

APPENDIX M

QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS





Ms. Hiegel's primary responsibilities include providing technical support and expertise for projects in data defensibility, data quality, and leading data quality efforts (quality assurance plans, sampling plans and data validation) for use in compliance monitoring, risk assessments, closures and numerous other applications.

Christina M. Hiegel, P.E., Civil /Environmental Engineer

Ms. Hiegel has over 11 years' experience in the environmental industry. Her primary responsibilities include providing technical support for projects in data defensibility, data quality, and leading data quality efforts (quality assurance plans, sampling plans and data validation/evaluation) for use in compliance monitoring, risk assessments, closures and numerous other applications. Additionally, she is involved in conducting Remedy Evaluations and Risk Evaluation for closed refinery sites and is responsible for completing and conducting Use Control Areas. She also is responsible for research and compliance support for permitting requirements, deed restrictions, zoning, Brownfields, or risk based corrective action. Ms. Hiegel has worked on remediation projects involving soil vapor extraction, multi-phase vapor extraction, and monitored natural attenuation. Additionally, she has worked on a number of large site risk assessments under the Wyoming Voluntary Remediation Program (VRP) and has been involved in collaboration with state agencies.

Ms. Hiegel is proficient in laboratory data validation and has been involved in developing and maintaining the corporate Quality Assurance and Quality Control standards and procedures for overall data quality for sites. She also has organized and developed the company technical group for data quality issues and teaching of others in EPA Methods and data validation applications. She is proficient in her understanding of EPA Risk Assessment Guidance for Superfund (RAGS), and the EPA National Functional Guidelines for Organic and Inorganic Data. She has performed EPA Tiered data validation and state specific validation in support of risk assessments and has prepared quality assurance plans, risk assessment reports, remedy reports, and other milestone reports in the risk-based corrective action process. She is proficient in quality assurance plans and guidelines including the Uniform Federal Policy and Department of Defense requirements.

Selected Project Experience

- Project Engineer responsible for completion of a remedy evaluation for a former chemical

treatment area and land farm at former oil refinery.

- Data Validation and Risk Assessment support for an Ecological and Human Health Risk Assessment Work Plan and report, sampling plan, GIS evaluation, and background evaluation at a former petroleum refinery under the VRP Process.
- Preparation of a Quality Assurance Project Plan and Data Management plan for a closure project under strict state guidance.
- Preparation of Use Control Area documentation and public notices for a large petroleum refinery and a large former petroleum refinery under the VRP Process.
- Data Validation Chemist responsible for preparation of Tier II data validations for a site evaluation, Tier III data validations, Quality Assurance Plans, Data Management Plans, Sampling and Analyses Plans, and laboratory coordination for several private and federal sites.

Expertise

- Tier II and III data validation of laboratory reports
- Quality assurance and quality control plans, quality management plans, and Data Management Plan, communication, and documentation
- Sampling analysis plans and background data assessment
- Risk-based standard calculation and comparison
- Risk assessment
- Use Control Area reports
- Public records research, deed search, coordination, and documentation of institutional controls
- Remedial Action Plans and remedy agreements

Education

- University of Wyoming: B.S./2001/Architectural Engineering

Registrations

- Engineer in Training Wyoming, #4244
- Professional Engineer – Wyoming #12087



Mr. Mathes has over 16 years of experience as a civil/environmental engineer and environmental manager. Mr. Mathes regularly applies his diverse technical expertise and regulatory experience to strategic project planning and implementation.

George E. Mathes, P.E., Vice President

Mr. Mathes' has specific experience in the management and oversight of large-scale projects that require collaboration and coordination between specialty consultants, contractors, regulators, and client/owner stakeholders. Mr. Mathes has managed projects/programs under the jurisdiction of, Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Clean Water Act (CWA), administrative orders on consent, and various other state, federal, and international regulatory programs. His engineering expertise includes the design and construction of in-situ and ex-situ soil/groundwater remediation systems, design of solid and hazardous waste landfills, design and implementation of soil/groundwater/vapor quality assessment programs, and strategic support for large-scale environmental due diligence programs.

Selected Project Experience

- Project Manager/director for several multi-faceted permitting and environmental assessment projects in Wyoming
- Project Manager/director for multiple solid waste, hazardous waste, and industrial facility design, permitting, and construction projects
- Project Manager for a multi-million dollar environmental assessment, soil remediation, groundwater remediation, and spill prevention project for a power generation company in Belize, Central America
- Overall responsibility for managing permitting, corrective action, and closure/post-closure programs at over 100 solvent and used oil storage, transfer, and recycle facilities throughout the U.S.

