creating solutions for today's environment

www.jbrenv.com

Remediation & Site Closure

JBR Environmental Consultants, Inc. (JBR) is prepared to help you remediate contaminated sites of all types and sizes. We have the experienced personnel, materials, equipment, and technical resources necessary for the engineering design and implementation of remediation plans. We have provided remedial services for numerous private and public-sector sites involving: landfills, ponds, abandoned containers, contaminated soils, leaking underground storage tanks, spills at manufacturing facilities or from above ground storage tanks and pipelines, and contaminated surface water or groundwater. We have responded to incidents where immediate remedial action was required for abatement of recent spills or transportation accidents.

Our remediation experience includes handling all types of contaminants including: metals, hydrocarbons, organic chemicals, pesticides, herbicides, chlorinated solvents, PCBs, acids, caustics, lead-based paint, asbestos, dissolved solids, and radionuclides.

We understand the advantages and limitations of specific remedial technologies, and we consider the cost of installing and maintaining those technologies. Our project experience shows our ability to implement innovative ideas to achieve cleanup goals.

Project Experience

Site Remediation of a Limestone Quarry Operation, UT

JBR personnel helped a limestone quarry operator in Tooele, Utah, with successful closure (No Further Action) of a former CERCLA (Superfund) quarry that had been backfilled with Cement Kiln Dust and chromium bricks from an off-site Superfund property. CERCLA closure included design and construction management of a geosynthetic clay liner and constructed cap, stormwater control basin, and stormwater interceptor trenches atop and surrounding the former quarry. JBR personnel also provided groundwater quality monitoring services and coordinated universal waste and asbestos-containing material abatement and demolition of numerous buildings across the site. JBR successfully closed several underground storage tanks and transformer release areas. JBR also provided assistance with limestone reserve evaluation and estimation for nearby parcels of property owned by the former quarry operator business.

Remediation Services

- Interpretation of site investigation data and regulatory support
- Engineering* evaluations and cost analyses
- Feasibility studies
- Corrective action plans and quality assurance project plans
- Engineering* and design including design/build projects
- Construction management
- Operations and maintenance
- Monitoring and reporting
- Performance audits and verification
- Site closure and institutional controls
- Risk-based corrective actions

*Note: JBR employs licensed professionals in disciplines including engineering and geology. JBR performs this work under the specific requirements within the states that it performs and/or offers these services.

JBR Corporate Headquarters
801.943.4144 - Salt Lake City, UT

Tempe, AZ 480.829.0457
Denver, CO 303.968.6774
Boise, ID 208.853.0883

Butte, MT 406.723.7980
Elko, NV 775.738.8766
Reno, NV 775.747.5777

Medford, OR 541.770.6977
St. George, UT 435.652.8301
Seattle, WA 425.977.4994

Project Experience

Site Investigation & Remediation Services for 19 Oil Facilities, WA & OR

Since August 2005, JBR has provided site investigation and remediation services for TOC Holdings Co. (formerly Time Oil Co.) at 19 facilities located in California, Oregon, and Washington. Services have included site investigations; remediation planning; implementation and permitting of in situ bioremediation programs; design, operation, and maintenance of soil vapor extraction systems and groundwater extraction and treatment systems; quarterly remedial system reporting; quarterly groundwater monitoring and reporting; regulatory agency negotiations; and technical support for site closure. JBR personnel have been providing environmental services at the 52-acre TOC Northwest Terminal in Portland, Oregon since 1993. In the summer of 2009, JBR provided environmental oversight during demolition of two petroleum tank farms, including: preparation of construction specifications; modification of demolition and stormwater permits; design and reconfiguration of the groundwater treatment system; construction oversight; sampling and management of various waste streams; post-demolition soil investigation; quarterly groundwater monitoring; and compliance monitoring for wastewater and stormwater permits.

Corrective Action Technologies Applied at a Large Natural Gas Processing Plant, WY

The site remediation strategy employed use of light, non-aqueous phase liquid (LNAPL) recovery, in conjunction with in situ bioremediation and soil vapor extraction and air sparge (SVE/AS) systems, to address multiple hydrocarbon releases at a large natural gas processing facility. Following extensive site characterization and analysis of potential risks to human health and the environment, JBR negotiated a phased, remedial strategy deemed acceptable to the WDEQ and JBR's client. The areal extent of contaminated, subsurface soil and groundwater approximated 25-acres and comprised two separate plumes of contaminated groundwater, migrating in two separate directions beneath the property.

Sequenced, remedial efforts included design, pilot testing, and field testing of the SVE/AS system, orchestrated to remediate the most contaminated areas initially, followed by sequential expansion of the SVE/AS system to remediate less-contaminated, downgradient areas. Sub-slab, soil gas monitoring and analysis is also being used to monitor subsurface conditions beneath a utility building that is located above the center of mass of one of the plumes of contaminated groundwater. A Proposed Work Plan for localized, selective soil excavation and on-site, bio-remedial landfarming is pending WDEQ approval, presently. Currently, JBR is monitoring contaminant mass reduction within both plumes, while ensuring the site poses no unacceptable risks to human health or the environment.

Remediation Approaches

- Contaminated groundwater recovery, treatment, and reinjection or disposal
- In situ and ex situ bioremediation
- Soil vapor extraction and off-gas treatment
- Sub-slab soil gas abatement
- Excavation and off-site disposal
- Containerized waste characterization and disposal, over packs, lab packs
- Tank, sump, and equipment cleanout and decontamination
- Land farming
- Encapsulation, solidification, stabilization
- Selective chemical treatment in situ
- Phyto-remediation
- Thermal treatment
- Constructed wetlands