



# PROFESSIONAL PROFILE

## Majda Rabah, PhD, PE, LSRP

### Principal Engineer



#### CONTACT INFORMATION

Main: (732) 584-6500

Direct: (732) 584-6538

Email: [mrabah@rouxinc.com](mailto:mrabah@rouxinc.com)

Website: [www.rouxinc.com](http://www.rouxinc.com)

300 Atrium Drive, Suite 403  
Somerset, NJ 08873

#### EDUCATION

PhD, Environmental  
Engineering, Stevens Institute  
of Technology, 2002

MSc, Environmental  
Engineering – International  
Institute for Infrastructure,  
Hydraulics, and  
Environmental Engineering  
(IHE), 1995

Diploma Sanitary Engineering,  
IHE, 1994

BSc, Civil Engineering, Birzeit  
University, 1991

#### PROFESSIONAL LICENSES

Professional Engineer (NJ) 2006

Licensed Site Remediation  
Professional (NJ) 2011

#### EXPERIENCE SUMMARY

Over twenty-five years of experience: Principal Engineer at Roux, Principal Engineer at Arcadis US, Inc., Associate Project Manager at Langan Engineering & Environmental Services, and Project Engineer at Remedial Technology & Engineering.

#### TECHNICAL SPECIALTIES

Remedial investigation and remedial action design and implementation at hazardous waste sites under various state (NJDEP, NYSDEC, SCDHEC) and federal (CERCLA, RCRA) regulatory programs.

#### REPRESENTATIVE PROJECTS

- **Lower Passaic River Superfund Site, Senior Project Manager.** Responsibilities included preparing financial progress reports, budgetary planning and tracking, account receivable processing and tracking, monitoring and updating project schedule, preparing periodic cash flow analyses, and forecasting and preparing annual project budgets.
- **Former Clay Mining Facility, Senior Project Manager and Lead Remediation Engineer.** Responsibilities included negotiations with the regulatory agency and the LSRP, design and evaluation of remedial investigation/remedial action, and site closure.
- **Insulation Manufacturing Facility, Senior Project Manager and Lead Remediation Engineer.** Responsibilities included the design and implementation of remedial investigation, and the use of modeling to identify the limits of onsite impacts versus offsite impacts. The information was presented to the regulatory agency and LSRP and the Site was brought to closure.
- **Former Pharmaceutical Manufacturing Facility, Senior Project Manager and Lead Design Engineer.** Responsibilities included design and implementation of an in-situ remediation system for chlorinated volatile organic compounds in bedrock, and implementation of a post-treatment monitoring system.
- **Former Chemical Manufacturing Facility, Senior Project Manager, Regulatory Advisor, and Technical Advisor.** Work included operation and maintenance of an active groundwater treatment system to maintain hydraulic control, implementation of active in-situ groundwater remediation, and routine, long-term groundwater monitoring.
- **Former Water Heater/Radiators Manufacturing Facility, Senior Project Manager and Technical Lead.** The Site was undergoing active soil and groundwater remediation. Due to vapor intrusion concerns, an active sub-slab depressurization system was installed, operated, and maintained. Hot-spot soil excavation was conducted along with development of site-specific soil remediation standards and compliance averaging to bring the soil case to closure. For groundwater, active in-situ remediation was implemented to remediate chlorinated volatile organic compounds in the overburden aquifer.
- **Guidance and Navigation Manufacturing Facility, Technical Advisor for ISRA/RCRA 2020 Site.** An in situ remedial system was in place for chlorinated solvents in soil (saturated zone) and groundwater. Work included monthly injections, groundwater sampling, soil investigation, surface water sampling, sediment sampling and reporting to the NJDEP/USEPA. Vapor intrusion investigation and evaluation were conducted at the Site. Sub-slab soil gas impacts were identified. Long-term indoor air monitoring is currently conducted at the Site.

