TEA Inc. | Environmental Solutions

SUCCESS STORY

"The TEA team combined the use of expert witness testimony, engineering, and toxicological expertise to solve a complex litigation and remediation problem in which oil field pits from legacy oil field operations were still in existence. "

PROJECT DETAILS

Location:
Southern United States

Project Type:
Litigation Support, Expert Witness, Oil Field Remediation

PROJECT SUMMARY

TEA was initially hired by a law firm on behalf of an oil company to investigate the presence and/or absence of alleged contamination and potential risks to human health and the environment associated with past oil and gas field operations at a site in southern Louisiana. Two sets of analytical data had been collected by plaintiffs, who had filed a legacy oil field lawsuit against the oil company for residual contamination on their property. TEA was hired to collect data to support and/or refute the existing data sets of the plaintiffs.

TEA experts initially suspected that the primary premise of the case was flawed. That premise, as stated by plaintiff experts, was that the site groundwater was useable as a drinking water supply; a significant claim because cleanup costs associated with cleaning up a drinking water aquifer would be exceedingly high.

Specific objectives of the site investigation:

- Delineate the vertical and horizontal extent of contamination at the site using past and current data
- Identify potential exposure pathways/receptors and potential health risks to humans and ecological receptors under existing and future land use scenarios
- Determine the extent of remediation, if necessary, to promote the continued and future use of the property under Louisiana regulations

Specific tasks performed to meet the objectives of the investigation:

- Description of the site background, historical oil and gas operations, past site investigations, and site geology and hydrogeology
- Evaluation of site exposure pathway dynamics
- Determination of aquifer classification under Louisiana law
- Calculation of appropriate Risk Evaluation Corrective Action Program (RECAP) Standards
- Collection of soil and groundwater data, analysis of data, and formation of conclusions on releases and degree of impact
- Recommendations for corrective action at the site

John Schell, Ph.D., Corporate Director of Toxicology and Risk Management
(e): jschell@teainconline.com (p): (832) 409-8528

Based on the review of registered wells within a one-mile radius of the subject property, and a walking door-to-door survey of residences within a 500-foot radius of the site, the shallow aquifer was not currently used as a source of drinking water or for any other purpose. Aquifer testing (slug tests) conducted at the site indicated that the estimated well yield of the shallow aquifer was less than 800 gallons per day (gpd). Therefore, the aquifer was classified under RECAP as a GW3 based on well yield. This analysis showed that the aquifer was NOT a potiential drinking water source and that remediation to drinking water standards was NOT necessary, thereby significantly decreasing the remediation costs.

Horizontal and Vertical Delineation

For soils, two Areas of Investigation (AOIs) were identified that were likely the locations of the former oil field pits. These areas were delineated both vertically and horizontally for RECAP metals, total petroleum hydrocarbons, and cleanup parameters under Louisiana Department of Natural Resources (LDNR regulations (29-B).

REMEDIATION PLAN

The results of soil analyses for 29-B and RECAP parameters indicated that selected soil constituents exceeded the pit closure and RECAP standards at the former pit locations. In addition, surface soil surrounding the former pit locations exceeded selected 29-B parameters. TEA estimated that approximately 770 cubic yards of material would need to be removed from AOI - 1, and 2,100 cubic yards of material from AOI-2.

THE RESULTS

TEA successfully remediated the AOIs. Wetland documentation prior to and following the remediation showed no impact on wetland resources, based on guidelines presented by the U.S. Army Corps of Engineers. The litigation case was settled, and the defendants are awaiting final approval for closure from the LDNR.

TEA experts and engineers saved over 90% of the cleanup costs, as compared to the original plaintiff cost estimates for remediation of the property.

SS_013

John Schell, Ph.D., Corporate Director of Toxicology and Risk Management
(e): jschell@teainconline.com (p): (832) 409-8528