- Project Manager / Director providing environmental due diligence support for over \$1B of mergers/acquisitions.

Expertise

- Strategic project planning and critical path analysis
- Environmental due diligence support for large-scale mergers/acquisitions.
- Regulatory agency coordination, negotiation, and permitting
- Soil, groundwater, and vapor quality assessment, monitoring, and remediation
- Design, implementation, evaluation, and optimization of soil and groundwater remediation systems and programs
- Landfill design, permitting, closure, and post-closure

Education

- University of Wyoming: M.S./1997/Environmental Engineering
- University of Wyoming: B.S./1996/Civil Engineering

Registrations

- Professional Engineer:
9228, Wyoming
#10498, Arkansas
#34752-006, Wisconsin
#22413, Kentucky
#72403, Oregon
#15674, Nevada
#90587, Texas
#67441, Ohio
#30946, Maryland
#44032, Minnesota
#7165, North Dakota
#11100250, Indiana



Ms. Harper's diverse background includes emphasis in project management and planning, environmental site investigations, remedial investigations, and Phase I site assessments.

Michelle Harper, Geologist

Ms. Harper is a geologist with 17 years of experience. Ms. Harper has a wide variety of experience in general field related activities including soil and groundwater sampling, drilling, test pit excavation, Phase I and Phase II site assessments, upstream oil and gas waste management, spill response, sample control and instrument calibration. Her supervisory experience includes roles as business manager, project manager, and field program manager, including procurement of subcontractors, and site health and safety officer. Ms. Harper's technical report writing capabilities include work plans, site investigation reports, remedial investigation reports, sampling and analysis plans, operations and maintenance manuals, and health and safety plans.

Selected Project Experience

- Project Manager/Task Manager responsible for performing and supervising waste management and spill response for upstream oil and gas clients in Northeast Wyoming.
- Project Manager responsible for performing and supervising environmental investigation activities on site relating to soil, groundwater, and surface water in Northeast Utah.
- Task Manager/Geologist responsible for performing and supervising environmental investigation activities on site relating to groundwater quality for permitting of an underground coal gasification (UCG) project in Northeast Wyoming.
- Geologist responsible for performing and supervising environmental investigations on-site and the operation and maintenance of remedial technologies. Assisted with and supervised report writing, documentation of field activities, and client relations at a refinery in Cheyenne, Wyoming.
- Geologist/Deputy Project Manager/Assistant Field Program Manager responsible for performing and supervising environmental investigations on-site relating to soil, groundwater, and surface water and assisted with the construction, operation and

maintenance of remedial technologies used on-site. Installed over 200 soil borings and groundwater monitoring wells, remedial excavations, thermal soil treatment, coastline erosion monitoring and replenishment, pipeline removals and installation, demolition of asbestos containing materials bearing structures, beach seep sampling, and an extensive site-wide groundwater monitoring program consisting of more than 150 wells at a large former refinery in Nikiski, Alaska.

- Project Coordinator for a large, multi-disciplinary programmatic Environmental Impact Statement (EIS) to assess affects of oil and gas exploratory activities on marine mammals in the Arctic Ocean. The project included public involvement with coastal whaling communities, incorporation of traditional knowledge and assessing impacts on both marine mammals and the availability of marine mammals for subsistence purposes. As the project coordinator, she assisted the Project Manager and project staff with all aspects of project controls and logistics and she was the task manager for establishing and maintaining the administrative record.
- Environmental Scientist responsible for monitoring seasonal fluctuations in groundwater levels, measuring groundwater levels, surface water monitoring, water level surveys, characterizing bog conditions in response to seasonal weather changes in Anchorage, Alaska. Documented field activities, and assisted with historical data research and report preparation.
- Geologist responsible for evaluating Class A and B water systems to determine the potential for contamination of drinking water sources for approximately 300 sites throughout Alaska. Assisted with confirmation of public water supply (PWS) well or surface water locations, review of existing data of the water system, identification of existing and potential sources of contaminants within the protection areas for both ground and surface water sources, determination of the natural susceptibility and vulnerability of the PWS, and report preparation.

Expertise

- Project management and planning
- E&P exempt waste management
- Contaminated site investigations
- Environmental sampling
- Phase I environmental site assessments
- Technical report writing

Education

- University of Alaska, Anchorage: B.S./2002/Natural Science and Environmental Geology