Mandy Tulich
Consultant

Education and Credentials

M.S., Structural Geology, Colorado State University, Fort Collins, Colorado, 2002

B.A., Geological Sciences, State University of New York, Geneseo, New York, 2000

Continuing Education and Training

SafeStart (2019–2020)

PSMJ Project Management Bootcamp (2015)

Leapfrog 3D, Leapfrog Mining Fundamentals In-House Training (2013)

Chevron Loss Prevention System Training (2010)

Hazardous Waste Operations and Emergency Response 40-Hour Certification (2006; refreshers 2007, 2008, 2016)

Maptek Training Course, Vulcan Basics (2007)

Introduction to Petroleum Engineering (2004)

EarthVision Software Training (2004)

Applied Subsurface Geological Mapping (2003)

Geolog Software Training (2003)

GoCAD Software Training (2002)

Principles of Geostatistics (2002)

Professional Affiliations

Member of American Association of Petroleum Geologists

Member of Geologic Society of America

Professional Profile

Ms. Mandy Tulich is a structural geologist with more than 15 years of experience providing litigation support and technical analyses for environmental remediation, contaminant fate and transport, and site characterization in the environmental consulting industry. She is skilled at creating 3-dimensional geologic and site conceptual models, which contribute to successful site characterization, development of highly refined hydrologic models, and remedial planning and design. Ms. Tulich has a strong understanding of complex structural environments, spatial data analysis, forensic geochemical analysis, and contaminant fate and transport. She is well versed in oil field geology and has previous experience in development geology, logging, and well construction. Ms. Tulich's recent work has involved optimizing remedial systems at underperforming remediation sites; assessing fate and transport of organic compounds, including chlorinated solvents and per- and polyfluoroalkyl substances (PFAS); and directing multiple phases of fieldwork to enhance site understanding and performance of remedial systems

Relevant Experience

Geochemistry and Litigation

Assessment of Hydrocarbon Release at a Natural Gas Storage Facility, Los Angeles, California—Provided project management and technical support for a litigation case involving an insurance settlement following a large release of gas from a storage facility.

Regional Chlorinated Solvent Plume, Los Angeles, California—Performed a hydrologic assessment and geochemical fingerprinting analysis of chlorinated solvents and other compounds to delineate multiple sources in an area with complex structural geology and groundwater flow.

Site Characterization and Remedial Design, California—Created a 3-dimensional site conceptual model of a former dry cleaner site to aid delineation of chlorinated solvents in groundwater, plan investigative borings, and facilitate remedial design of the site.

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Mine Tailings Characterization, Montana—Characterized tailings deposits along two stream reaches to support ongoing litigation and allocation.

Paper Mill, Michigan—Provided technical support for a litigation case, including analysis of chlorinated hydrocarbon data in river sediment.

Smelter Site, Tacoma, Washington—Provided site characterization support at a former smelter facility. Evaluated geochemistry and distribution of site data and identified a complete and appropriate data set, which led to correctly characterizing the site and successfully minimizing the client's costs.

Natural Gas Storage Reservoir, Wyoming—Provided technical support for a litigation case involving natural gas migration within a storage facility. Reviewed data and evaluated geologic and geochemical data to characterize the site and the natural gas in the area.

Natural Gas Storage Reservoir, Kansas—Geologist and project manager for a litigation case involving natural gas migration near a storage facility. Reviewed and evaluated geologic and geochemical data to characterize the site and the natural gas in the area.

Hydrogeology and Mining

Multiple Mining Sites, Nevada—Created cross sections for numerous sites to support site characterization and aid in the development of a groundwater model and understanding of subsurface flow.

Marigold Mine, Nevada—Developed a regional, 3-dimensional geologic model (using Leapfrog Geo software) for the Battle Mountain region, including the Marigold mine. Provided hydrogeologic modeling support and assisted in report production.

Bald Mountain Mine, Nevada—Created numerous cross sections and assisted in developing a 3-dimensional Vulcan block model of the subsurface geology.

Cortez Hills and Pipeline Mines, Nevada—Created numerous regional- and local-scale cross sections and developed a regional geologic model of the entire Crescent Valley using Vulcan and Leapfrog Mining software. Provided geologic and hydrogeologic support, including updating models, creating cross sections, and drafting reports and figures.

Phoenix Mine, Nevada—Developed a simplistic, 3-dimensional geologic model to compare and assess the validity of competitor's hydrologic model and associated lithologic/hydrologic units. Mapped groundwater elevation contours and identified structures that impeded groundwater. Assisted in writing and compiling a baseline characterization report for the site.

Oil and Gas

Multiple Oil and Gas Wastewater Injection Sites, California—Created cross sections for numerous sites to support site characterization and aid in the development of a groundwater model and understanding of subsurface flow.

Kern River Oil Field Expansion Area Hydrogeologic Evaluation, Bakersfield, California—Correlated numerous well logs and estimated the size of aquifers and potential water production.

Kern River Oil Field, Bakersfield, California—Evaluated secondary reserves, completed geologic modeling and log correlation within the oil field, and planned new wells for the southern expansion area.

PFAS Sites

PFAS Groundwater Remediation, Confidential Location—Performed a hydrologic and geologic assessment of an area impacted by PFAS. Developed a 3-dimensional geologic model and enhanced the conceptual site model to identify PFAS hot spots onsite. Utilized a refined groundwater model to design and install several pumping wells to optimize an underperforming groundwater containment system. Managed multiple phases of fieldwork for drilling and installing wells, planning pump tests, and bringing the enhanced remedial system online.

PFAS Site Assessment, Confidential Location—Performed a groundwater assessment, directed a field program, and developed a 3-dimensional geologic and site conceptual model to improve understanding of groundwater flow and contaminant fate and transport at a historical PFAS disposal site. Assessed performance of an existing groundwater containment system, evaluated option of onsite infiltration, and proposed a strategy for remedial optimization.

PFAS Natural Resource Damage Assessment (NRDA) Litigation, Confidential Location—Provided technical support for a groundwater and surface water NRDA litigation case involving PFAS, including PFOA and PFOS. Analyzed data to evaluate potential source locations and provided groundwater modeling support.

PFAS Plume Modeling, Alaska—Created a 3-dimensional geologic model of a PFAS plume in a region of complex subsurface transport due to the presence of permafrost.

PFAS Site Conceptual Model, New Jersey—Created a 3-dimensional geologic model of a large region in New Jersey to enhance the conceptual site model, aid in placement of future monitoring well locations and depths to screen for PFAS-contaminated groundwater, and aid in remedial design.

Data Visualization and 3-Dimensional Site Characterization

Former Wood Treating Facilities—Characterized sites where former wood treating activities occurred, and integrated multiple data types to create 3-dimensional site conceptual models of areas to aid in site understanding, stakeholder communication, and remedial design.

Multiple Projects—Performed spatial analyses of complex data sets and generated figures using ArcGIS.

Presentations/Posters

Fisher [Tulich], A.B., and E.A. Erslev. 2002. Geometries and kinematics of Laramide basement-involved anticlines. Rocky Mountain Section Meeting of the American Association of Petroleum Geologists, Laramie, WY.