

SCOPE OF WORK
7th Street and Missouri Remedial Investigation
ASRAC Contract ADEQ16-118255

HIGH LEVEL SUMMARY:

Complete the investigation of releases of chlorinated solvents from the former Kino Drapery Cleaners facility by establishing the lateral extent of impacted groundwater, determining potential impacts to sensitive receptors from soil vapor in near surface soils; and summarizing the data in a Draft Remedial Investigation (RI) Report.

MAJOR DELIVERABLES

- Community Involvement Mailings
- Remedial Investigation Workplan per R18-16-406(B.2)
- Conceptual Site Model 3-Dimensional visualization
- Groundwater monitoring results (laboratory report)
- Soil vapor survey results (laboratory report)
- Weekly Risk Reports
- Draft Remedial Investigation Report

FIRM FIXED PRICE

\$455,000.00

MAJOR TASKS DESCRIPTION

Task 1: Project Planning and Support: Tetra Tech will provide the project management and technical staff necessary to meet the project requirements. Project management activities will include coordinating and scheduling, communicating with ADEQ, monitoring the project budget, managing contractual matters, preparing weekly risk reports (WRRs), preparing monthly status reports, and performing other administrative tasks required to successfully complete the project on time and within budget.

Task 2: RI Workplan: We will prepare a workplan to comply with the requirements of AAC R18-16-406 (B.2). The workplan will describe the work to be conducted, provide a schedule for the work, and include a quality assurance project plan (QAPP), health and safety plan (HASP), and sampling and analysis plan (SAP).

Task 3: Conceptual Site Model: The CSM will be updated with the visualization and analysis of key data (geological, hydrogeological, and chemical) in a 3-dimensional, spatially accurate format. 3DVA visualization will be used to evaluate data gaps and identify boring locations. It will be updated during the project to guide in continuing investigations.

Task 4: Access Assistance and Permitting: We will attend two meetings with private land owners and prepare figures denoting proposed boring locations. We will prepare applications and drawings to obtain permits for drilling and installing monitoring wells in the City of Phoenix right-of-way. Applications will be prepared for six locations: one down gradient, one cross gradient and one vertical extent boring/well near the former Kino Drapery facility. The other three applications will be for one step-out boring/well down gradient to the northeast, one step-out cross gradient boring/well to the northwest, and one step-out cross gradient to the north.

Task 5: Drilling and Well Installation: Four exploratory borings will be drilled to depths discussed below: one vertical extent boring in the COP right of way on the east side of the former Kino Drapery facility; one down gradient boring along Montebello Avenue; one cross gradient boring centrally located along 6th Street, north of Missouri Avenue; and one boring in the Cinema Park Village Shopping Center parking lot east/northeast of MW-8, near the area where the highest tetrachloroethene

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(PCE) concentrations have historically been measured. Boring locations may be modified based on the result of the CSM update and our field monitoring.

A total of 24 groundwater samples will be obtained during drilling of borings and tested in the field using a portable gas chromatograph for PCE, trichloroethylene (TCE), cis-1,2-dichloroethylene (DCE), trans-1,2-DCE, vinyl chloride, chlorobenzene, and dichlorobenzene. One correlation sample will be obtained for each boring and will be tested for VOCs using EPA 8260B. Four duplicate confirmation samples will be obtained and tested in a fixed base laboratory for VOCs.

The vertical extent boring will be drilled first and will be advanced to the depth where no VOCs are detected in groundwater samples analyzed in the field or to the maximum depth capable for the drilling rig used. The other three borings will be drilled to the same depth as the vertical extent boring. Our costs are based on two wells to 235 feet below ground surface (the depth of the SRP well inlet) and two wells to 200 feet bgs.

Three of the groundwater monitoring wells will be constructed using 4-inch diameter PVC casing, with screened intervals beginning at 10 to 20 feet above the current depth to water and extending to the total depth of the well. One of the wells will be completed as a nested well to allow for measurement of the vertical hydraulic conductivity. The nested well will be constructed with three 2-inch diameter PVC casings, with a shallow, intermediate and deep screened interval. The depth of the screened intervals will be based on our updated CSM and field monitoring data. The four new monitoring wells will be developed by surging and bailing within 48 hour following well completion.

Investigation derived wastes will include drill cuttings and well development water. Drill cuttings will be placed in 20 cubic yard roll off containers, sampled for characterization, and transported and disposed at a licensed solid waste facility. Well development water will be containerized in 55-gallon drums, profiled, and transported to a recycling facility. IDW has been assumed to be non-hazardous and non-Arizona Special Waste.

Task 6: Groundwater Sampling: We will conduct two groundwater sampling events, each including up to 17 monitoring/irrigation wells. Passive diffusion bags (PDBs) will be used to collect samples, to allow for depth specific sampling, and to minimize investigation derived wastes. One duplicate sample will be obtained for each 20 samples collected. Our sampling plan includes up to 25 samples per event. Samples will be analyzed for volatile organic compounds using EPA Method 8260B. Traffic control for lane closure will be required for the wells located in 7th Street and Missouri Avenue.

Task 7: Soil Gas Survey: Temporary vapor monitoring probes will be installed near properties identified as sensitive receptors to evaluate potential vapor intrusion exposure and along an irrigation pipe to evaluate a potential migration pathway. These areas will include the child care facilities north and south of the site and along the alignment of the SRP irrigation pipe on the west side of 7th Street, north of Missouri Avenue. Up to 25 vapor probes will be installed and sampled. Soil vapor samples will be from depths of 5 feet at the two day care facilities and from depths of 5 and 10 feet along the SRP irrigation line, and will be analyzed for VOCs using EPA Method TO-15.

Task 8: Community Involvement: Community involvement activities will include mailing up to 5,000 folded 11 by 17 inch notices with a return page to solicit community support and advertise formation of a Community Advisory Board (CAB), and attending one CAB meeting.

Task 9: Draft RI Report: A draft RI report summarizing the information required for the RI as listed in AAC R18-16-406 will be prepared following completion of tasks described above.