

TECHNICAL SPECIALTIES

Mr. Michalanko is a Senior Scientist and Ecologist with over 19 years' experience evaluating ecological risks/toxicology from environmental hazards. Mr. Michalanko's background both as an ecologist and environmental toxicologist provides full-spectrum support for all ecological components involved in remedial investigations and environmental toxicology issues. Mr. Michalanko's areas of expertise include:

- Ecological risk assessment (ERA);
- Toxicological exposure assessment;
- Toxicological evaluations;
- Wetlands delineation, permitting and mitigation;
- Site investigation and remediation;
- Natural Resource Damage (NRD) evaluations and assessment;
- Literature reviews and summations to ascertain ecological toxicity of emerging contaminants;
- Statistical data analysis, including ProUCL;
- Ecological bioassay, bioaccumulation and population study assessments;
- Bioavailability assessments of organics and inorganics in sediment and surface water;
- Threatened and endangered species evaluations and habitat assessments.

In addition to Mr. Michalanko's work in the fields of ecological risk and toxicology, he has also served as a project manager and field team leader for multiple Superfund investigations along the East Coast, having successfully managed complex budgets, large project teams, and challenging logistics. Mr. Michalanko is also lead technical/project manager for many compliance-related environmental issues and is experienced in the following areas of compliance support:

- Stormwater permitting, design and compliance;
- USEPA Clean Water Act compliance and reporting;
- Development and review of emergency response plans including: SPCCs, PPC and DPCC/DCRs
- Regularity compliance auditor with over 8 years of conducting comprehensive environmental, health and safety audits for firms nationwide.

CREDENTIALS

B.S., 2000, Biology (Ecology), Ursinus College, Collegeville, PA

M.S., 2006, Environmental Toxicology & Environmental Science, Drexel University, Philadelphia, PA

EXPERIENCE SUMMARY

- Senior Ecologist at Roux Associates, Inc. (2011-present);
- Environmental Scientist/Ecological Risk Assessor at Golder Associates (2007 – 2011);

- Environmental Scientist/Ecological Risk Assessor at Black Veatch (2000 – 2007)

KEY PROJECTS

- Lead Ecological Risk Assessor for the Columbia Falls Aluminum Company site in Columbia Falls, MT. Project work included conducted a full-scale habitat assessment of over 1,000 acres of varying habitats as well as completion of an ERA that included toxicological review of potential ecological risk from introduction of cyanide and fluoride in aquatic and terrestrial habitats.
- Lead Ecologist evaluating dioxin and furan impacts to wildlife receptors at the former Ecolab property in Avenel, NJ. Project work included estimates of potential ecological toxicity to mammalian and avian species.
- Lead Ecological Risk Assessor for the former Bishop Tube site in East Whiteland, PA. Project work included conducted a statistical evaluation of sediment and surface water data, as well as, ecological exposure estimate evaluation for a high-quality waterway located adjacent to the former Site.
- Lead Ecologist for the former Corpus Christi Alumina site in Gregory, TX. Project work overseeing a large-scale sediment sampling effort in the La Quinta Channel in Corpus Christi Bay and statistical evaluation of sediment data to determine potential toxicological risks from former site operations. Evaluations were presented in an ERA submitted to the TCEQ.
- Lead Ecologist for a New York State Department of Conservation (NYSDEC) Fish and Wildlife Resources Impact Analysis (FWRIA) of potential ecological impacts associated with metals in sediments within an approximately 18-mile portion of the Upper Hudson River downstream of a former pigment manufacturing facility. Project work included the identification and description of fish and wildlife resources in aquatic and riparian habitats within the study area. Analysis of potential in-stream ecological impacts focuses on the identification of likely fine-grained sediment deposits outside of areas that have been remediated by other parties. Developing a metals assessment strategy for sediment based on analyses of pore water, acid volatile sulfides (AVS), and simultaneously extractable metals (SEM) to identify site-specific exposure conditions that influence the bioavailability and toxicity of metals.
- Lead Ecologist of a comprehensive investigation to assess the potential effects of DDT and its metabolites in sediments from tidal portions of the Raritan Estuary system. Based on a thorough review of existing reports and data, was able to determine that under the existing conditions there were no impacts

to populations of aquatic receptors and semi-aquatic wildlife in the thereby limiting intrusive sediment remediation to the estuary.

