FEDERAL MARKET SERVICES

# Site Assessment and Environmental Remediation

## Comprehensive Services

- Contamination Assessment (RCRA, CERCLA, state)
- Remedial Investigation
- Remedial Design
- Landfill post closure care, maintenance, permitting
- Monitoring well installation, sampling, abandonment
- Vapor intrusion
- Human health and ecological risk assessment
- Hydrogeologic studies
- Conceptual site model development
- Regulatory partnering and negotiations
- PFAS and emerging contaminant treatment system design, install, operate, and maintain

Montrose provides contamination site assessment and remediation services for federal clients nationwide for various chemical constituents and impacted media. Montrose's unique capabilities include fully accredited in-house laboratories, patented treatment technologies, and General Constructor and Pollutant Storage System Contractor certifications, with an in-house fleet of construction equipment.

With our team of project managers, engineers, scientists, technicians, and construction tradesmen, we can take a project from assessment through to site closure. Montrose owns and maintains a fleet of more than 65 remediation systems, allowing us to quickly mobilize to meet our client's needs. Our systems include air sparge, SVE, DPE, air strippers, and our patented resin exchange. We also have portable pilot/injection systems to facilitate sub-surface placement/injection of amendments, that support enhanced in-situ bioremediation or ISCO. All our systems are trailer-mounted and portable, allowing us to customize our solutions to meet the treatment criteria for individual sites. Our equipment is housed in regional warehouses where they are assembled, customized, upgraded, and maintained for quick mobilization.

Montrose has certified heavy equipment operators and owns construction support services equipment such as skid steers, excavators, backhoes, and haul trailers to support earth moving operations and remedial system infrastructure installation. Our experienced environmental technicians and construction managers are trained to operate and maintain our fleet of systems with monthly inspections and to immediately mobilize in the event of a system down alarm via our telemetry systems or emergency response situation. To support source removals and IDW storage, handling, and disposal, Montrose has an in-house team that specializes in hazardous and non-hazardous waste management. We can self-perform waste characterization, profile generation, manifesting, and cradle-to -grave tracking. We also have professional engineers on staff to support RCRA permitting if needed to support site objectives. To round out our turnkey capabilities, we have a qualified, verified network of specialty and commodity subcontractors, including electrical and structural engineers, surveyors, drillers, and T&D contractors.

## Highlights

- **Teams of professional engineers and professional geologists registered in 42 states.**
- **Staff of more than 3,500 exclusively dedicated to environmental services.**
- **Pioneer in emerging contaminant solutions.**
- **In house certified DoD ELAP laboratories.**
- **NJ Licensed Site Remediation Professionals.**

MONTROSE ENVIRONMENTAL

Connect with us at montrose-env.com/markets/federal/

# Site Assessment and Environmental Remediation

## Representative Projects

**PFAS Phase I Remedial Investigation, USACE Tulsa District, JBSA Randolph and Seguin Auxiliary Airfield, TX**

Montrose performed a CERCLA RI to characterize and define the extent of PFAS in soil, water and groundwater and collected data suitable to support a future risk assessment from known PFAS source areas. The firm developed DQOs and principal study questions for the QAPP. Approaches for the individual sites within the base were developed along with the CSM for PFAS release locations installation-wide, which provided a holistic understanding of the PFAS release, the interaction between contamination and legacy contamination, geologic and hydrogeologic conditions, and migration in the environment. The firm collected soil, groundwater, surface water, and sediment samples to delineate extent of contamination and installed/sampled lysimeters to evaluate porewater and its contributions to PFAS transport from soil to groundwater. Samples were submitted to laboratories that had established PFAS-specific SOPs and were ELAP-certified for PFAS. The firm established disposal requirements for IDW with transporter and disposal facility prior to sampling.

**EE/CA, Small Arms Firing Range, Remote Communications Facility, US Coast Guard, Belle Chasse, LA**

Montrose was tasked by the USCG to complete an EE/CA, including site characterization, to evaluate alternatives to address elevated lead, arsenic, and antimony levels in soil and GW. In consideration of USCG's goal of unrestricted site closure, Montrose prepared the EE/CA compliant with CERCLA and NCP, Subpart E for future removal actions. Montrose evaluated several alternatives, including cap and grade, stabilization, offsite landfilling, sieving, and sorting, and bioremediation and phytoremediation. Considering each option's effectiveness, risk reduction, feasibility, and cost, the chosen remedy recommended onsite stabilization and disposal of the treated material as nonhazardous waste offsite, facilitating unrestricted site closure, as preferred by USCG. Montrose developed a cleanup model to achieve unrestricted site closure and demonstrated that elevated arsenic concentrations were in part due to natural conditions and not former SAFR operations. Elimination of arsenic as a COPC reduced the remedial goals and costs for unrestricted site usage.

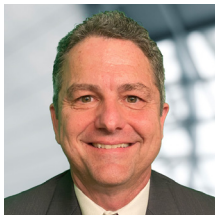
**HTRW Investigations and System Optimization, USACE Philadelphia District, Former Defense Supply Center, Philadelphia, PA**

The project involves characterization of a complex hydrogeologic setting to optimize a groundwater treatment system and design/pilot test innovative technologies to remediate soil and groundwater and mitigate vapor intrusion. The site overlies an estimated 1M gallons of a petroleum LNAPL plume in the shallow water table aquifer. Dissolved-phase impacts are distributed across the shallow and a deeper aquifer. The results of High-Resolution Site Characterization studies were corroborated with traditional drilling and borehole logging, Environmental Sequence Stratigraphy and environmental statistics to create a multi-parameter three-dimensional CSM of site hydrogeology and contaminant distribution. Aquifer pumping tests were used to evaluate the hydraulic conductivity of discrete aquifer zones, geochemical and isotopic sampling of recovered vapor phase contamination, quarterly groundwater gauging and sampling of the Site's 167 wells; MNA sampling and analysis/evaluation; soil gas and indoor air vapor intrusion assessments; the design of a biovent/biosparge pilot test system to augment the legacy vacuum enhanced skimming remediation system; and the installation of vapor barriers beneath the foundations of more than 50 townhomes in a residential development to the south of the Site.

**Design of FUSRAP Radiological RI, USACE Louisville District, Former Joslyn Manufacturing Facility, Fort Wayne, IN**

Montrose designed an RI plan to collect radiological data needed to support closure of FUSRAP-related environmental and health concerns using the CERCLA process. The site is an active steel mill that was formerly utilized to roll, grind, and cut uranium and thorium rods for the DoD between 1943 and 1952. RI design and planning included: historic document review and preparation of a document review narrative; site reconnaissance and preparation of a site inspection report; conducting a TPP meeting and development of a site closure strategy; and preparation of an SAP, which was approved by USEPA and Indiana EPA.

MONTROSE ENVIRONMENTAL




For More Information, Please Contact:

Robert Bogert, PE
Principal Engineer
robogert@montrose-env.com
407-247-6598