

**DAVID J. HAZEBROUCK, P.G., LSP, LEP
PRINCIPAL - SENIOR PROJECT MANAGER**

EDUCATION:

B.S., University of Rhode Island, Geology, 1983
Field Geology, Montana State University, 1983
Various CEUs in environmental sciences required annually for state licenses

MEMBERSHIP/REGISTRATIONS:

Rhode Island Society of Environmental Professionals
Licensed Site Professional Association
Environmental Professionals Organization of Connecticut
Association of Groundwater Scientists and Engineers
Registered Professional Geologist (Maine) No. 335
Licensed Site Professional (Massachusetts) No. 7903
Licensed Environmental Professional (Connecticut) No. 240

EMPLOYMENT EXPERIENCE:

2002 - Present	Lake Shore Environmental, Inc.
1996 - 2002	Fuss & O'Neill, Inc.
1990 - 1996	Envirogen, Inc./Vapex Environmental Technologies, Inc.
1989 - 1990	Environmental Scientific Corporation
1985 - 1989	Lincoln Environmental, Inc./BCS Designers/Sure Test
1984 - 1985	U.S. Geologic Survey - Water Resources Division

PROFESSIONAL EXPERIENCE:

Mr. Hazebrouck is a hydrogeologist by training and has been providing senior project management and environmental consulting services in the environmental assessment and remediation industry for over 20 years. Mr. Hazebrouck has wide ranging experience in conducting due diligence environmental site assessments and developing and implementing hydrogeologic studies, hazardous waste investigations, underground storage tank compliance programs, and in-situ remediation programs. His project experience ranges from Phase I property transfer site assessments to design and implementation of full scale remediation systems at federal superfund sites. He has directed many site remediation projects in Massachusetts under the Massachusetts Contingency Plan and in Connecticut under the Remediation Standard Regulations. He has also facilitated numerous Brownfields redevelopment projects for private developers and state agencies throughout Southern New England. He has also performed hydrogeologic studies in support of environmental impact assessments, surface and groundwater quality studies, siting and evaluation of groundwater supply wells, and has provided expert testimony at municipal and state regulatory hearings.

Representative projects which Mr. Hazebrouck has directed include the following:

Environmental Assessments

Town of Johnston, RI - Phase I & II Environmental Site Assessments

Several fast-track Phase I & II ESAs were completed by Mr. Hazebrouck for the Town of Johnston on properties slated for acquisition for development as a fire station, new public works garage, and recreational areas. Analytical results of soil samples from a former construction yard revealed significant levels of soil contamination by petroleum hydrocarbons. Mr. Hazebrouck facilitated the property transaction by conducting remedial activities including drywell closure, soil remediation and groundwater monitoring. Assessment and remediation was completed in accordance with RIDEM's Voluntary Remediation Program allowing the Town to proceed with its development plans.



Rhode Island School of Design – Phase I ESA & Hazardous Building Materials Inspection

Mr. Hazebrouck conducted a Phase I environmental site assessment and hazardous building materials inspection on a high-rise commercial building in downtown Providence on behalf of the Rhode Island School of Design. Field inspection and sampling for asbestos identified numerous basement areas where incomplete asbestos abatement activities had been previously conducted. The Phase I ESA report alerted RISD to the potential asbestos cleanup liability and associated costs.

RIAC Pre-demolition Hazardous Materials Assessment

As part of the Rhode Island Airport Corporation's Voluntary Land Acquisition Program, Mr. Hazebrouck directed a Pre-demolition Hazardous Materials Assessment program on behalf of the land acquisition program manager, W.D. Schock Company. These assessments were conducted as modified ASTM Phase I environmental site assessments in that they included inspections of residential properties for hazardous building materials such as asbestos containing materials, electrical devices potentially containing PCBs (fluorescent light ballasts, thermostats), household hazardous waste and lead paint. A portable X-ray fluorescence analyzer (XRF) was used to screen painted surfaces for lead content. The results of the pre-demolition hazardous materials assessments were summarized in reports for groups of homes and provided to demolition contractors for bidding purposes.

Brownfields Development

Technical Assistance Contract - RIDEM

With a former employer, Mr. Hazebrouck directed an on-call technical assistance contract with the RIDEM. In this role, he provided technical guidance to RIDEM staff in support of their Brownfields Pilot Program. As part of this program, he oversaw projects ranging from Phase I & II site assessments, remedial alternatives evaluations, corrective action cost estimates, remedial investigations, remedial designs, and remedial oversight at over 12 abandoned industrial sites throughout Rhode Island.



