

T. Lawrence Hinline, LSP

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Technical Background (Representative Projects are summarized on attached pages)

Solid Waste/Hazardous Waste

- assisting in siting evaluation for a municipal landfill
- conducting/managing numerous landfill closure investigations related to nature and extent and fate and migration of landfill impacts
- conducting projects under CERCLA and NCP RI/FS protocols
- conducting environmental investigations at federal facilities including Portsmouth Navy Shipyard, Griffiss AFB, Knolls Atomic Power Lab.
- MCP project related to solvent plume emanating from septage lagoons at a former landfill site
- characterizing solvent plumes at industrial sites
- preparing a number of RAOs for various releases
- preparing and executing RAM plans
- MCP projects relating to petroleum impacts at former UST sites
- investigation and characterization of arsenic impacts associated with municipal water supply facility per MCP protocols
- characterizing PCBs at industrial and utility sites
- characterizing inorganic and organic impacts at industrial and municipal landfills
- characterizing Manufactured Gas Plant (MGP) sites
- constructing permeable reaction wall innovative technology for chlorinated VOC impacts in groundwater

Water Resource Management

- characterization and selection of land disposal sites for treated wastewater
- completion of large scale loading tests to evaluate infiltration capacity for wastewater discharge
- evaluation of impacts of land disposal of treated wastewater
- evaluation of technologies for treated wastewater disposal
- integration of reclamation and reuse strategies into treated wastewater management
- groundwater discharge permitting
- identification of potential groundwater sources
- investigations and permitting related to water treatment plants
- vulnerability assessment of water supplies

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- constructing Oxygen Release Compound passive treatment system for VOCs and PAHs at a manufactured gas plant site
- characterizing and remediating petroleum spill sites
- conducting projects in various states' voluntary action/brownfields programs
- preparing permit applications for disposal wells
- preparing technology reports for EPA and industry
- supporting industry during EPA Regulatory Negotiation period

New Business Development

- developing relationships with prospective clients and existing clients
- preparing proposals including pricing, procuring subcontractors, assembling teams and developing scope
- developing and participating in preselection interviews
- conducting market research

Project Management

- assembling project teams
- developing project approaches and scope of work
- tracking and controlling budgets and schedules
- keeping projects focused on end result and client objectives, completing final project reviews
- developing project pricing

Administration

- managed "Site Investigation & Remediation Group" of hydrogeologists and engineers
- developed labor projections, balanced workloads and made staff adjustments
- conducted performance evaluations
- addressed accounts receivable
- led company initiative to investigate applicability of internal improvement programs to our company
- led internal improvement program in company that addressed company performance through process improvement initiatives. Have had training in improvement policies, procedures and tools.
- assisted in development and presentation of project management training program

Significant Reports, Papers and Presentations

- Two Decades of Successful Class I Well Operations (NWWA/UIPC, New Orleans, 1986)
- Interplay of Area of Review, Mechanical Integrity and Geology in Evaluating Returns to the Surface, (NWWA/UIPC, New Orleans, 1987)
- Assessment of 14 Alleged Class I Well Failures, Report for CMA, 1986
- Annulus Pressure Monitoring Systems, Report for EPA, 1987
- Assessment of Pretreatment Technologies, Report for EPA, 1987
- In-Situ Treatment of a TCE Plume Using a Funnel and Gate System, (NGWA/API, Houston, 1996)
- Field Trial of the Biowall Technology at a Former Manufactured Gas Plant Site, 1997

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Employment History and Education

Lightship Engineering	2006	Environmental Consulting
Stearns & Wheeler	1988-2006	Environmental Consulting
Ken E Davis Associates	1985-1988	Environmental Consulting
W.L. Tidwell & Associates	1983-1985	Petroleum Consulting
Texas Oil & Gas	1981-1983	Petroleum Exploration
Texaco	1979-1981	Petroleum Exploration

M.S. Geology, Ball State University, 1979

B.A. Geology, Bowdoin College, 1977

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Representative Projects

A list of representative projects I have completed follows. For most of the projects listed, responsibilities included developing proposals or scope, developing level of effort and pricing, developing project approaches and work plans, negotiating with regulators and interfacing between regulators and clients, reviewing deliverables, preparing reports, and tracking and controlling project budgets and schedules.

Solid Waste & Hazardous Waste

Municipal RI/FS, Landfill: Managed RI/FS project at municipal solid waste landfill that was characterized as inactive hazardous waste sites subject to CERCLA investigations due to the disposal of industrial hazardous wastes and the release of hazardous substances to the environment. Key to the investigation was the immediate construction of a cap to mitigate a \$2.5 million per year leachate removal expense and extensive public participation activity resulting from heavy involvement from a concerned and adversarial environmental group.

Industrial Foundry Landfill, Investigation: Managed site characterization at a foundry. The study focused on impacts of foundry sands that had been determined to be hazardous and on impacts by solvents which were ultimately attributed to an off-site source. Geochemical and hydrogeological studies and extensive regulatory negotiation resulted in the site being delisted by the regulating agency.

Municipal Landfill Investigations: Managed numerous municipal landfill closure investigations. Project objectives included characterization of site geology, geochemistry and nature and extent of contamination, to facilitate design of appropriate closure and post closure monitoring plans.

Municipal Landfill, Investigation and Remediation: Conducted groundwater investigation at municipal landfill. Investigation uncovered presence of bulk hazardous sludges and drums at the site. Impacts of drums on soil were investigated using immunoassay test kits. Remediation plan for drum removal and disposal and sludge relocation under a proposed landfill cap were implemented. Ongoing investigation relates to characterizing extent of PCB impacts in adjacent floodplain to facilitate design and implementation of a remediation program.

