

Design and Construction Services

KEY Services

Highlights

Extensive Design and Construction Management Expertise



Demonstrated Experience With Successful “Cradle To Grave” Projects



Integration of Risk Assessment To Reduce Remediation Scope and Costs



Successful Negotiation Of MNA Remedies



State-Of-The-Art Site/Civil Design Hardware and Software



Standardized Design Details and Construction Specifications



Manufactured Gas Holder Remediation

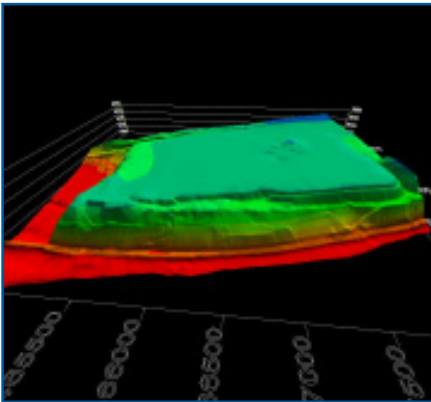
Key Environmental Inc. (KEY) has design and construction experience with a wide array of remediation projects and has serviced these projects in the capacity of design engineer, construction quality assurance engineer, construction manager, and in some cases as the remedial contractor. This experience provides design/construction efficiencies to our clients and ensures smooth field operations, including avoidance of costly overruns. We have used our remediation experience and risk assessment capabilities to petition agencies with technical impracticability arguments for no further action.

KEY's technical staff is comprised of process engineers, geotechnical engineers, geologists, hydrogeologists, risk analysts, and technical project managers. A number of KEY staff are nationally recognized for their expertise in the investigation and remediation of sites contaminated by chlorinated solvents and coal tar. The KEY technical staff maintains up-to-date knowledge of remedial technologies and actively pur-

sues the development of new techniques for remediation of difficult environmental problems, such as recovery of non-aqueous phase liquids.

Remediation Technologies

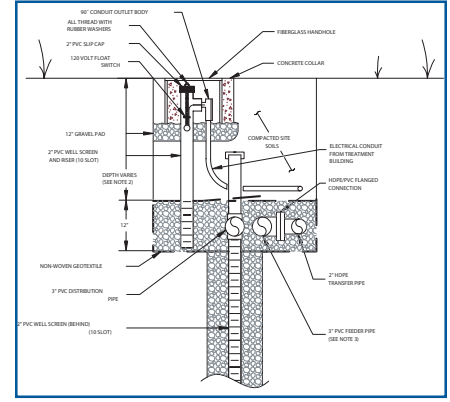
Some examples of technologies in which KEY personnel have practical experience include natural attenuation, in-situ biological treatment, air sparging, soil vapor



Computer Enhanced Design Capabilities



Portable Groundwater Treatment System



Infiltration Trench Detail

extraction, groundwater extraction/treatment, in-situ passive treatment, on-site containment, and in-place stabilization. KEY has also petitioned regulatory agencies with technical impracticability arguments for no further action at various types of sites.

Construction Management and Oversight

KEY has been heavily involved in many of these projects through the completion

of remedial construction - as the Resident Engineer, Construction Quality Assurance Engineer, and in some cases as the Remedial Contractor. As such, we provide our clients with design deliverables that have been "field-tested," thus avoiding construction cost escalation associated with contract documents that are either impractical or not cost-effective.

Key Environmental Design and Construction Projects

Texarkana, TX

- Barrier Wall
- NAPL Removal
- Groundwater Recirculation
- Groundwater Reinfiltration
- Portable Groundwater Treatment Unit

Charleston, WV

- AS/SVE
- Catalytic Oxidation
- LNAPL and DNAPL Removal

Nashua, NH

- Groundwater Reinfiltration
- NAPL Removal

Kearny, NJ

- NAPL Removal
- Oil/Water Separation
- Groundwater Reinfiltration
- Barrier Wall
- Low Permeability Cover
- Natural Attenuation

Pittsburgh, PA

- AS/SVE Remediation
- Pennsylvania Act 2

Houston, TX

- NAPL Removal
- Natural Attenuation

Charleston, SC

- NAPL Removal
- Portable Groundwater Treatment Unit
- In Situ Stabilization

Port Reading, NJ

- Laser Induced Fluorescence Delineation
- In Situ Stabilization
- Low Permeability Cover
- Natural Attenuation

Charleston, WV

- AS/SVE
- Catalytic Oxidation
- LNAPL and DNAPL Removal

Youngstown, OH

- NAPL Removal
- Oil/Water Separator
- POTW Discharge

Spotsylvania Co., VA

- Laser Induced Fluorescence Delineation
- Sediment Removal
- Natural Attenuation

Ford City, PA

- Stormwater Management
- Phytoremediation
- Public Park
- Pennsylvania Act 2

Port Newark, NJ

- In Situ Solidification
- Ex Situ Solidification
- Low Permeability Cover
- Natural Attenuation

Baltimore, MD

- LNAPL Removal
- Dissolved Air Flotation
- Carbon Adsorption



KEY SERVICES

Remedial Investigations and Site Assessments

- Phase I Assessments
- Geophysical Evaluations
- Hydrogeological/Aquifer Testing
- Soil/Sediment Characterization
- Groundwater Characterization
- Fate & Transport Evaluations
- Risk Assessments
- Natural Attenuation Assessments
- GIS/GPS/Data Management

Environmental Engineering

- Feasibility Studies
- Remedial Design
- Turnkey Projects
- Construction Management
- Construction QA/QC Oversight
- Monitoring/Reporting
- System Operations

Program Support

- Permitting
- Regulatory Support
- Expert Witness and Reports
- Contractor Procurement
- Decommissioning/Demolition

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