Assessment, Investigation, and Remediation Services

Statewide, Texas

Client

Texas Commission on Environmental Quality

Highlights

- Superfund site remedial investigation
- Brownfields site assessments
- Chlorinated solvents
- Heavy metals
- TRIAD-based characterization
- Innovative technology

DBS&A has been a prime contractor under the Texas Commission on Environmental Quality (TCEQ) Assessment, Investigation and Remediation Services (AIRS) contract since 2009. The most current contract, signed in 2013, extends the period of performance through 2017 and has a maximum value of $13 million. Representative projects include the following:

Brownfields Site Assessment

As part of the redevelopment of the 12-acre Plaza Saltillo Railyard Property Site in Austin, Texas, the commuter rail line that transects the property is being realigned. Under the TCEQ Brownfields program, DBS&A conducted a site assessment to delineate the extent of metal-impacted soils along the proposed railway realignment area that exceed the TCEQ's Texas Risk Reduction Program residential Tier 1 protective concentration levels to assess worker exposure. DBS&A also assessed groundwater of the shallow underyling unit to determine if it was affected by past site use.

Geoprobe investigation along track

For the soil assessment, DBS&A developed a 30-foot-grid cell-sampling pattern across the proposed railway area and analyzed approximately 200 in situ surface soil samples in the field with a portable X-ray Fluoresence (XRF) device. DBS&A used XRF surface soil results to determine Geoprobe sample collection points and assess metal concentrations with depth.

DBS&A relayed GPS data, XRF operation settings and sampling data, XRF QA/QC procedures, and safety information collected during our assessment to the U.S. Environmental Protection Agency subcontractor to collect comparable data and assess surface soils outside of the railway realignment. DBS&A also met with the Brownfields applicant on-site to confirm sample locations along the active railway and to ensure that utility corridors were avoided.

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Removal Action Support

On-site analysis of metals with XRF

As part of a team made up of TCEQ staff and another TCEQ contractor, DBS&A conducted a Pilot Study and an Expanded Assessment at 243 properties in the Dona Park neighborhood in Corpus Christi, Texas, where lead, cadmium, and zinc were chemicals of concern (COCs) in the soils. Removal confirmation sampling was also conducted at the five yards requiring soil removal. During the Pilot Study, DBS&A utilized in-situ and ex-situ field X-Ray Fluorescence (XRF) measurements to determine the representative concentrations of COCs in a yard. Another TCEQ contractor was responsible for the collection and laboratory analysis of 20-part composite samples. Based on the results of the Pilot Study, DBS&A utilized ex-situ XRF and confirmation laboratory analysis on 10-part composite samples to determine the representative concentrations of COCs in the remaining yards of the Expanded Assessment. DBS&A also conducted 10-part composite confirmation sampling using XRF and laboratory analysis during the removal action, prior to backfilling and yard-restoration activities. During the project, DBS&A set up two XRF analysis stations which allowed samples to be analyzed quickly and efficiently.

Remedial Investigation

Nested wells for
two transmissive zones

DBS&A is executing a remedial investigation (RI) at the North East 2nd Street Federal Superfund Site in Happy, Texas. The Site was added to the National Priorities List because of the presence of Carbon Tetrachloride, 1,2-Dibromoethane, and 1,2-Dichloroethane at concentrations above the Maximum Contaminant Level. For this Site, DBS&A prepared scoping and planning documents, including the conceptual site model, sampling and analysis plan, and data quality objectives. Field investigation activities include passive soil gas surveys to locate source area, installation and sampling of monitoring wells to characterize the two transmissive zones of the Ogallala aquifer, and soil borings to assess surface soil exposure pathways. DBS&A also sampled residential wells and collected geochemical and metals data from all wells for use on future remedy selection. DBS&A is in the process of evaluating the existing plume at the Site, the hydrology, and the shallow transmissive zone before proceeding with a recommendation for remedial action.

Remedial Investigation

DBS&A performed a RI at the Moss Lake Road Proposed State Superfund Site in Big Spring, Texas, after tetrachloroethylene was identified in public water supply wells and residential wells.

Investigation activities include: (1) sampling residential wells, (2) installing 45 passive soil gas (PSG) points, (3) installing and sampling six groundwater monitor wells, and (4) installing and sampling five soil vapor points based on the results of the PSG investigation. The use of the PSG technology enabled DBS&A to cost-effectively characterize the distribution of volatile organic compounds over large areas while simultaneously providing semi-qualitative data for use in locating future monitor wells and soil vapor sampling points. This optimized our well-installation activities and minimized the number of monitor wells required.