- Ecological Project Manager for the Sharon Steel Superfund Site ecological risk assessment located in Sharon, PA. Coordinated and conducted various sampling efforts and literature review for evaluation of toxicological impacts from former slag piles. Field work included extensive surface water, sediment, soil, as well as, fish, benthic macroinvertebrate, amphibian, reptile and small mammal tissue.
- Lead Ecologist assessing natural resource injury associated with sediments in a mercury-impacted river associated with a former textile manufacturer in Waynesboro, VA. The sediment injury assessment included the evaluation of mercury-associated effects on benthic invertebrate receptors based on sediment toxicity, sediment, pore water, and benthic community studies. The approach and the characterization of exposure based on relevant sediment types. Also conducted statistical analyses to support the quantification of potential injuries to the warm-water fishery within the system.
- Ecological Project Manager for the both the Clearview and Folcroft Landfills ecological risk assessments located in Lower Darby, PA. Coordinated and conducted various sampling efforts for evaluation in the ERA process, including, surface water, sediment, soil, landfill leachate, as well as, fish tissue. Prepared the final ERA, including food chain modeling, for USEPA submittal.
- Lead Ecologist and Remedial Investigation (RI) Field Team Leader for Callaway and Son Drum Service Superfund Site in Lake Alfred, FL. Lead for all RI and ecological sampling efforts, including lagoon sediment and surface water sampling, as well, as surface soil sampling. Prepared the final ERA, including food chain modeling, for USEPA submittal.
- Lead Ecologist and RI Field Team Leader for the Standard Chlorine Superfund Site remedial investigation in New Castle, DE. Tasks conducted include oversight of soil investigations, well installations, groundwater sampling, as well as, ecological sampling of sediment, surface water, and fish tissue in nearby Red Lion Creek. Conducted literature review and provided statistical analysis of data to ascertain potential bioavailability of chlorobenzenes in aquatic habitats. Preparation of the final ERA submitted to USEPA.
- Lead Ecologist and RI Field Team Leader for the Big John's Superfund Site ecological investigation in Fairmont, WV. Tasks conducted include oversight of vibracore sediment samples in the Monongahela River

and surface water sampling, as well as, as well as completion of the ERA submitted to USEPA.

- Lead Ecologist and RI Field Team Leader at the Trinity Industries site in Greenville, PA. Conducted literature reviews to ascertain and properly investigate migration pathways for ecological exposure to groundwater constituents present from historic site operations. Coordinated and conducted various sampling efforts for evaluation in the ERA and RI process, including, surface water, groundwater sediment and soil.
- Wetland delineator for over 100 wetland delineations throughout the eastern United States utilizing both U.S. Army Corp and State Agency delineation methods.
- Conducted over 50 threatened and endangered species surveys throughout the northeast and California. Investigations included potential solar plant development areas and multiple Superfund sites in PA, DE, and MD as part of remedial investigation/feasibility studies.
- Key field member for the construction of the Norfolk Naval Shipyard wetlands at the Scott Center Landfill. Included development of an emergent/scrub-shrub wetland and open water habitat.
- Key field member for wetland mitigation at the Central Chemical site in Maryland. Project included including the removal of the invasive common reed that dominates the degraded marshland portion of the property, re-grading of the property, and planting of new, native wetland vegetation.
- 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.
- Field Team Leader for multi-phase investigations at over twenty Superfund sites nationwide. Responsible for all phases of the investigations from project budgeting and scheduling, overseeing and conducted sampling of multiple media (soil, groundwater, surface water, sediment, air and biota); as well as data review and report prep.
- Provided support for the design and implementation of an onsite groundwater treatment system for Superfund Sites nationwide. Oversaw all aspects of the projects from initial design to construction oversight.
- Project Manager for groundwater treatment system operation and maintenance for numerous facilities throughout NJ, DE, and PA.

- Project Manager for ISRA RI/RA at a former paint and pigment manufacturing facility in Paulsboro, NJ. Constituents of concern include chlorinated VOCs in both soil and ground water. Remedial activities conducted include excavation and backfilling to achieve soil NFA and monitored natural attenuation of ground water.
- Managed or participated in multiple compliance audits for clients in the manufacturing and logistics industries. Audits addressed all regulatory areas including RCRA, SARA, CWA, CAA, TCSA, and OSHA. Clients included Schweitzer-Manduit, Mannington Mills, and Federal Express.
- Prepared Emergency Management Plans for multiple Fortune 500 clients including site inspections, response training and response drill oversight.
- Project Manager over 150 SPCC plans for various clients, in freight management industry. Tasks conducted include site inspections, interviewing of site personnel, review of facility files, and report preparation. The SPCC Plans were prepared in accordance with the Federal Oil Pollution Prevention Regulation, Title 40 Code of Federal Regulations (40 CFR 112).
- Project Manager for over twenty PPC/SPRP/and SPCC plans in Pennsylvania for multiple rail and transpiration related clients, many in the Philadelphia region.
- Project Manager over twenty SWPP plans for various clients, in the transportation industry. Tasks conducted include site inspections, interviewing of site personnel, review of facility files, review of state stormwater regulations and report preparation.
- Project Manager for the preparation of over 120 Emergency and Hazardous Chemical Inventory reports as required under the Emergency Planning and Community Right-To-Know Act (EPCRA)/Title III of the Superfund Amendments and Reauthorization Act (SARA) and each states' equivalent to the Hazardous Materials Emergency Response and Community Right-to-Know Act. Project responsibilities included interviewing of site personnel, the review and interpretation of program-related regulations from local, county and state agencies throughout 29 states, and report preparation.