Former United Wire Site, Warwick, RI

A developer had obtained a purchase and sales agreement from the owners of an abandoned former foundry in Warwick, Rhode Island with the intention of redeveloping the site into a hotel complex and apartment building. The building had been used as a salvage operation for two years and had numerous leaching pits and pipe chases throughout the floor. Mr. Hazebrouck directed a comprehensive Site Investigation which identified a leaking No. 6 fuel oil tank and a significant plume of perchloroethylene (PCE) which had migrated several blocks away from the site. Through meetings and negotiations with RIDEM, a remedial approach consisting of on-site soil treatment, underground injection structure closure, UST removal and a down gradient PCE treatment zone was agreed upon and development of a Remedial Action Work Plan is in progress.

Former Hope Webbing Textile Mill

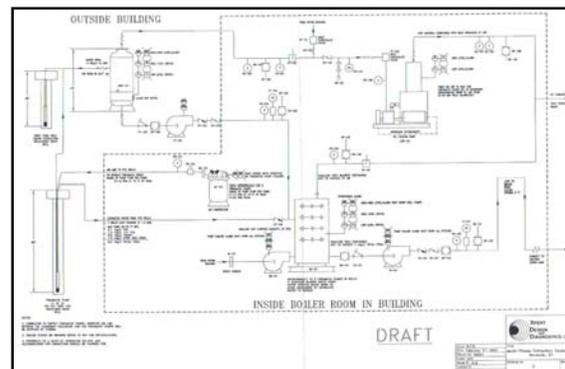
Mr. Hazebrouck assisted a private developer, acting as interim property manager for the Rhode Island State Receiver, with investigating and remediating a large inactive textile mill in Pawtucket, RI. Inspections were completed on over one million square feet of building space in order to develop a comprehensive site investigation scope. Investigations included, drilling with hollow stem augers and monitoring well installation, geoprobe sampling, surficial soil sampling and soil gas sampling. Other activities included investigation and closure of underground injection structures, die testing to determine sewer discharge points, transformer/capacitor inventory, above ground storage tank compliance evaluations, and assessment of ecological impacts to a river which is adjacent to the mill's dump. Investigations were summarized in a Site Investigation Report and corrective action remedies were outlined in a Soil Management Plan. The developer plans to obtain a Settlement Agreement/Covenant-not-to-sue with RIDEM and acquire the property.

Remedial Investigations, Design & Implementation

Former Norden Systems Inc.

United Technologies Corporation (UTC) was responsible for assessing and remediating the former Norden Systems, Inc. site in Norwalk, Connecticut under the Department of Environmental Protection Voluntary Remediation Program. Mr. Hazebrouck began managing the Norden Site investigations in 1992 while with Envirogen. He continued on as Project Director when he joined Fuss & O'Neill and is still managing the project as the founder of LSE. Project activities he has managed on this project include contaminant hydrogeological investigations of 11 Areas of Concern to determine potential impacts to soil and groundwater. Detailed evaluations of groundwater flow in the fractured bedrock aquifer were performed in conjunction with the U.S. Geological Survey including:

- air rotary drilling and rock coring,
- borehole geophysical logging (caliper, temperature, fluid resistivity, natural gamma logs, cross-hole radar



- tomography, vertical flow-meter testing and down-hole video camera),
- pumping tests,
 - packer tests, and
 - installation of discrete-zone monitoring systems.

In the eastern side of the Site where solvents were encountered in a wetlands area, a source area remediation system consisting of air sparing/soil vapor extraction was designed and installed and has successfully achieved cleanup goals. In order to remove the source of a large solvent plume in the western half of the Site, multi-phase extraction (MPE) pilot testing was conducted in weathered and fractured bedrock and a full scale MPE system was designed and installed and was started in July 2003. An analysis of monitored natural attenuation was also performed to support development of a groundwater management strategy for dilute areas of the plume.

