PROFESSIONAL PROFILE

CONTACT INFORMATION

Main: (856) 423-8800
Direct: (856) 832-3774
Email: pdownham@rouxinc.com
Website: www.rouxinc.com

402 Heron Drive
Logan Township, NJ 08085

EDUCATION

BS, Environmental Science, University of Southern Maine, 2005

PROFESSIONAL LICENSES

New Jersey Licensed Site Remediation Professional (LSRP), No. 628901

Peter Downham, LSRP

Vice President | Principal Scientist

EXPERIENCE SUMMARY

Over seventeen years of experience in the environmental/geotechnical consulting industry. Principal Scientist, Senior Scientist, Project Scientist, Staff Scientist and Staff Assistant Scientist at Roux and Environmental Scientist at Advantage Engineering.

TECHNICAL SPECIALTIES

Development and implementation of soil and ground-water investigation, remediation activities; groundwater fate and transport; UST investigations and environmental site assessments; development of NJDEP ISRA and PADEP Act 2 compliance strategies; due diligence support including the assignment of environmental liability costs for property acquisition, and technical support and cost review to insurance carriers associated with environmental liabilities.

REPRESENTATIVE PROJECTS

Investigation/Remediation

- Project Principal and LSRP for New Jersey Department of Environmental Protection (NJDEP) Industrial Site Recovery Act (ISRA) investigation activities for a metal machine factory in Fairfield, NJ. Constituents of concern include 1,4-dioxane, chromium and chlorobenzene. Completed Preliminary Assessment and Site Investigation report.
- Project Principal and LSRP for former metal manufacturing plant in Clifton, New Jersey. Responsibilities included completion of all ISRA activities including completion of Preliminary Assessment, Site Investigation, Remedial Investigation and Remedial Action. Contaminants included historic fill, metals, and PAHs. Remedy includes deed restriction, engineering controls (fencing and capping). Entire Site Restricted Use RAO issued for Site.
- Project Principal and LSRP for former pharmaceutical manufacturer in New Brunswick, NJ. Responsibilities included completion of ISRA activities including the completion of a Preliminary Assessment, Site Investigation and ultimately the issuance of an Unrestricted Use Response Action Outcome (RAO).
- Project Principal associated with the remediation of a 17-acre industrial complex in Brooklyn, New York. Investigation and remediation activities included closure of outstanding Resource Conservation and Recovery Act (RCRA) issues and navigating client through the New York Brownfield Cleanup Program (BCP). The client is developing site into a multi-story warehouse and logistics center.
- Project Principal and LSRP for a large chlorinated solvent plume associated with a clothing manufacturer in Vineland, New Jersey. Designed and managed the investigation and remediation of soil, vapor, and groundwater impacts. Remedial technologies included soil vapor extraction/air sparge, soil excavation, in situ chemical and biological injections and long-term groundwater monitoring (MNA).
- National Client Manager and Project Principal for Large Midstream Petroleum Company. Responsibilities include providing due diligence support in asset acquisition, management of investigation/remediation of portfolio of sites and general regulatory support with regard to environmental issues.
- Project Principal for a petroleum bulk storage terminal in Bangor, Maine. Responsibilities include regulatory compliance with MEDEP Chapter 600 Requirements. In addition, regulatory compliance was achieved, and the Site was closed out via use of LNAPL transmissivity evaluation.

