



PROPOSAL FOR ENVIRONMENTAL SERVICES

Subsurface Investigation and Assessment Reporting
ESA Project No. UPS2301

ESA CONSULTING, LLC (ESA) is pleased to present Upshur County (client) with this cost proposal for a Risk Based Assessment (RBA) at the Upshur County Road and Bridge Central Barn Facility located at 2255 US Highway 271 N in Gilmer (Upshur County), Texas. The RBA is required in response to a release identified during April 2022. The proposal includes the expansion of previous investigation activities and includes conducting a membrane interface probe (MIP) survey, installation of up to four monitoring wells to adequately delineate impacts to soil and groundwater, routine field activities including quarterly sampling of monitoring wells and semi-monthly recovery of phase separated hydrocarbons (PSH) (if present) for a up to one year, as well as the completion of an Assessment Report Form (Form TCEQ-00562) and associated regulatory requirements. The Assessment Report will include the following information:

Review of Site Information

- Regional Geology
- Land Use
- Source History

Performance of Receptor Survey

- Inventory of Water Wells within ½ mile of the site.
- Field Survey of site and a 500' radius for water wells, schools, hospitals, residences, basements, day care centers, nursing homes or businesses as well as surface water bodies, parks, recreational areas, wildlife sanctuaries, wetlands and agricultural areas.
- Documentation of any ordinances that prevent future installation of water supply wells on or in the vicinity of the site.
- Identification determination of depth of subsurface utilities and structures with the potential to serve as preferential migration pathways.

Conceptual Model Development

- Determination of COCs and concentrations in each affected environmental media (soil, water, vapor and surface water)
- Determine beneficial groundwater use category for the site.
- Vapor evaluation to verify that concentrations do not exceed 25% of lower explosive limit.
- If surface water is present within ¼ mile evaluate impact to surface water.
- Evaluation of nuisance conditions including PSH, explosive vapors, impact to food source vegetation.
- Periodic evaluation of existing data to establish current site conditions and plume stability.

The scope of work required to obtain the information outlined above will include the following:

- ESA will oversee and direct a Texas-licensed Water Well Driller in conducting a membrane

interface probe (MIP) subsurface investigation to evaluate the vertical and lateral extent of chemicals of concern (COC) in environmental media expanding on previous site investigation activities.

- ESA will oversee and direct a Texas-licensed Water Well Driller in the drilling and installation of no less than four groundwater monitor wells that will adequately delineate the contaminant plume as required by TCEQ.
- During drilling a Texas-licensed Professional Geoscientist will screen soil cores for petroleum hydrocarbons using a photo-ionization detector (PID) to determine the vertical extent of impacts to soil and will describe the soil core to characterize the geological characteristics of the shallow subsurface. Boreholes will be drilled to at least five feet below the deepest detected PID response or until groundwater is encountered.
- Two soil samples will be collected from each borehole, one from the zone exhibiting the highest PID response and one above the soil/groundwater interface; if the presence of VOCs is not indicated by the PID, the sample will be collected at the total depth of the borehole. Soil samples will be collected using EPA Method 5035 for benzene, toluene, ethylbenzene, and total xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA method 8260B, total petroleum hydrocarbons (TPH) by Texas Method 1005, and for polycyclic aromatic hydrocarbons (PAH) by EPA Method 8270 if TPH >nC12 is detected.
- Monitor wells will be installed to facilitate determination of groundwater gradient by triangulation and will be installed in such a manner that the screened interval intersects the top of the groundwater saturated zone. Additional wells may be necessary if subsurface conditions are complex and require more data points.
- The elevation of the top of each well casing will be determined relative to a permanent on-site datum to allow gauging of water levels and generation of a potentiometric map showing static groundwater elevations relative to the on-site datum.
- Groundwater samples will be collected for one year on a quarterly basis from each well using a dedicated Teflon™ bailer and decanted with minimal agitation to laboratory-provided sampling containers and stored on ice until delivery to a TCEQ approved, NELAC-certified laboratory for analyses of benzene, toluene, ethylbenzene, and total xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA method 8260B; for total petroleum hydrocarbons (TPH) by Texas Method 1005, and for polycyclic aromatic hydrocarbons (PAH) by EPA Method 8270 if TPH >nC12 is detected.
- Phase separated hydrocarbons (PSH) will be recovered from any monitoring wells, if necessary, on a semi-monthly basis as required by TCEQ. If warranted, a dedicated product recovery system can be installed to streamline PSH recovery requirements; cost of installation and operation and maintenance (O&M) of a PSH recovery system is not included in this cost proposal.

- Preparation and submittal of required quarterly groundwater monitoring reports as required by TCEQ for a period of one year.

DELIVERABLES

ESA will prepare and submit a completed Assessment Report Form documenting the completion of the scope of work as well as quarterly groundwater monitoring reports required by TCEQ. Reports will be delivered to the client on or before applicable regulatory deadlines for review prior to submittal to TCEQ.

FEES

ESA will provide these services for a time and materials fee not to exceed \$106,818 without written approval of the client. Client will be invoiced monthly with any incremental time and material charges incurred during the period.

TERMS AND CONDITIONS

Client agrees to provide ESA with access to the property for the purpose of implementing the scope of work.

If additional wells or samples, are required to complete delineation of impacted environmental media, and/or if off-site access is required to complete the scope of services or if additional investigation is required after agency review of the report findings ESA will provide client with a cost proposal for additional services required.

The client realizes that neither ESA nor subcontractors to ESA owe any fiduciary duty to the client. In no event shall ESA be liable for special, incidental or consequential damages. All services provided by ESA under this agreement will be performed in a manner consistent with that degree of care and skill ordinarily exercised by environmental professionals operating under similar circumstances. All reports and other work product are the property of ESA and the client. This agreement comprises the final and complete agreement between the client and ESA. It supersedes all prior or contemporaneous communications, representations, or agreements, whether oral or written, relating to the subject matter of this agreement. Execution of this agreement signifies that each party has read this agreement and is satisfied. Amendments to this agreement shall not be binding unless made in writing and signed by both ESA and the client.

Offered by ESA *Kurt D. Ritch*

Date 03/24/2023

Accepted by *Todd Tefteller*

Date 3-31-2023
TODD TEFTELLER
UPSHUR CO JUDGE

