

# Environmental Site Remediation



**Stringent state and federal regulations govern hazardous waste remediation, and liability for known or unknown subsurface contamination is expanding.** Responsible parties seek remediation alternatives that help them recover and reuse valuable property and reduce liability. Apex recognizes that practical and cost-effective remediation solutions are key to the success of these goals.

## Successful Project Experience

Apex has a proven track record of asset enhancement and liability reduction by selecting and implementing appropriate remediation technologies. Apex has worked on construction sites, in contaminated facilities, at Resource Conservation and Recovery Act (RCRA) and Treatment, Storage, & Disposal (TSD) sites, and at Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and other uncontrolled hazardous waste sites. This practical experience combined with innovative remediation designs adds value to the traditional engineering approaches to remediation. We know what works.

Apex's field experience can be critical to managing unanticipated environmental problems. During excavation for a new construction project, contaminated soil and groundwater were encountered within the building footprint affecting three levels of proposed subsurface construction. Apex determined the off-site source of contamination; obtained regulatory approvals; and permitted, designed, and installed a remediation system within ten working days. Apex saved the owner construction delay costs, remediation costs, and third party liability. Full understanding of the regulations resulted in the off-site responsible party paying full remediation costs without attorney involvement.

Apex selects the most cost-effective remediation technique that satisfies the clean up requirement and site conditions. We have successfully used bioventing and bioremediation techniques, both in-situ and aboveground, to mitigate hydrocarbon contamination without major disruption to the site. Apex has applied biological corrective action techniques

to clean up sites while protecting personnel and passers-by from exposure and assuring minimal disruption to the property when land usage was at a premium.

Apex is 100 percent committed to protecting our client's assets and reduce their liability. Our remediation proposals provide costs, milestones, and potential liabilities to our clients so that an appropriate business decision can be made. We can optimize the selected remediation technique without over studying the problem.

## Up-to-Date Technology

Apex reduces up-front capital expenditures by maintaining standard remediation equipment in our warehouse for lease. As new remediation technologies emerge, equipment is added. For example, a telemetry system now provides 24-hour remote monitoring of some remediation systems to reduce client operation and maintenance costs.

## Capable Staff

Apex has the technical and professional resources to provide a broad range of remediation services. In-house staff includes certified professional geologists, hydrogeologists, professional engineers, project designers, construction managers, chemists, certified industrial hygienists, health and safety experts, and risk assessment specialists.

## Case Studies

### Case Study 1

Faced with the challenge of addressing a RCRA-permitted property, our client called upon us to design and oversee remediation of a contaminated former secondary lead smelter. Apex successfully negotiated with regulators our concepts for soil stabilization and groundwater neutralization. Upon completion of this five-year 17-acre project, we will achieve the first ever RCRA permit removal in EPA Region 4 for our client.

### Case Study 2

During due diligence, Apex identified petroleum contamination associated with a nearby gas station. Apex advised the client to pursue negotiations with the major oil company for cost reimbursement associated with the development of the site and groundwater dewatering. The client was not eligible for state cleanup funds and did not expect to receive compensation from the third party. Apex arranged a meeting with the major oil company and negotiated an agreement for our client to receive reimbursement for all premium environmental costs associated with their redevelopment project. Apex recovered for the client approximately \$400K in costs associated with petroleum contaminated soil disposal and groundwater treatment.

### Case Study 3

Through due diligence, significant dry cleaning solvent (PCE) contamination was identified on a commercial property. Previously estimated cleanup cost exceeded \$6M. Apex defined the extent and magnitude of contamination and risks and obtained regulatory approvals in a state Voluntary Cleanup Program for an innovative remediation approach prior to closing. We negotiated an escrow with the seller and agreed to provide a guaranteed fixed price for cleanup and closure. Apex completed cleanup and obtained state regulatory closure within the tight construction schedule and saved \$3M from the initial estimates.

### Case Study 4

A municipally-owned utility was faced with the challenge of rehabilitating a former manufactured gas plant (MGP) property as part of a state cleanup program. Apex performed the site assessment, risk characterization, and remediation activities that enabled redevelopment of the property. This former brownfield will become the location of a new electrical substation and ground-mounted solar energy generating facility.