

AZ Superfund Site Uses ISCO to Replace Recirculation Wells Leading to Cost Savings of \$100,000

Project Highlights

- 95% reduction of BTEX, MTBE and TMBs reported on-site
- Total savings estimated to be \$100,000
- *In Situ* Chemical Oxidation (ISCO) combined remedy design incorporates PersulfOx® to effectively address reduction in contaminants

Project Summary

A former industrial paint facility in Tempe, Arizona was contaminated with high levels of gasoline in the groundwater. Ongoing active remediation using Accelerated Remediation Technology (ART) was applied to treat high levels of BTEX, MTBE and TMB. However, this remediation approach was unsuccessful in reducing contaminants to cleanup target levels due to the limited radius of influence produced by the recirculation well system. REGENESIS was approached to design an ISCO plan using the existing treatment well infrastructure.

Remediation Approach

REGENESIS injected 10,028 pounds of PersulfOx at a 12% solution in two applications. As a result, a 95% reduction of BTEX, MTBE, and TMBs was reported post-application. The overall PersulfOx ISCO injection treatment totaled \$40,000 – a small fraction of the previously deployed ART system cost and equal to four months of the ART system's operational expense.

REGENESIS Solutions Applied

PersulfOx is a sodium persulfate-based chemical oxidation technology which destroys both hydrocarbon and chlorinated solvent-type contaminants in the subsurface. PersulfOx contains a built-in catalyst which activates the persulfate component and generates contaminant-destroying free radicals without the need for the addition of a separate activator.

Results

The REGENESIS ISCO plan using PersulfOx contributed to the 95% reduction in BTEX, MTBE, and TMBs while providing significant cost savings to the client in the remediation of this Arizona Superfund site. Use of a combined remedy approach offers clients viable options for achieving cleanup target levels and compressed time to closure.



Site Details

Site Type: Industrial Paint Facility

Contaminant of Concern: BTEX, MTBE, TMB, Napthalene

Concentration:

B - 23,000ug/L
T - 17,000ug/L
E - 2,100ug/L
X - 9,500ug/L
MTBE - 2,800ug/L
TMB - 1,500ug/L
Napthalene - 500ug/L

Remediation Approach: *In Situ* Chemical Oxidation (ISCO)

Soil Type: Sand, Silt

Technology Used: **PERSULF** 



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