

# Remediation Services



[www.HCR-LLC.com](http://www.HCR-LLC.com)



We provide customized one-stop solutions by also performing remediation services with expert field service for all remediation types from excavation, system installation, through OM&M – with significant experience in water treatment, petroleum, landfills, roadways, ports and other infrastructure industry projects.

**Handex Consulting & Remediation, LLC (HCR)**

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## System Engineering/Design, Construction & Installation



HCR's experienced teams of professional engineers and professional geologists remain hands-on throughout the entire design process. HCR interaction ensures that each project achieves the established cleanup goals on time and within budget. As part of the design phase, HCR provides a cost estimate for both the capital investment and life cycle of the proposed solution. HCR foremen and construction supervisors play an essential role in the project design phase to ensure practical implementation of the proposed remedy and project success.

HCR possesses a long track record of working on a wide variety of sites with varying site-specific conditions, systems and regulations. We have the experience as remediation experts to swiftly and economically service your needs with a high-quality design. HCR has been awarded multiple Prudential-Davis Productivity Awards for implementing construction savings and innovative designs in the industry of environmental remediation. Our engineering team may incorporate innovative solutions if conducive to the scope of work for your specific needs, and is prepared to design the most cost-effective solution for your site.

Our extensive experience allows us, in a timely manner, to provide the safe and efficient field engineering you need to make informed decisions that will best manage your risk and liabilities.

## Operations, Monitoring & Maintenance (OM&M)



HCR provides a comprehensive OM&M program designed to minimize downtime, reduce system operating costs and explore alternative approaches as needed to achieve site closure. HCR accomplishes this by utilizing systems that include automated monitoring, a Preventative Maintenance Program to prolong equipment life, and designs that feature critical safety devices. HCR personnel have installed, operated and maintained an assortment of remediation and mitigation systems for soil, groundwater and air. Based on extensive experience, HCR has a unique insight into cost-effective remedial designs and system management.

Our clients, including environmental consulting firms, choose us for our premier OM&M services, including:

- Experienced operations and maintenance staff
- Cost efficient procedures
- Analytical trend and cost savings data
- Consistent and accurate on-time reporting
- Rapid mobilization and execution
- Remote monitoring for system optimization
- On-site problem solving
- 24-hour emergency response capabilities for current clients

HCR has operated thousands of remedial systems from simple sub-slab depressurization systems to complex multi-point, multi-phase systems with a variety of processes including:

- Groundwater extraction and treatment
- Liquid and solid carbon treatment
- Sand/mixed media filters
- UV oxidation
- Air stripping
- Catalytic oxidation
- Air sparging
- Bio-venting and other bio-remediation approaches
- Soil vapor extraction
- Soil excavation, removal and disposal
- Landfill gas and leachate collection and treatment

OM&M costs often represent the single largest portion of life cycle costs for site remediation. HCR provides OM&M services to customers with single or multiple soil, water and air treatment systems. HCR's experienced field staff, along with our engineering and consulting personnel, are available to assist with the design and construction of treatment and remedial systems. HCR has in-house computer aided design and drafting (CADD) capabilities for as-built diagrams, permit approval drawings and O&M manuals. HCR has the experience necessary to evaluate and assess existing systems on site and provide recommendations for system optimization. HCR's OM&M Program is structured to reduce system operation costs while exploring alternate approaches to achieving site closure. Task level support is utilized to keep systems operating properly, while maintaining compliance and enhancing regulatory relationships that lead to closures.

HCR provides unique service through:

- Existing infrastructure (equipment, database systems, 24-hour response systems)
- Repair capabilities
- Efficient staffing (sampling technicians, licensed professionals, system operators, project managers)

HCR owns and operates its own equipment and instrumentation to ensure responsiveness through rapid mobilization between all sites with minimal subcontracting requirements and markups. HCR's infrastructure provides full in-house maintenance capabilities in our own repair shop. As such, we have the ability to repair a majority of components found in remedial systems on-site or at HCR company facilities. Our service technicians are familiar with the repair and maintenance requirements of all systems installed and maintained by HCR. We also enjoy valued relationships with major suppliers to promptly solve non-routine equipment challenges.

