

## Corrective Action LUST Site Remediation Case Study: Surfactant Enhanced Remediation of BTEX, PAH, and Diesel Free Product Recovery, UST Soil and Groundwater Plume, Monee, Illinois USA

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This paper presents the results of a 2008 to 2009 case study involving in-situ surfactant enhanced remediation of a large underground storage area (UST) at an active Truck Stop in Monee, Illinois, USA. The case study details the application (injection) and extraction (vacuum truck) methods used to enhance the contaminant mass recovery of both sorbed and free phase BTEX and PAHs from the subsurface UST area to achieve site closure in accordance with the Illinois LUST regulation. The presentation also included graphical data, mass recovery calculations, and photographic evidence of the pre and post site conditions.

The site was located within a commercial and agricultural land use area where an undetermined spill event resulted in free phase (LNAPL) hydrocarbon impacts within the subject UST area. The impacts were comprised of free product (4 to 6 inches) and sorbed LNAPL and BTEX. The petroleum underground storage tank (UST) system consists of two (2) 20,000-gallon USTs, located in the same tank basin on the east portion of the property. A newly installed 20,000-gallon bio-diesel UST is located in a separate tank basin, north of the petro-diesel USTs. There were two petro-diesel basin observation wells (ON, OS), and two bio-diesel basin observation wells (NW, SW).

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George (Bud) Ivey is the President and Senior Remediation Specialist with Ivey International Inc. based in Vancouver, Canada. He has over twenty years of environmental remediation experience, and has worked on more than 1200 projects internationally. His background includes: Organic Chemistry, Geological Engineering, and a Master's Certification in Project Management. Among some of his more recent accomplishments include his being awarded:

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