



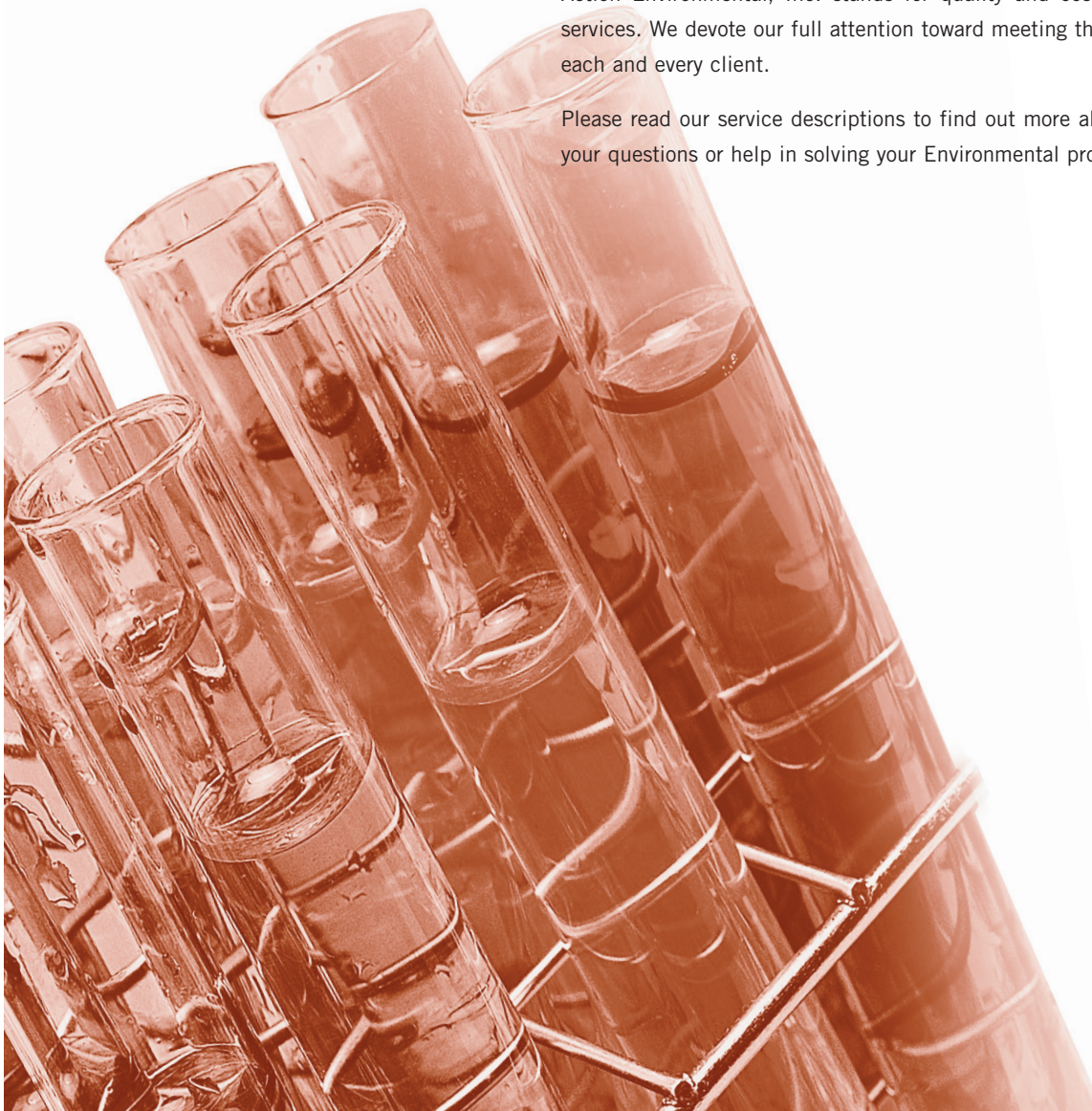
PRODUCT/SERVICE INFORMATION

Action Environmental

Action Environmental, Inc. is an engineering and consulting company serving the Greater Boston area since 1989. We specialize in the remediation of contaminated soils and groundwater.

Action Environmental, Inc. stands for quality and cost effective environmental services. We devote our full attention toward meeting the environmental needs of each and every client.

Please read our service descriptions to find out more about how AEI can answer your questions or help in solving your Environmental problems.