## Soil and Groundwater Remediation



The primary elements of HCR's success in managing soil and groundwater mitigation and remediation projects are:

1. Focus on a successful up-front assessment and delineation of contamination plumes
2. Extensive experience in designing and installing environmental treatment systems
3. Thorough understanding of costs associated with each unique and distinct system

HCR is experienced with several types of conventional and innovative treatment technologies and remedies, such as:

- Biological treatment technologies
- Bioaugmentation
- Bioventing
- Biosparging
- Bioslurping
- Permeable reactive barriers
- Chemical treatment technologies
- Chemical precipitation
- Ion exchange
- Carbon absorption
- In-situ chemical oxidation
- Surfactant enhanced recovery
- Permeable reactive barriers
- Solidification and stabilization
- Physical treatment technologies
- Air sparging
- Dual phase vacuum extraction
- Oil skimming
- Soil vapor extraction
- Excavation or dredging
- Pump and treat
- Thermal desorption
- Natural attenuation monitoring

HCR also has the necessary experience to evaluate and assess an existing system on site and provide recommendations and implementation for system optimization. As soil and groundwater remediation experts, HCR will service your needs in a cost-effective manner utilizing the knowledge obtained through our extensive track record of working on a wide variety of sites with site-specific conditions, systems, and regulations.

### ► Soil Excavation, Removal and Disposal

In many instances, based on site assessment data and site constraints, the most cost-effective and expedient method of a site cleanup and closure is source removal of the contaminated media. The HCR team is experienced in the execution of source removal projects and state and local permitting prerequisite requirements.

Utilizing in-house capabilities, HCR can determine the limits and depth of contaminated soil to remove. With an effective Site Assessment, managed by HCR professionals, you can be assured that the project is completed the first time, eliminating the need to perform re-work later on.

Support structures are designed and installed by HCR to assure that buildings, roadways, and railroad tracks remain structurally sound and free of future subsidence, as a result of excavation.

In the event that dewatering is required, HCR is an experienced installer of well point dewatering systems. With a complement of treatment equipment, including mobile treatment of up to 500 gpm to meet permitted discharge standards, HCR can monitor the discharge 24/7 to remain in compliance.

HCR's professional equipment operators and scientists ensure that contamination removal, truck loading and restoration are performed in a safe and efficient manner, with the least possible amount of disruption to traffic and pedestrians in the area.

During the Site Assessment phase of a project, HCR's professional staff collects the necessary representative samples to obtain approval from its network of disposal facilities. Soil is loaded at the site and shipped directly for disposal, with all required shipping documents prepared for client review and signature.

At HCR, we pride ourselves on our ability to restore the site back to its original condition after the project is complete. Whether it is asphalt, concrete, sod or landscaping that needs to be restored, HCR can complete the task.

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## Environmental Construction, Dewatering and Groundwater Treatment and Demolition



In addition to the environmental services HCR provides, many of our clients depend on HCR to complete civil construction activities at contaminated sites. Examples of these services include road widening, storm sewer installation and demolition projects where HCR utilizes its experienced teams to complete those portions of the project which may be located in contaminated areas.

HCR has installed concrete reinforced pipe, drainage manholes and headwalls, and provided many other project needs such as:

- Well point dewatering
- Treatment of dewatered effluent
- Screening of excavated soil
- Transportation and disposal of hazardous and non-hazardous soil and sediment
- Sheet piling
- Traffic management
- Erosion and sediment control
- Injectable barriers

## (UST/AST) Tank Dismantling/Decommissioning



HCR has the technical capabilities and experience to serve your UST and AST removal needs. We provide these services in a timely, safe and cost-effective manner with our safety-focused, in-house employees and our own equipment. HCR's technical team has worked with recipients of public funds to assist with underground storage tank removals, subsurface investigations and evaluations, and tank closures. HCR employs personnel that maintain Subsurface Evaluator Licenses for the remediation and removal of unregulated heating oil tanks.

## Enhanced Biodegradation/Bioremediation



HCR is fully equipped to mitigate soil and groundwater contaminants by in-situ chemical oxidation (ISCO) or enhanced biodegradation. Injection of chemical oxidants into a contamination plume can mitigate a wide variety of contaminants and is often used to address elevated concentration levels. HCR has successfully completed injection events in compliance with stringent environmental rules and regulations. Chemical injection can also be used to accelerate biodegradation, and depending on the material injected, can be used to enhance anaerobic or aerobic biodegradation. Anaerobic biodegradation can remediate chlorine-based solvents such as PCE and TCE while aerobic bioremediation can accelerate natural attenuation of gasoline-related compounds such as BTEX and MTBE.

## Air Stripping/Sparging



By applying innovative remedial strategies and technologies, HCR has reduced overall remediation time frames and costs by eliminating prolonged system O&M. We have also reduced cleanup time dramatically with innovative approaches such as in situ air sparge (AS)/soil vapor extraction (SVE), air strippers, horizontal groundwater recovery wells, POLYWALL hydraulic barriers and the use of mobile treatment units.