- Project Principal for a petroleum bulk storage terminal in South Portland, Maine. Responsibilities include regulatory compliance with Maine Department of Environmental Protection (MEDEP) Chapter 600 Requirements. In addition, regulatory compliance was achieved, and the Site was closed out via use of light non-aqueous phase liquids (LNAPL) transmissivity evaluation. The use and subsequent approval of the transmissivity evaluation was the first in the State to gain regulatory approval by MEDEP.
- Project Principal and LSRP for large petroleum terminal in Linden, NJ. Primary responsibilities included the investigation of approximately 155 separate discharges ranging from 25 gallons of diesel fuel up to 7,000 gallons of transmix (diesel fuel, gasoline, and jet fuel). Additional responsibilities include the active recovery of LNAPL, and remediation of soil and groundwater impacts. In addition, soil and groundwater impacts are commingled with previous property owner and technical support is provided on a regular basis to client for defense of liabilities relating to new versus historic release.
- Project Principal and LSRP for ISRA investigation activities associated with 11 mile underground refined petroleum products pipeline that crosses multiple surface water bodies including the Delaware River. Responsibilities include the completion of a preliminary assessment and a thorough review of the history of the pipeline to determine appropriate sampling locations for site investigation purposes. Unrestricted Use RAO issued for the Site.
- Project Principal and LSRP for significant gasoline release (over 55k gallons) that initially impacted sediment, stream, and wetlands. After implementation of remedial activities (dual phase extraction, air sparge, and excavation) completed groundwater modeling to show impacts not reaching surface water body and receptors. Restricted Use RAO issued for the release.
- Project Principal and LSRP for the investigation and remediation of a large gasoline release at a bulk storage terminal in Mt. Laurel, new Jersey. Responsibilities included the characterization of large MTBE/TBA groundwater plume and remediation of groundwater via dual phase extraction and associated monitoring.
- Project Principal and LSRP for a large gasoline release at a pipeline pump station located in Southern New Jersey. Responsibilities included the management of emergency response operations being conducted 24 hours per day, investigation of soil and groundwater impacts, and providing interface with regulatory agencies on behalf of client. Additional evaluation of data was necessary to differentiate the release associated with the pipeline from historic impacts associated with the refining operations located at the adjacent property. Contaminants of concern included benzene, toluene, ethylbenzene, and xylenes.
- Project Principal and LSRP for diesel fuel release that discharged into the Delaware River resulting from a pipeline failure at a Petroleum terminal in Camden County, New Jersey. Responsibilities included the management of emergency response operations, investigation of soil and groundwater impacts, and provided interface with regulatory agencies (NJDEP, Coast Guard, and State Police) on behalf of client. Additional evaluation of data was necessary to differentiate the release associated with the pipeline from historic impacts associated with the former property owner. Contaminants of concern included benzene, toluene, ethylbenzene, and xylenes. Remedial Investigation and Remedial Action Report has been submitted and an Unrestricted Use Response Action Outcome (RAO) has been submitted for the discharge.
- Project team member for completion of a Technical Bid Package for a major petroleum client for the removal of all underground storage tanks at approximately 145 retail service stations that were being divested located throughout New Jersey. Activities included the vetting of contractors, and consultants and development of the scopes and site-specific schedule needed for each individual service station.
- Project team member for delineation and recovery of LNAPL at a large rail yard in Philadelphia, Pennsylvania. Activities included monitoring well installation, ground water and soil sampling, and reporting. Other tasks include the design and installation of LNAPL recovery system within the active rail lines and facility.
- Project Manager for numerous soil and groundwater investigations in New Jersey. Responsibilities included the development and implementation of investigation activities and development of conceptual site models.
- Project manager responsible for development and implementation of site remedial investigations and remedial action implementation at a current bus garage in Nutley, New Jersey. Constituents of concern include degraded petroleum products. Project duties include implementation of field work and management of contractors and staff, preparation of work plans and reports.
- Coordinated and managed various vapor intrusion investigations designed to monitor indoor air and sub slab vapor in accordance with NJDEP Vapor Intrusion Guidance. Based upon results of indoor air samples, completed recommendations to responsible parties on how to mitigate exceedances, including design and coordination of sub-slab depressurization systems and necessary NJDEP reporting.