ENVIRONMENTAL ASSESSMENTS: INNOVATIVE SITE CHARACTERIZATION

ENVIRONMENTAL SITE INVESTIGATION SERVICES

- File search at Federal, State and local Regulatory Agencies
- Aerial Photograph Review
- Site Inspections
- Site Use History Evaluation
- Review of Surrounding Area, Surficial and Bedrock Geology, Ground and Surface Water Quality, etc.
- Asbestos, lead-based paint and mold Analysis
- TASA and ASTM Compliance
- Geophysical Surveys (GPR, Seismic, Conductivity)
- Soil Gas Surveys
- Soil Test Probes and Borings
- Groundwater Probes and Monitoring Wells
- Hydrogeological Investigations
- Soil and Groundwater Sampling and Analysis
- Periodic Groundwater Monitoring
- Quantitative Aquifer Analysis and Modeling
- Licensed Site Professionals (LSP)
- Professional Geologists and Engineers

ADDITIONAL SERVICES

- Remedial Action Design
- Remedial System Construction and Operation
- Site Plan Development
- Permitting

The need for environmental professionals to quickly make sound decisions in today's real estate development market is the motive behind Action Environmental's Assessment Services. The success of a development or redevelopment project often hinges on the ability to quickly acquire accurate and reliable information pertaining to a site's environmental condition.

Action Environmental provides the precise site characterization data that is necessary to avoid, or manage, the potential liability and risk associated with real property transactions. Action's services range from providing Phase I Environmental Assessments for determining past site uses to complex hydrogeological assessments and turn-key site remediation services, including the installation and operation of remediation systems.

Action is oriented toward using innovative techniques that provide a quantum leap forward in the way site assessments are conducted, speeding up the process and lowering project costs. Our in-house resources include gas chromatographs, X-Ray Fluorescence analyzers, and various other direct reading instruments for on-site analysis of environmental contaminants. Action integrates these on-site analytical techniques with advanced data and sample acquisition technology and techniques, such as: Ground Penetrating Radar; Direct push soil and groundwater sampling (Piezocone Penetrometers, Geoprobos, etc.), seismic evaluations of soil characteristics, resistivity cones with direct push; and other geophysical evaluation equipment to actively assess sites.

These sampling technologies are used to quickly delineate contaminant zones in subsurface soils and groundwater followed by the use of on-site analytical equipment to quickly provide data on the presence/absence and concentration of contaminants on a site. This methodology allows an iterative approach to site assessments during a single mobilization to the site. The approach usually used by other consultants is a longer process involving phased approaches and several trips to the site. This longer phased approach — with weeks and sometimes months between sampling events — is the major challenge to the timely completion of real estate transactions.

Action utilizes these innovative techniques to complete our projects in a timely, accurate, and cost effective manner. Action brings over 15 years of specialized capabilities, knowledge and experience to its clients. You can count on Action to understand our client's needs and provide innovative solutions to their most difficult environmental challenges.



FIELD TECHNICAL SERVICES & CAPABILITIES

FIELD SERVICE CAPABILITIES

- Soil and Groundwater Sampling
- Soil Gas Surveys and Vertical Profiling
- Ground Penetrating Radar (GPR) Surveys
- Mobile Laboratory Analysis using gas chromatograph, XRF and UV Technologies
- Soil boring, micro-well, and monitor well installation
- Low clearance and limited access direct push probing and drilling
- Aquifer slug and pump tests
- Remediation feasibility studies and tests including vapor extraction, air sparging, dual phase extraction, ground water recovery, bioventing and natural attenuation
- Remedial System Design and Installation
- Construction of Packaged Remediation Systems
- Groundwater Probes and Monitoring Wells
- Hydrogeological Investigations
- Periodic Groundwater Monitoring
- Quantitative Aquifer Analysis and Modeling
- Licensed Site Professionals (LSP)
- Professional Geologists and Engineers

ADDITIONAL SERVICES

- Remedial Action Design
- Remedial System Construction and Operation
- Site Plan Development
- Permitting

The foundation of an environmental assessment is the collection of quality data that can be used as the basis for project decisions. Field Technical Specialists, equipped with the latest technologies, often collect this baseline environmental data.

Recognizing the importance of this dynamic to the successful completion of environmental projects, Action provides a technical staff that is a mixture of environmental, analytical, geophysical, geological and engineering experience. This mixture of professional and technical staff capabilities brings a diverse range of experience to our assessment, construction and remediation services.

Our in-house resources, include:

- Portable OVAs – Varian 3400FID
- Portable OVAs – Photovac PID
- Photovac Field Gas Chromatograph
- Spectrace QuanX XRF (Metals Na-U)
- Direct Push Rigs
- Ground Penetrating Radar
- Portable Groundwater Treatment Systems
- Air sparge/soil vapor extraction pilot test equipment

The integrated utilization of this equipment, and a wide range of other environmental field instruments, give Action the capability to meet our Client's needs in a cost-effective manner.