HCR has built several sparge/vent/groundwater treatment trailers to be brought on site for use in short-term remediation or dewatering projects. HCR has used these trailers to allow sites with a few contamination-impacted wells to go straight to the less-costly Monitoring Only phase, eliminating the client's need to install and operate a remediation system. When possible, aboveground piping is used to save the expense of trenching during the installation of vapor-extraction, sparging and groundwater recovery wells.

## Site Decommissioning and Closure



HCR has trained and experienced personnel to perform site and system decommissioning services which allow an asset to be transitioned from an environmental liability to a profitable business entity. HCR employs remedial methods so that site closure is complete and defensible. When HCR closes a site, clients can rest assured that the contamination has been fully delineated, treated and managed with the best remedial techniques available. HCR has performed these and similar services for clients such as major developers, major oil companies, automobile dealerships, banks, real estate firms and pharmaceutical manufacturers.

These services include:

- Facility decontamination
- Lead, asbestos and mold assessment and abatement
- UST/AST removal
- Building demolition
- Site reconstruction

HCR personnel take pride in leaving a site in the same or better condition than when work begins. HCR's teams do not consider a project completed until the site has been decontaminated, backfilled with topsoil and/or certified clean fill as appropriate, graded and cleared, re-vegetated as needed, and the work site has been returned to the owner for beneficial reuse. If an installed treatment system needs to be decommissioned, HCR has the manpower and resources to demolish the system and restore the site as appropriate.

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## Assessment Drilling Services



HCR is uniquely capable of mobilizing the right drilling equipment to a site with minimal lead time because HCR maintains its own equipment for use in conducting site assessments, remedial investigations and implementation of remedial measures. Our equipment includes drill rigs and associated equipment capable of penetrating most subsurface conditions. HCR maintains a fleet of conventional drilling and direct push rigs with a varied range of capabilities to meet the needs of the individual project goals and specific job site restrictions.

Our suite of equipment allows HCR to perform its own media sampling, well installations, soil vapor treatment, and the design and construction of soil and groundwater remedial systems. HCR provides an added value for our clients by executing projects as a fully integrated team, utilizing knowledge of management, engineering and technical expertise to quickly and efficiently design and implement full-service remedial solutions for a wide variety of environmental contamination. In-house control of drilling allows HCR to modify its schedule far more easily than environmental companies that are dependent on subcontractors for drilling.

Our personnel are well trained to operate within industry best practices for safety and performance and to comply with all federal, state and local environmental laws and regulations. HCR's operators and drillers are licensed in various states, including Florida, New Jersey, New York and Pennsylvania. Additionally, we have drillers certified by the National Ground Water Association.

## ► Environmental Drilling

- Hollow and Solid Stem Auger Rigs
- Hydropunching
- Soil Borings/Split spoon sampling
- Soil vapor extraction wells
- Air sparge wells
- Groundwater monitoring/recovery wells
- Temporary well points
- Remediation wells
- In-situ slurry injection wells
- Well installation, development, purging and rehabilitation
- Well abandonment, decommissioning and closeout
- Remediation well system construction and decommissioning

## ► Direct Push Technology (DPT)

- Geoprobe® rigs
- Site investigation
- Expedited site assessment
- Pre-packed micro-wells
- Chemical injection (remediation reagents)
- Undisturbed sampling
- Emergency response capability
- Soil boring and sampling
- Discrete groundwater sampling
- Continuous acetate soil sleeve sampling
- Landfill sampling probes
- Soil-gas sampling probes
- Low clearance, angle and vertical drilling
- Reduced footprint/environmental impact
- Minimization of investigation derived wastes



## Dedicated Account Management



When clients are served by more than one local office, a significant competitive advantage is created for HCR and our clients by our ability to provide a single dedicated account manager as a client's single point of contact.

The HCR Program Management system facilitates an intimate customer relationship and drives the immediate and long-term vision of both HCR and our clients.

HCR defines Program Management in two ways:

- A group of projects managed in a coordinated way to obtain benefits not available from managing them individually.
- The strategic management methodology that seeks to integrate all aspects of decision-making and actions necessary to achieve the desired results of both HCR and its clients.

Our Program Management system goal is to translate client business strategies into the flawless execution in Project Management. The Program Management mission articulates:

- HCR will consistently exceed client and company performance objectives while materially reducing client life cycle costs for remediating environmental contamination.
- HCR will collaborate with clients and stakeholders to develop comprehensive plans to cost-effectively restore the asset value of environmentally impacted property sites and portfolios, while mitigating regulatory concerns and client exposure to third party liabilities.

HCR offers the following to enable clients to achieve their business objectives:

- Dedicated account management
- Outsourcing/contract professionals
- Strategic business planning
- Program advocacy support
- Site and portfolio life cycle planning
- Resource optimization and modeling
- Risk management strategies