- Project manager responsible for implementation of mitigation of immediate environmental concern (IEC) indoor air conditions, soil delineation activities, completion of NJDEP forms, interaction with client and NJDEP for dry cleaning facility located in Cherry Hill, NJ. Project included design of sub-slab depressurization system and development of site-specific impact to groundwater standards.
- Project Manager responsible for development and implementation of ISRA related activities for a former paper company located in Clark, NJ. Project responsibilities include preparation of work plans and reports, implementing field work and management of contractors and staff during investigation and remediation activities. Contaminants of concern included poly aromatic hydrocarbons (PAHs), chromium, and benzene. Due to property transaction requirements, all work was completed within a short time period to allow the property transaction to occur. And a final RAO was issued.
- Project team member for an ISRA Site Investigation and Remediation project at a former industrial gas plant in Bergen County, New Jersey. Contaminants of concern included buried compressed gas cylinders, chlorinated solvents, and historic fill.
- Project Manager for ISRA project at a concrete quarry in Northern New Jersey. Responsibilities included implementation of quarterly groundwater sampling events to monitor the effectiveness of remediation activities and fate and transport modeling to determine extent of Classification Exception Area (CEA).
- Project team member and field manager for SI and RI activities at a former large glass factory in Southern New Jersey. Responsibilities included the management and implementation of field activities, data evaluation and reporting. Contaminants of concern included PAHs, metals, and volatile organic compounds (VOCs).
- Project team member and field manager for a former bus garage and now active multi-tenant garage in northern NJ. Coordinated and managed the investigation of the following media: soil; groundwater; and vapor (sub-slab and indoor air). In addition, provided support to client to develop a site-wide approach to investigating and remediating the Site to minimize disruption to the current tenants.
- Completed an extensive vapor intrusion (VI) investigation that included sub-slab soil gas and indoor air sampling in off-site residences that were triggered due to dissolved VOCs in groundwater. Prepared detailed VI Investigation Work Plans for two off-site industrial properties that were approved by the NJDEP Case Manager. Worked with the off-site facility managers to gain access to collect sub-slab soil gas samples within the manufacturing areas of the facilities. Completed VI investigation reports that were submitted to and approved by the NJDEP Case Manager.
- Project manager for pet products manufacturing plant in Northern New Jersey that contained a large chlorinated solvent groundwater plume that extends to 400 feet Bgs. Responsibilities included the management and implementation of investigation activities, development of workplans and reporting. In addition, completed compound specific isotope analysis to prove offsite sources were contributing to groundwater impacts discovered on-site.

Due Diligence/Property Acquisition Support

- Project Principal and LSRP associated with assisting client with the acquisition of a former steel manufacturing plant in Piscataway, New Jersey. Responsibilities included completion of initial due diligence support; assigning environmental liability costs to allow client to negotiate with seller and providing design; and management and direction for the remediation of chlorinated volatile organic compounds (CVOCs) in groundwater and polychlorinated biphenyls (PCBs) in soil. Additional activities included the development of a 3D conceptual site model (CSM) for complex geological framework at the site and implementation of in situ chemical reduction of CVOC-impacted groundwater in fractured bedrock by pnuematically enhancing the fractured bedrock and injecting 400,000 pounds of carbon and zero-valent iron (ZVI) substrate as deep as 130 feet below ground surface (bgs). PDI and remedial activities were implemented within strict one year timeline to meet proposed future redevelopment of the property.
- Project Principal for all environmental due diligence activities associated with the potential acquisition of a former landfill impacted with cyanide located in Carteret, New Jersey. Responsibilities included completion of initial due diligence support and assigning environmental liability costs to allow client to negotiate with seller.
- Project Principal for all environmental due diligence activities associated with the acquisition of a former plastics manufacturing plant impacted with CVOCs and perfluorooctanesulfonic (PFOS) located in Howell, New Jersey. Responsibilities included completion of initial due diligence support and assigning environmental liability costs to allow client to negotiate with seller.
- Project Principal for all environmental due diligence activities associated with the acquisition of a former military research and development (R&D) facility impacted with CVOCs and PFOS located in Belleville, New Jersey. Responsibilities included completion of initial due diligence support and assigning environmental liability costs to allow client to negotiate with seller.

