An environmental subsurface investigation and remediation company

In-Situ Chemical Oxidation Event

Former Gas Station Site-Conyers, Georgia

Introduction: Geo Lab was contracted by a local environmental consulting firm to conduct an in-situ chemical oxidation event utilizing activated sodium persulfate to treat ground water at a former gas station site in Conyers, GA. The objective of the injection event was to achieve contaminant concentrations below closure levels.

Contaminants: Benzene, Tolulene, Ethylbezene, and Xylenes

Remediation Treatment: Klozure Persulfate activated with Fe-EDTA Iron

Application: In-situ injection

Design and Implementation: Geo Lab arrived on site with it's Chem-ox ready injection trailer and a Geoprobe 6620 track rig. The injection event was conducted over the course of nine days. Approximately 7700 gallons of activated persulfate at 20% solution was distributed among 10 wells that were previously installed on site. Additionally, to fill any gaps, Geo Lab provided a Geoprobe 6620 track rig for six additional direct push injection points that received approximately 230 gallons each of 20% persulfate solution. Two inch steel rods with a Geoprobe ported injection tip was advanced to a target depth of 25 feet below ground surface where the persulfate was injected in increments up to 14 feet below ground surface. Injection pressures were kept at a minimum to reduce the possibility of day-lighting and the creation of preferential pathways in the subsurface. Due to subsurface conditions and soil properties, injection volumes of the persulfate solution varied from well to well, and from DPT point to DPT point.

Summary

Geo Lab successfully injected 7700 gallons of activated sodium persulfate solution into 10 previously installed remediation wells. A Geoprobe 6620 was also utilized to drive additional DPT injection points to fill in any gaps between the wells. Minimal day-lighting and surfacing was observed during the course of the injections, and the project was completed on time and within budget.

Project Summary

ISCO Pilot Event

Site

Former Gas Station

Conyers, GA

Contaminants of Concern

- Benzene
- Tolulene
- Ethylbenzene
- Xylenes

Remediation Approach

- In-Situ injection of Klozure Persulfate activated with FE-EDTA Iron

Summary

- 7700 gallons of activated sodium persulfate was successfully injected among 10 remediation wells and Six DPT points

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