ROUX





CONTACT INFORMATION Main: (856) 423-8800 Direct: (856) 832-3778 Email: <u>mmchugh@rouxinc.com</u> Website: <u>www.rouxinc.com</u>

402 Heron Drive Logan Township, NJ 08085

EDUCATION

MS, Engineering Geology, Drexel University, 1997 BA, Geology, Colgate University, 1986

PROFESSIONAL LICENSES

Licensed Geologist in Pennsylvania #01332-G New Jersey – Licensed UST Subsurface Evaluator #0011866

Monica McHugh, PG

Technical Director

EXPERIENCE SUMMARY

Over thirty-five years of experience. Technical Director and Senior Hydrogeologist at Roux; Project and Senior Geologist at URS Corporation (Dames & Moore); Project Hydrogeologist at Groundwater and Environmental Services, Inc. (GES); Hydrogeologist at GHR/Haufler, Inc.; and Environmental Technician at Enroserv Inc.

TECHNICAL SPECIALTIES

Implementation and management of soil and groundwater investigations and remediation at New Jersey ISRA, Superfund, Pennsylvania Act 2, and industrial/commercial sites; and due diligence support.

REPRESENTATIVE PROJECTS

- Project Manager and/or Principal Investigator for numerous Phase I/Phase II Environmental Site Assessments conducted at industrial and commercial facilities and undeveloped properties across the United States, including a project involving over 180 retail gasoline service stations located in Mid Atlantic and New England states.
- Project Manager and Principal Investigator for due diligence/compliance audits performed at industrial facilities located throughout the United States. Compliance issues addressed include RCRA, SARA, ASTs, USTs, NPDES/storm water discharges, industrial wastewater discharges to POTW facilities, PCB storage, solid waste, and air.
- Project manager and/or Principal Investigator for numerous New Jersey Industrial Site Remediation Act (ISRA) Preliminary Assessment, Site Investigation, Remedial investigation, and Remedial Action projects.
- Project manager of soil and groundwater investigations and preparation of Site Characterization Reports for numerous Pennsylvania Land Recycling (Act 2) sites including retail gasoline stations and former/current industrial facilities.
- Project manager and/or Principal Investigator for on-site and offsite soil and groundwater investigations around a former refinery in New Jersey.
- Project Manager/Hydrogeologist for a remedial action project at a Superfund site for over 10 years. The client was the sole financially viable PRP for a chlorinated hydrocarbon plume that had impacted residential drinking water wells finished in fractured bedrock. The Site has been delisted having achieved complete remediation of soil and groundwater. No follow-up monitoring is required.
- Project Manager for a New Jersey Remedial Investigation project involving the delineation of hexavalent chromium impacted soil and groundwater and preparing a conceptual site model to be used for remedial design. Soil investigation included the calculation of a Site-Specific Impact to Groundwater Soil Remediation Standard for hexavalent chromium using Synthetic Precipitation Leachate Procedure (SPLP) methodology.
- Project Manager/Hydrogeologist for a remedial action project at a regulated gasoline Underground Storage Tank (UST) site in Monmouth County New Jersey. The plume has been delineated offsite and on-site remediation involves air sparging and vacuum extraction. Onsite groundwater contaminants have decreased to below groundwater quality standards.



- Project Manager/Hydrogeologist for a remedial action project at a regulated gasoline and diesel UST site in Philadelphia, Pennsylvania. A Site Characterization report and a Remedial Action Completion Report were approved by the Pennsylvania Department of Environmental Protection resulting in a determination of no further action.
- Project Manager/Hydrogeologist for a New Jersey dry cleaning remedial investigation and remediation project addressing tetrachloroethene-impacted soil and groundwater.
- Project Manager/Hydrogeologist for an ISRA Site Investigation and Remediation project at a former glass manufacturing facility in Burlington County, New Jersey. Remediation included dewatering and excavation of petroleum contaminated soil within a substation, and calculation of site-specific Impact to Groundwater Soil Remediation Standards for metals using SPLP methodology.
- Project Manager/Hydrogeologist for an ISRA Site Investigation and Remediation project at a former industrial gas plant in Bergen County, New Jersey with buried gas cylinders, chlorinated solvent impacts, and historic fill.
- Project Manager/Hydrogeologist for an ISRA Site Investigation and Remediation project at a former gasoline station. An Innovative Technology grant was applied for and approved for partial funding of the remediation.
- Project Manager/Hydrogeologist for a third-party oversight project involving soil and groundwater investigation at an airport fuel farm.
- Project Manager for a quarterly ground-water sampling program at a chemical plant in New Jersey. Ground-water sampling is being conducted to monitor volatile organic contaminants in a coastal plain aquifer that have impacted several municipal public water supply wells.
- Project manager for two quarterly ground-water sampling programs at a chemical plant in New Jersey being conducted in accordance with an Administrative Consent Order and a RCRA post-closure permit.
- On-site contract compliance work for a steel plant, including compiling historic PCB equipment and disposal information and creating a PCB log compliant with TSCA regulations.
- Project Manager/Hydrogeologist for over 10 years for an ISRA project at a 13-acre former manufacturing facility impacted by dissolved and free-phase chlorinated solvents (primarily TCE) in overburden (glacial till) and fractured bedrock (sandstone/mudstone of the Brunswick Group).
- Project Manager and Principal Investigator for storm water sampling and preparation of PCB Minimization Plans for several

industrial facilities in Pennsylvania subject to the total maximum daily load (TMDL) requirements of the Delaware River Basin Commission's Estuary Toxics Management Program.