The experience of our staff and our innovative technical capabilities enables Action to provide a variety of technical services ranging from monitor well sampling to the design, installation, construction, and operation of remediation systems. Our diverse list of clients includes local, state, and federal governments, as well as private sector clients.

These services are concentrated in our Specialty Assessment Services (SAS) Team, specifically staffed and trained to utilize these techniques and technologies to quickly and cost effectively assess our client's sites.

Led by our Licensed Site Professionals, Engineers and Geologists, the SAS Team mobilizes to your site and brings to bear all of Action's capabilities to assess and remediate your site in compliance with all local, State and Federal environmental regulations.



HAZARDOUS WASTE MANAGEMENT & CONSULTING

ADDITIONAL SERVICES

Action Environmental also provides services in the areas of:

- On-Site Remedial Treatment
- Environmental Site Assessments
- Asbestos, Lead-Based Paint and Mold Surveys
- OSHA Compliance and Training (40 CFR 1910.120, 1910.1200, Confined Space, First Responder, etc.)
- Environmental Engineering and Permitting

Action has provided regulatory consulting assistance to hundreds of municipalities and private clients in support of their efforts to achieve full compliance with hazardous waste requirements. Action's consulting services range from conducting multi-media compliance audits to preparing complicated RCRA permits for hazardous waste treatment, storage and disposal facilities (TSDFs).

Action maintains a diverse staff of engineers, geologists, and scientists skilled in interpreting complex state and federal hazardous waste regulations. As a regulatory consultant, Action uses this expertise to provide our clients with cost-effective solutions that are acceptable to environmental regulators.

Action understands that our clients are in business to conduct their business, not to keep abreast of the multiple regulatory changes and changing technology necessary to help their business maintain regulatory compliance. Our clients rely on Action to keep them up to date and in compliance through the design and implementation of Environmental Management Systems (EMS) and Programs. In addition, Action brings our clients the most up-to-date computer-based Environmental Management Information System (EMIS) software.

Action's hazardous waste consulting services include the following:

- Multi-Media Environmental Compliance Audits
- Hazardous Waste Training Seminars
- Integrated Contingency Plans (ICP)
- Facility Response Plans (Process Safety)
- Clean Closure Equivalency Demonstration Services (RCRA Facility Investigations Audits, Closure Plans, and Corrective Measure Studies (CMS), etc.) for RCRA Part B facilities (Hazardous Waste Container/Tank Storage Areas, Waste Piles and Incinerators, etc.)
- Pollution Prevention (P2) Plans
- Toxic Chemical Release Reporting Forms (Form R)
- Part B Permit Applications for TSDFs
- Tier II Emergency and Hazardous Chemical Inventory Forms
- Hazardous Waste Tank Assessments



INNOVATIVE CORRECTIVE AND REMEDIAL ACTIONS

ADDITIONAL SERVICES

Action Environmental also provides services in the areas of:

- Environmental Site Assessments
- Asbestos, Lead-Based Paint and Mold Surveys
- OSHA Compliance and Training (40 CFR 1910.120, 1910.1200, Confined Space, First Responder, etc.)
- Environmental Engineering and Permitting
- LSP/21 E Consulting Services
- Analytical Sampling and Testing

Action has provided economic and effective remedial services to our clients for over 15 years. The greatest challenge faced by developers and real estate professionals today is dealing with contaminated commercial and industrial sites. Action provides turn-key investigation, design and construction services to ensure proper execution and management of all types of corrective and remedial action projects.

Action staff of biologists, chemists, engineers, geologists and hydrogeologists combine their extensive knowledge of industrial operations in a variety of business settings with extensive technical experience to provide effective and appropriate solutions to remediate site contamination. Our staff has assisted public and private sector clients with a variety of remedies to complex soil and ground water contamination problems, including: developers, architects, industrial manufacturers, petroleum handlers and processors, local, state and federal facilities.

Action has designed, constructed and operated remedial systems that have contained and treated a variety of soil and groundwater contaminants. These systems include:

- Soil Vapor Extraction
- Groundwater Recovery and Treatment
- In-Situ Air Sparging
- Soil Excavation
- Bioremediation
- Thermal Desorption Techniques
- Dual Phase Extraction
- Remedial Systems Operations and Management
- Waste Stabilization
- Capping/Containment
- Discharge Permits
- Waste Inventory Identification and Removal

Action's years of involvement in major remedial/corrective action projects has led us to develop project , bid and construction management procedures to effectively manage project operations and control/minimize project costs.

Our hands-on approach makes Action the natural choice for developing and implementing economic remedial and corrective actions.