

ROBERT L. ZIMMER, P.G., P.E.

TITLE	Vice President, Senior Geologist, Senior Engineer; Geovation Engineering, P.C.
EXPERTISE	Groundwater Geology and Hydrogeology Hazardous Material and Waste Management Construction Management and Inspection Environmental Assessment/Site Characterization Contaminated Property Remediation and Restoration Permitting of Industrial Facilities Information Management and Presentation

TECHNICAL SKILLS

More than 22 years of multi-disciplinary technical and project-management experience in the evaluation of environmental media (groundwater, soil and air) and the design and permitting of environmental systems, including:

- Design and implementation of approved groundwater and soil investigation/remediation projects including fracture-trace analysis, well placement, design, installation, development and sampling; data analysis and interpretation; treatability/feasibility studies of remedial alternatives; remedial system specification, installation, construction management and O&M; regulatory interaction and permitting, cost estimating and report preparation including CADD preparation of design drawings
- Expertise with groundwater, soil and air monitoring sampling methodologies, technologies and equipment
- Contractor and construction management of the installation of both conventional and innovative remedial systems for removal of contaminants from soil and groundwater
- Program management of geophysical investigations; analysis and interpretation of geophysical data
- Computer analysis of geologic and geochemical data
- Preparation of air permits for industrial facilities and evaluation of storm water systems
- Innovative remedial technology identification and evaluation, including design analyses, bench-scale treatability studies and feasibility studies

SELECTED SPECIFIC PROJECT EXPERIENCE

- **Project Geologist, Remedial Investigation**, residential property, southern NY. Implemented a subsurface remedial investigation consisting of 26 boreholes at a site located in New York. Project included extensive interaction with Local and State regulatory agencies. Project responsibilities included selection and coordination of drilling team, soil and groundwater sampling, computer-aided data analysis, data interpretation and report preparation. Investigation focused on the microbial production of H₂S gas and the mechanisms of the release of H₂S gas to the ambient air.
- **Project Manager, Environmental Assessments** in New York, New Jersey, Connecticut, and Michigan. Directed property investigations including regulatory contacts, site visits, and report preparation. Coordinated soil sampling, groundwater sampling, and asbestos sampling; evaluated laboratory results; and made recommendations pursuant to environmental management. Site assessment in New York also served as a baseline document for an environmental impact statement (EIS) prepared for the site.

- **Project Manager, *Site Investigation of Properties Impacted by Neighboring Facilities***, southern NY. Performed property investigations designed to evaluate the impact on the subject property resulting from documented releases from neighboring facilities. Collected or directed the collection of soil and/or groundwater samples or evaluated existing data to ascertain the real or potential impacts to properties from environmental releases on neighboring properties. Prepared reports for clients and regulatory agencies summarizing findings.
- **Project Manager, *Pesticide Remediation Project, North Carolina***. Responsible for overall project management and on-site project management for multi-million dollar soil remediation project. Managed subcontractors and project administration for implementation of large-scale soil excavation, treatment, and treatment cell construction. Worked closely with city officials to facilitate redevelopment of property as a city park.
- **Project Manager, *Site Investigation of Chlorinated Compound Release***, southern NY. Performed and directed investigations at a facility utilized by a former industrial manufacturer of electronic components. Investigation methods included installation of soil borings, soil and groundwater sampling and the installation of soil-gas sampling points. Evaluated local and regional groundwater flow regimes. Prepared numerous reports for use by client and regulatory agencies.
- **Project Engineer, *Air Permit Application***. Prepared, signed, and sealed, Air Emission Permits for the discharge of subsurface soil vapor gases to the atmosphere in Westchester County, New York. Air permits were obtained from the Westchester County Health Department and included measured and calculated emission rates as well as technical drawings of the emission points.
- **Project Engineer, *Air Permit Application***. Currently in the process of interacting with a manufacturing company opening a light manufacturing operation in Rockland County, New York, preparing air emission permits from paint booths, screen printers, drying ovens and process line machinery. Air permits will be submitted to the Rockland County Department of Health and will include calculated air emission rates as well as technical drawings of the emission points.
- **Project Engineer, *Air Permit Application***. Prepared, signed and sealed, Air Emission Permits for the discharge of paint of booths emissions to the atmosphere in Rockland County, New York. The air permit was obtained from the Rockland County Health Department and included calculated emission rates based on inventory records of product use and blower motor specifications.
- **Project Manager, *Delisting of a Suspected Inactive Hazardous Waste Site***, southern NY. Reviewed Phase I investigation reports and documentation and independently evaluated site conditions. Interacted with client's counsel and held several discussions with senior NYSDEC regulators. Submitted delisting petition to NYSDEC based on the lack of evidence supporting the site's inclusion on NYSDEC's list of "suspected" inactive hazardous waste sites--success of the petition resulted in one of the first site delistings in New York State.
- **Project Manager, *Site Closure of Petroleum Impacted Properties***, southern NY. Performed site investigation activities to determine the nature and extent of soil and groundwater contamination. Designed remediation programs and performed progress monitoring of site conditions. Prepared reports for submission to clients and regulatory agencies, which included summaries of data, collected, discussions on site conditions and recommendations for additional actions. Obtained documents from NYSDEC stating no further action was required.
- **Project Manager, *DNAPL Characterization and Release Mitigation***, airline facility. Developed and implemented an investigation to determine sources and extent of soil/groundwater impacted by DNAPLs (chlorinated solvents). Responsibilities included regulatory meetings, subsurface investigations, and development of alternative methods of handling a hazardous waste stream. Directed prompt mitigation of DNAPL releases from suspected source areas.

- **Operations and Project Manager**, *Numerous Soil and Groundwater Bioremediation Programs*, NY and NJ. Performed analyses of environmental data to support specification and implementation of subsurface remediation programs based on Geovation's proprietary denitrification-based bioremediation (DBB) technology. Managed the installation, permitting and O&M phases of bioremediation programs for sites impacted by fuel oil and gasoline. Assisted Geovation's PI in the research, development and regulatory approval of Geovation's DBB technology.

EDUCATION and PROFESSIONAL TRAINING

M.S., Marine Environmental Sciences, State University of New York at Stony Brook. Multidisciplinary applied-science education with academic concentration in stratigraphy and sedimentology.

B.A., Geology, State University of New York at Potsdam.

40 Hour Hazardous Waste Health & Safety Training and 8 Hour Supervisor and Manager Health & Safety Training; Annual refresher training.

PROFESSIONAL LICENSES, REGISTRATIONS CERTIFICATIONS and AFFILIATIONS

Chairman, Planning Board of the Village of Greenwood Lake, NY

Licensed Professional Geologist (P.G. 003211-G); Pennsylvania

Licensed Professional Geologist (License No. 1634); North Carolina

Licensed Professional Engineer (License No. 082496-1), New York

Certified/Licensed for *Subsurface Evaluation*; NJDEP-BUST Certification No. 0019300

Registered Site Manager and Registered Environmental Consultant; North Carolina DENR

Member, American Geophysical Union (AGU), Hydrology Division



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