- **Former Printing Facility, Technical Lead and Regulatory Advisor.** Work included implementation of pilot-scale and full-scale in-situ groundwater remedial system and monitoring program (ISCO injections in bedrock along with pneumatic fracturing), application for and procurement of NJDEP permits (short-term and long-term permit-by-rule applications), vapor intrusion evaluation, and reporting to the NJDEP.
  - **Former MGP Site, Project Manager for Remediation of Soil.** Work included delineation of DNAPL in soil, DNAPL recovery pilot-scale test, soil excavation and offsite disposal, sediment dredging and restoration of an on-site/off-site creek, and wetlands mitigation.
  - **Former Industrial Facility, Project Manager.** The Site was remediated under the Brownfields Act. Work included report preparation to the NJDEP, implementation and evaluation of multi-phase SI/RI programs, QA/QC inspection of the remediation and environmental construction activities, application for and procurement of NJDEP permits, co-development and implementation of remedial system operation, maintenance, and monitoring programs, coordination of HDSRF grants and other remediation funding, and coordination of public outreach programs.
  - **Manufacturer of Wood Protection Products, Technical Lead.** Work included evaluation of remedial alternatives, application for NJDEP permitting, and implementation of large-scale in-situ chemical oxidation to remediate toluene in groundwater.
  - **New Jersey Schools Development Authority, Project Manager.** Work included site investigation (soil and groundwater), remedial investigation, implementation of a pilot-scale in-situ chemical oxidation test, and data evaluation and reporting.
  - **Former Supplier of Industrial Gases and Equipment Facility, Technical Lead.** Work included evaluation and optimization of a soil vapor extraction/air sparge treatment system designed by others.
  - **Former Aerospace, Automotive and Engineering Company, Technical Lead.** The Site was developed as a home improvement store. Work included evaluation of an active vapor intrusion mitigation system, risk-based analyses of vapors to determine the required NJDEP permitting, and operation and maintenance of the mitigation system (sub-slab depressurization system).
  - **Former Manufacturer of Polyvinyl Chloride (PVC) Resins, Chlorine and Caustic Soda, Technical Lead.** Work included evaluation of several remedial alternatives for chromium-impacted soil and groundwater, and remedial action implementation. Currently the Site is undergoing long-term monitoring for groundwater impacts.
  - **Municipal Public Works City Yard, Project Manager and Technical Lead.** Work included the design and implementation of an in-situ chemical oxidation treatment system using PermeOx Plus. This site was the first in New Jersey to receive NJDEP's approval for the use of PermeOx Plus as oxidant.
  - **Refinery, Project Manager.** Work included evaluation of remedial alternatives to be implemented at several areas of concern at the refinery.
- ### LSRP Projects
- **Doremus Avenue, Newark, NJ.** Spill Act Discharge (closed with an Unrestricted Use Response Action Outcome (RAO) using Alternative Remediation Standards).
  - **FMC Innovation Center, Ewing, NJ.** ISRA Leasehold Portion Case (closed with a site-wide unrestricted use RAO).
  - **FMC Former Research and Development Facility, Plainsboro, NJ.** ISRA/RCRA GPRA 2020 site (groundwater and soil Remedial Action Permits with a Limited Restricted RAO site wide).
  - **Kooltronic Incorporated, Hopewell, NJ.** ISRA Case (soil Remedial Action Permit), ongoing active in-situ groundwater remediation, and an immediate environmental concern due to vapor intrusion.
  - **Lucas Aerospace.** ISRA Case (groundwater Remedial Action Permit and a site wide RAO [Limited Restricted Use RAO]).
  - **Former Bristol-Myers Squibb, Hillside, NJ.** ISRA Case.
  - **Clay Street, Newark, New Jersey.** Spill Act Discharge.
  - **Johnson and Johnson, New Brunswick, NJ.** Childcare center (Historic Fill-related Soil Remedial Action Permit with a Limited Restricted RAO site wide).
  - **Johnson and Johnson IT IS, Raritan, NJ.** Spill Act Discharge. Entire site Unrestricted Use RAO.
  - **Johnson and Johnson Consumer Products, Morris Plains, NJ.** Spill Act Discharge (Historic Fill). Unrestricted use RAO-A was issued.
  - **RF Products, Camden, NJ.** Spill Act Discharge.
  - **Kester Solder, Inc., Newark, NJ.** ISRA Case (groundwater Remedial Action Permit with a Limited Restricted RAO site wide).
  - **Litton Systems Incorporated, Passaic, NJ.** ISRA Case (soil Remedial Action Permit; groundwater investigation is ongoing).
  - **Binel Equities, Newark, New Jersey.** Spill Act Discharge.
  - **AM Pharm Corp, Fairfield, New Jersey.** ISRA Case.



- **Former Fluid Systems, Inc., Fairfield, NJ.** ISRA Case (soil Remedial Action Permit).
- **R & F Alloy Wires, Inc., Fairfield, NJ.** ISRA Case.
- **Sigma Netics, Inc., Fairfield, NJ.** ISRA Case.
- **Delta Service Station, Franklin Township, NJ.** Spill Act Discharge.

**PUBLICATIONS**

*Grey Water Treatment in Immobilized Cell Packed Bed Reactors for Use Under Microgravity Conditions*, SAE Technical Paper Series: 1999-01-1946, 29th International Conference on Environmental Systems, 1999.

*Development of a Gravity-Independent Wastewater Bioprocessor for Advanced Life Support in Space*, Water Resources Research, 2005.

*A Gravity Independent Biological Grey Water Treatment System for Space Application*, Doctoral Dissertation, 2002.

*Wastewater Treatment Strategies in Palestine*, Master's Thesis, 1995.

**RESEARCH SUMMARY**

Developed a gravity independent, biological wastewater treatment system for advanced life support programs in space. A prototype of the treatment system was patented and is being tested at the NASA Johnson Space Center, Houston, Texas (PhD research project).

Performed a feasibility study on the application of low-cost, on-site wastewater treatment technologies for remote villages in areas with no sanitary sewer systems.

Developed a master plan for housing, transportation, water, and wastewater sectors for an urban community.