- Project Principal for all environmental due diligence activities associated with the potential acquisition of a former 100-acre petroleum terminal in Staten Island, New York.
- Project Principal for all environmental due diligence activities associated with the acquisition of a warehouse facility (former furniture manufacturer and printing press) in Patterson, New Jersey. The due diligence activities discovered six (6) underground storage tanks that were previously unknown and causing impacts to both soil and groundwater.
- Project Principal for a third-party review and due diligence associated with the acquisition of a portfolio of petroleum terminals located in northern New Jersey. Responsibilities included the review of ISRA activities completed by the terminal owner to ensure they are completed pursuant to NJDEP regulations and that our client's assets are protected in the future. Recommendations are provided to the client on a regular basis which are then forwarded to the former terminal owner, which are either addressed or at the least documented and filed in the event the concerns come to light in the future.
- Project Principal associated with the completion of environmental due diligence activities for the acquisition of multiple Sites in Western Pennsylvania. The Sites were acquired for the construction of a refined petroleum products pipeline. In addition, support was provided during construction activities for the relocation of thousands of cubic yards of soil where the material was reused, and the Client incurred significant costs savings since it did not have to be disposed of at a landfill.
- Project Principal for all environmental due diligence associated with the acquisition of three petroleum bulk storage terminals in Trenton, New Jersey. Responsibilities included identifying and assigning costs to environmental liabilities. After the acquisitions, was retained as the LSRP to ensure compliance with ISRA.

Litigation Support

- Provided litigation support, including expert witness testimony to counsel and insurance carrier associated with the fate and transport, and forensic evaluation from leaking underground storage tanks and the standard of care of the installation and abandonment of underground storage tanks.
- Provided litigation support to counsel and insurance carrier regarding the standard of care associated with the proper anchoring of an above ground storage tank.
- Provided litigation support to counsel and insurance carrier involving the standard of care associated with the handling and disposal of acid producing soils.
- Provided litigation support to counsel and insurance carrier involving the standard of care associated with a fuel delivery company and their negligence of a leaking underground storage tank.

Insurance

- Project Manager for development and implementation of site/remedial investigations of hexavalent chromium in soil and groundwater at an aluminum manufacturing facility in southern New Jersey. Areas of concern include site wide groundwater in multiple water bearing units. Responsibilities include development of groundwater monitoring network and implementation of site-specific sampling program, technical evaluation of groundwater flow in both the perched and regional aquifers, evaluation of localized draw down from area supply wells, effects of tidal fluctuation on groundwater flow, fate and transport modeling, development of site-specific impact to groundwater standard and management of field personnel and sub-contractors and reporting.
- Project Principal for industrial site in Southern New Jersey that contained large chlorinated solvent groundwater plume that involved delineation and remediation through soil vapor extraction and air stripping remediation technologies. In addition, completed compound specific isotope analysis to determine if offsite sources were contributing to groundwater impacts.
- Project Manager responsible for management of 50+ residential UST remediation projects involving third party impact on behalf of the insurance carriers. Remediation technologies include in situ chemical oxidation, in situ bioremediation, enhanced fluid recovery and excavation with helical pier support of structures. Additional claim support activities include technical claim support, and litigation support for third party cost recovery.
- Project manager for implementation of quarterly groundwater sampling, soil and groundwater investigations and remedial actions at active gas station located in Plymouth Meeting, Pennsylvania. Responsibilities included interactions with client, Pennsylvania Department of Environmental Protection (PADEP) and the Underground Storage Tank Indemnification Fund (USTIF). Other responsibilities included completion of quarterly groundwater sampling reports submitted to PADEP, and design of ISCO remediation for site closure.
- Claim review for large insurance company for removal of four 20,000-gallon fuel tanks and associated remediation activities at retail gas station in Charles Town, West Virginia. Responsibilities technical review of remedial strategy for effectives and costing and recommendations to insurance carrier.

PROFESSIONAL TRAININGS

OSHA 40 Hour Health and Safety Trained

PUBLICATIONS

"Remediation of Lead in Urban Soils," Soil Science Society of America Meeting, Seattle, WA, 2004.

Downham, P., Wynne, L (2016). SRRA: Are We Better Off Four Years Later? *New Jersey Law Journal*, July 15, 2016.