroleum constituents detected above NC 2L Groundwater Quality Standards include BTEX, naphthalene, EDB, 1,2-DCA, 1,2,3-trichloropropane, and vinyl chloride. Previous remediation efforts included oxygen release socks and aggressive fluid vapor recovery (AFVR). As a result of these efforts, contaminant levels are decreasing; RemRxTM CRP Persulfate was selected as a polishing step to treat lingering contaminant tailings.

Figure 1. Proposed placement of borings (teal) and wells (purple). Red lines indicate dissolved benzene concentrations.

Approach: Initial deployment of RemRxTM CRP Persulfate targeted the front portion of the property. Due to proximity to the road, borings were used for amendment placement instead of constructed wells. Six inch diameter borings were air drilled to depths ranging from 23-30 ft, about 15 ft below the water table. Once the desired depth was reached, the drill was retracted and a mixture of fast release persulfate and slow release RemRxTM CRP pellets were alternated with the persulfate activator to backfill the void space. The borings were sealed with bentonite followed by Portland cement grout. A total of 10 soil borings were advanced. Each boring was filled with ~80 lbs of RemRxTM CRP Persulfate, ~60 lbs of fast release persulfate, and activator. A future deployment is planned to place RemRxTM CRP-packed canisters into nine 4 inch treatment wells that were placed in the rear of the property.

Figure 2. Backfilling of the borings with RemRxTM CRP Persulfate pellets. Borings were loaded with persulfate (to overcome SOD), pellets, and persulfate activator.



RemRxTM manufactures innovative solutions to solve widespread environmental issues.

RemRxTM CRP based treatments utilize a range of oxidants and can be used to remediate chlorinated solvents, petroleum products, and numerous other industrial contaminants.

RemRxTM is actively partnering with innovative remediation site managers in pilot and test site deployments. Contact us!

RemRxTMCRP is the patented system of **Controlled Release Pellets** that provide a time-released, prescriptive oxidant dosage that **sustains** delivery into the subsurface with only a single deployment. This extended release provides a constant feed of oxidant to combat natural oxidant demand and back diffusion, in order to mitigate rebounding and tailing issues that are common to traditional ISCO treatment methods. Ultimately, this means increased efficiency and decreased total project costs.