Wellesley, MA - On-Call Hydrogeologic Consulting Services

As part of a three year on-call contract for hydrogeological consulting services with the Wellesley Board of Public Works, a variety of environmental investigations and remediation was performed. Mr. Hazebrouck was the project director and LSP of record for this contract. Services included:

- review and critique of technical reports prepared by third parties,
- various Licensed Site Professional services including preliminary response actions, comprehensive response actions, risk assessment and filing response action outcome statements (RAO).
- hydrogeologic studies of groundwater quality impacts resulting from a Town-owned solid waste facility,
- conducted a Phase II Comprehensive Site Assessment and Method 1 risk assessment at a former UST fuel farm of the Public Works Garage in accordance with the Massachusetts Contingency Plan (MCP); a Class A RAO was achieved and an Activity and use Limitation was recorded as part of ongoing institutional controls,
- conducted an investigation of drywells receiving discharges from garage floor drains and directed remediation of contaminated soil,
- developed specifications and completed construction management for installation and connection of a new oil/water separator to the regional sewer system, perform an evaluation of salt storage best management practices.



Superfund

Winthrop Landfill (SVES and Bioventing)

The Winthrop Landfill, located in the Town of Winthrop, Maine, is an inactive municipal landfill on the National Priorities List. Municipal, commercial and industrial waste disposal occurred at the 11 acre landfill through the 1970s. Faced with the potential of decades of ground water pumping, the primary responsible party (United Technologies Corp.) contracted with Vapex (acquired by Envirogen in 1991) to investigate potential VOC source removal technologies.

Phase I investigations included performance of a 3-Dimensional soil gas survey to determine the degree and extent of VOCs and fixed gasses. Point air permeability testing was performed at each soil gas point to delineate permeability variations across the site. Phase II investigations involved SVE and in situ air sparging field pilot tests at three areas of the site in refuse and native soils, vapor

transport modelling and development of a conceptual and a 60 percent full scale SVE design. Phase II work also included methane modelling, air dispersion modelling and offgas control feasibility studies. Phase III work involved completion of a final detailed SVES design and installation of the full scale SVE system which consisted of 72 SVE wells and a total air flow rate of 3,000 scfm. Mr. Hazebrouck was the project manager for this project and was responsible for all aspects of design and construction and approved the SVE well design as a Maine licensed geologist. Phase IV work included start up, operation, maintenance and monitoring of the SVES. The full scale system removed approximately 70,000 pounds of VOC through volatilization and biodegradation.

Stamina Mills Superfund Site (SVES and MPES)

The Stamina Mills Site, located in the Town of North Smithfield, RI, had been a textile weaving and finishing mill since 1824. In 1969 a surface spill of trichloroethylene (TCE) occurred which subsequently impacted overburden soils, saprolite and fractured bedrock. Numerous Site investigations have been performed since 1980 and a Record of Decision specifying SVE technology for remediation of unsaturated zone soils was established in 1990. An Administrative Consent Order and Scope of Work were executed between USEPA and the responsible party in 1991.

Envirogen was subcontracted to develop the SVE Pre-Design Work Plan and perform feasibility testing and design services related to remediation of TCE in the source area soils and saprolite. As Senior Project Manager, Mr. Hazebrouck directed the installation of SVE test wells and vapor probes and oversaw SVE field pilot testing and 2-dimensional air flow modeling. A full scale SVES design consisting of 57 SVE and MPE wells were installed. Envirogen developed the final SVE design submittal and provide full scale construction supervision in 1996 and 1997.

Underground and Aboveground Storage Tanks

Rhode Island Airport Corporation UST Compliance Program

The Rhode Island Airport Corporation was responsible for bringing 75 underground storage tanks (USTs) at six state airports into compliance with DEM regulations by the December 22, 1998 deadline. On RIAC's behalf, Mr. Hazebrouck directed an aggressive UST compliance program beginning in March, 1998 using a design/build project delivery approach for this fast-track, high profile project. Major project tasks included:



- completion of a UST needs assessment and prioritization program,
- prepared UST removal and above ground storage tank (AST) design plans and specifications,
- developed project specific UST closure procedures to streamline UST closure assessments,
- subcontracted for all construction and analytical services and performed construction management,
- developed streamlined process to coordinate decisions by RIAC, DEM and RI Dept. of Administrative Services,
- managed the remediation of 4,350 tons of contaminated soil,
- completed Site Investigation Reports and post-closure groundwater monitoring at T.F. Green, North Central, Quonset

in Soils Magazine, October, 1992.

- “Tough Environmental Laws Extend Liability for Contaminated Sites”, New England Real Estate Journal, 1987.
- “Heed Environmental Issues in Real Estate Transactions”, Providence Business News, September 2003.
- ”RIDEM’s Revised Hazardous Material Rule Makes Arsenic Levels in Soil Now Manageable”, New England Real Estate Journal, April 2005.