Department of Defense, Bulk Storage: Managed groundwater investigation and remediation project at a petroleum bulk storage facility at a Navy Shipyard. The investigation involved the use of geophysical techniques, immunoassay field testing, drilling and site characterization, and the design and construction of a passive remediation system.

Department of Defense, Petroleum: Managed groundwater investigation project at an Air Force Base. The investigation characterized soil and groundwater impacts resulting from underground piping leaks at an aircraft refueling facility.

Department of Defense, PCBs and Solvents: Managed soil and groundwater investigation project at an Air Force Communications and Research facility. The investigation characterized soil and groundwater using a

field GC to track soil and groundwater impacts to direct the investigation as it occurred. PCBs were identified in the course of the solvent investigation and were subsequently remediated.

Municipal UST Investigation and Remediation: Managed numerous UST investigations, both in and out of the Massachusetts MCP in which nature and extent of petroleum contamination was characterized.

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Representative Projects (cont.)

Projects culminated in negotiated closures or in remedial programs including pump and treat systems, excavation, and landfarming.

Municipal Solvent Plume Investigation: Completing MCP investigation and remedy proposal for a 21E project in which a plume of PCE was emanating from former septage lagoons at a closed municipal landfill.

Industrial RI/FS, Solvents: Managed RI/FS at electronics manufacturing facility. The study involved characterizing a DNAPL plume, implementing an IRM for petroleum free product recovery and constructing a reactive iron permeable reaction wall, an innovative technology for VOC remediation in groundwater. Additional remedial systems installed include a soil vapor extraction system, a pump and treat system for source control and a landfarm cell for petroleum impacted soil.

Industrial RI/FS, Solvents: Managed RI/FS at electronics manufacturing and R & D facility. The study involved characterizing a DNAPL plume, using inorganic geochemistry to identify multiple plumes, making distinctions from off-site sources and implementing a soil vapor extraction system for vadose zone remediation.

Industrial R&D, Manufactured Gas Plant: Managed pilot test of innovative passive remediation technology for groundwater impacted with aromatic and PAH compounds at a manufactured gas plant site. The pilot test evaluated effectiveness of solid Oxygen Releasing Compound for stimulating bioremediation of VOCs in groundwater.

Industrial Site Investigation, Manufactured Gas Plant: Developed work plan and managed investigation of former manufactured gas plant under Pennsylvania Act 2 framework. Investigation entailed iterative delineation of the extent of DNAPL presence in the subsurface.

Municipality, Brownfields Investigation of former Steel Mill: Developed approach and scope and am managing investigation of solvent and metal impacts at abandoned steel mill. Investigation scope calls for iterative characterization of site through the use of borings, Geoprobos, field GC and temporary water sampling points.

Municipality/Developer, Environmental Site Assessments: Completed numerous expedited site assessments for a developer working with a municipality. The redevelopment was occurring in an old industrial section of the city. Rapid-turnaround Phase I and Phase II or combined investigations targeted petroleum and solvent related impacts and resulted in the installation of remediation systems or adjustment of the development plan. Developed a Memorandum of Understanding between the developer and the

regulatory agency that defined appropriate responses to the various environmental impacts likely to be encountered.

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Representative Projects (cont.)

Water Resource Management

Land Disposal Site Testing: Designed and conducted large scale loading test to determine site suitability to accept 1.0 to 1.5 MGD treated wastewater. Test involved installing 11 observation wells and six test basins and flooding each test basin with approximately 20,000 gallons of water over a several day period. Evaluated measured infiltration rates and mounding impacts.

Municipal, Groundwater Resource Development: Assisted six municipalities in locating new groundwater resources for municipal supply. Projects included conducting townwide investigations for potential well locations, conducting hydrogeologic assessments of well field capacity to determine field development potential, siting wells, overseeing installation of wells, conducting pumping tests, determining safe yields and preparing permits. Related work included developing or assisting in implementing wellhead protection programs.

Municipal Wastewater: Technical lead on a pilot test to determine the viability of injecting treated wastewater into the subsurface. Objective of overall project was to facilitate water reuse with a minimum amount of land. Objective of pilot test was to determine operational concerns and hydraulic and environmental impacts of injection.

Package Plant Wastewater Management: Technical lead on a number of projects for schools or developers to evaluate land disposal sites for treated wastewater. Evaluations included analysis of proximal receptors, characterization of the subsurface, evaluating fate and migration and modeling mounding impacts.

Municipal Wastewater Management: Technical lead of a project to characterize candidate sites, selected by the municipality, for suitability for land disposal of treated wastewater. Evaluations included analysis of proximal receptors, characterization of the subsurface, evaluating fate and migration, determining capacity and conceptual layout of recharge facilities.

Water Treatment Plant Consulting: Project Manager and technical lead for a number of projects for a municipal water purveyor. Projects included: overseeing work of major utility and consultant for a remedial action to remove flyash from the watershed and reservoir bottom; permitting filter backwash water discharges; permitting filter backwash residual beneficial use; investigating impacts of arsenic associated with disposed filter backwash residuals.

Municipal Water Supply: Assisting a municipality identify a groundwater supply for the purpose of golf course irrigation. Evaluation has entailed a desk top evaluation of candidate areas and depths for obtaining water, to be followed up by site investigations.

Municipal Water Supply: Assisting a municipality identify potential threats to public water supply by studying area hydrogeology, identifying potential sources of impact and completing groundwater modeling.