- Preparation of an Energy Recovery System Solid Waste Facility Permit Renewal Application for an incinerator at a pharmaceutical facility in New Jersey.
- Principal Investigator for environmental financial reserves audits conducted at laboratory products manufacturing and warehouse facilities located throughout the United States, Canada, and Mexico.
- Project Manager and Principal Investigator for a storm water inspection and compliance audit at a steel manufacturing facility in Pennsylvania.
- Principal Investigator for a detailed OSHA compliance audit conducted at an electronics manufacturing facility in New York.
- Auditor for semiannual compliance audits conducted at multiple mills located in Massachusetts and New York operated by a paper product manufacturer.
- Auditor for periodic compliance audits conducted at multiple plants operated by a food product manufacturer.
- Health, safety, and environmental compliance audit team member for multiple airport locations of an airline service company, including a review of airport-specific issues such as ramp access and traffic control, foreign object damage (FOD) control, deicing material management, and airport vehicle maintenance.
- Principal Investigator for health, safety, and environmental compliance audits conducted at animal pharmaceutical facilities located in Maryland and West Virginia.
- Principal Investigator for health, safety, and environmental compliance audits conducted at pharmaceutical facilities located in Pennsylvania and Massachusetts.
- Project manager and principal investigator for environmental risk assessments conducted for Pollution Legal Liability (PLL) underwriters at a hazardous waste treatment, storage, disposal (TSD) facility and chemical manufacturing facilities in New Jersey.
- Project Manager for an annual Consumer Confidence Report (water quality report) project for a national drinking water supply company. Managed project team that provided data gathering support, data input, database development and management. Performed regulatory compliance review and report quality assurance review and generation.
- Project manager and compliance audit team member for health, safety, and environmental compliance audits





conducted at upstream natural gas facilities, natural gas, crude and oil pipelines, oil refineries, and petrochemical facilities at locations in the United States, Canada, Australia, Mexico, and Brazil for a major oil company.

- Project Manager and Principal Investigator for over 5 years for an ISRA project at a former pharmaceutical laboratory in New Jersey impacted with chlorinated solvents and PCBs.
- Project Manager for over 5 years for an ISRA Site Investigation and Remediation project in New Jersey. The former manufacturing facility had two sumps that contained oil contaminated with chlorinated solvents. The sumps had leaked and impacted soil and groundwater under the building.
- Project Manager and Principal Investigator for an ISRA project at an electronic appliance manufacturing facility located in New Jersey. The Preliminary Assessment identified over 20 potential areas of concern across the 20+-acre site. Through extensive photo documentation and presentation of the results of interviews and site document review, the site received a No Further Action approval without sampling or remediation required.
- Project Manager for a litigation support project in an industrial park in New Jersey. The client owned an active manufacturing facility being sued by a nearby property owner for claims of environmental impairment based on the plaintiff's findings of groundwater impact from an ISRA investigation. The suit was settled out of court for less than 5% of the original claim.
- Project Manager for a biannual groundwater and surface water sampling project in Pennsylvania. The facility was utilized as a disposal site for oil refinery operations waste.
- Project Manager and Principal Investigator for a soil and groundwater investigation project at a former oil terminal in Atlantic City, New Jersey.
- Project Manager for an Underground Storage Tank (UST) Closure Investigation in New Jersey with extensive free-phase petroleum product. Negotiations with the state led to approval of a periodic free product removal program rather than a permanent pump and treat system.

- Project Manager and Principal Investigator for a RCRA Post-Closure Monitoring site in Pennsylvania. The facility closed its surface impoundments in 1985. Managed quarterly groundwater monitoring and statistical analysis, as required by the RCRA post-closure permit. In addition, a hydrogeological investigation of the effectiveness of the groundwater abatement system was conducted and plans for treatment modifications required by an impending NPDES renewal were prepared.
- Project Manager and Principal Investigator for a dioxin sampling project conducted at an electrical substation at which a fire occurred involving several transformers. The analytical data was evaluated by a toxicologist and a report was prepared for the client, a Pennsylvania utility company.
- Environmental support, including data compilation and evaluation and report preparation, for a mercury spill cleanup project for a Pennsylvania utility company. The spill was discovered in a residence and was allegedly from a basement gas meter.
- Project Manager and Principal Investigator for environmental compliance audits conducted at two fossil fuel electrical generating stations and three maintenance facilities operated by a Pennsylvania utility company.
- Contract environmental work for a Pennsylvania fossil fuel cogeneration plant. Assignments involved storage tank, hazardous and residual waste, water withdrawal, air, and emergency response plan issues.
- Environmental awareness training document preparation for a group of waste anthracite (culm) coal processing facilities in Pennsylvania.
- Project Manager and Principal Investigator for Treatment, Storage, and Disposal (TSD) facility audits conducted at six scrap metal and fluorescent light recycling facilities for a Pennsylvania utility company.

PROFESSIONAL TRAININGS

OSHA 40 Hour Health and Safety Trained