



## PROFESSIONAL PROFILE

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### Michael B. Marsden, PG, CHg

#### Principal Hydrogeologist

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#### CONTACT INFORMATION

Main: (415) 967-6000  
Direct: (415) 967-6013  
Email: [mmarsden@rouxinc.com](mailto:mmarsden@rouxinc.com)  
Website: [www.rouxinc.com](http://www.rouxinc.com)

555 12th Street, Suite 250  
Oakland, CA 94607

#### EDUCATION

BS, Hydrogeology, San Diego  
State University, 1987  
AS, Earth Science, Modesto  
Junior College, 1984

#### PROFESSIONAL LICENSES

Professional Geologist:  
California, No. 6536  
Certified Hydrogeologist:  
California, No. 566

#### EXPERIENCE SUMMARY

Mr. Marsden's experience covers environmental pollutants such as solvents, petroleum hydrocarbons, PCBs, lead, arsenic, chromium, MGP wastes and pesticides in both soil and groundwater. Mr. Marsden has completed numerous extensive remedial investigations. Mr. Marsden has conducted complex hydrogeological investigations and performed evaluations of surface water and groundwater using analytical tools including groundwater geochemistry, stable isotopes, hydrostratigraphic interpretation aquifer test analysis, and historical operations and records analysis. He assisted in the design and installation of soil and groundwater remediation systems and supervised the analysis of groundwater flow and transport models. Mr. Marsden has been retained as the expert in cases involving allocation of environmental costs, insurance claims, and owner/tenant disputes over sites affected by solvents, metals, MGP wastes and fuel leaks. Mr. Marsden has been a consulting expert in coordinating efforts between attorneys and assisted in case strategy development and trial preparation. Mr. Marsden has been designated as a technical testifying expert, deposed, and testified in court.

#### TECHNICAL SPECIALTIES

Mr. Marsden has over thirty-one years of environmental consulting experience including hydrogeologic analysis, complex site assessment and remediation, source identification, project management, litigation support, regulatory compliance, cost allocation and recovery, and insurance claim evaluation.

#### EXPERT RETENTIONS

##### Cost Allocation and Recovery

- Provide expert technical services and testimony in the classification of claimed in environmental cost recovery disputes at sites nationwide. Have been retained in cases related to industrial facilities, dry cleaners, manufactured gas plants (MGP), mining sites, chemical manufacturing facilities, landfills, and sediment remediation sites. Have reviewed investigation and remediation activities and the associated costs related to sites contaminated with petroleum products, chlorinated solvents, PCBs, and heavy metals. Have provided analysis of both incurred and future costs and given deposition testimony regarding incurred costs.
- Technical expert in an ongoing case relating to environmental damages arising from the historical operations of a marine construction facility adjacent to the Duwamish River in Seattle, Washington. Mr. Marsden is evaluating possible allocations associated with the historical site operations, including the evaluation of the nature and extent and timing of contamination in river sediment.
- Technical expert in on going case involving the classification of investigation, remediation, and operational costs associated with the environmental and litigation activities at a plating facility in Santa Ana, California
- Technical expert in a cost allocation case between insurance carriers involving environmental investigation and remediation activities at a former industrial site in Santa Clarita, California. Mr. Marsden evaluated historical and ongoing incurred costs associated with environmental activities, prepared an expert report, and provided deposition testimony. The case settled prior to trial.

- Technical expert in a case relating to environmental damages arising from the historical operations of a MGP facility adjacent to the Lower Willamette River in Portland, Oregon. Mr. Marsden is evaluating possible allocations associated with the historical site operations. Mr. Marsden is evaluating the nature and extent and timing of contamination in both upland and river sediment. Mr. Marsden prepared future cost estimates and conducted categorization of incurred costs and presented at mediation.
- Technical expert in on going case involving the classification of investigation, remediation, and operational costs associated with the post closure operations of a municipal landfill in the Central Valley of California.
- Technical consulting expert for a coverage claim relating to the environmental damages arising from the operations of a uranium enrichment facility in Missouri. Mr. Marsden was responsible for categorizing and evaluating the reasonableness of past costs and projecting future costs. Mr. Marsden conducted an assessment of the contribution and allocation of costs associated with solvent contamination of the soil and groundwater to the comingled (solvent and radionuclide) contaminants.
- Technical consulting expert in case relating to environmental damages arising from historical operations of mining activities across northern Idaho. Mr. Marsden is responsible for evaluation of future costs, developing technical defense strategies, overseeing review of all discovery documents, preparation of site chronologies, evaluation of fact and expert witnesses, assessing industry knowledge, cost allocation, and review and analysis of deposition and trial testimonies associated with CERCLA investigation and remediation and the nearly \$1 billion natural resource damage claim.
- Technical expert to corporate counsel for cost allocation mediation, insurance recovery mediation, and tax assessment negotiations related to a chlorinated solvent impacted site. Developed cost allocation approach and prepared mediation reports and provided testimony during mediation.
- Technical expert in case relating to environmental damages arising from the operations of a portfolio of over 200 gasoline service stations across the Pacific Northwest. Mr. Marsden was responsible for evaluating the future costs associated with investigation and cleanup of petroleum. Assessing the timing of environmental impacts and nature and extent of soil, soil gas, and groundwater impacts.
- Technical consulting expert in case relating to environmental damages arising from the historical operations of the Silvergate Power plant located adjacent to San Diego Harbor in San Diego, California. Mr. Marsden evaluated the nature and extent and timing of contamination in bay sediment relative to neighboring shipyard sites. Mr. Marsden evaluated past costs and possible allocations.
- Technical expert relating to environmental damages arising from the operations of a chrome plating facility in East Syracuse, New York. Mr. Marsden was retained first as a consulting expert to evaluate various technical defense arguments and assess the need for technical experts. Mr. Marsden was later retained to provide expert opinions on the nature, number, and timing of releases at the site and the possible contribution of the releases to the surrounding environmental contamination. Mr. Marsden testified in New York State Court as a technical expert in this matter.
- Technical consulting expert in case relating to environmental damages arising from the historical operations of a manufactured gas plant adjacent to San Diego Harbor in San Diego, California. Mr. Marsden evaluated the nature and extent and timing of contamination in both upland and bay sediment. Mr. Marsden evaluated past costs and possible allocations.
- Technical consulting expert for a coverage claim relating to environmental damages arising from the historical operations of a dry cleaning facility in Las Vegas, Nevada. Mr. Marsden conducted fate and transport evaluation of PCE through the unsaturated and saturated zones to assess the nature and timing of releases and the possible contribution of other parties to the groundwater plume.

### Source Identification and Release Dating

- Provided expert court testimony and technical services to attorneys and industry related to the identification of contaminant sources and release dating in support of cost allocation and recovery.
- Technical expert in case involving the sources and timing of PCE releases from an industrial laundry facility in Seattle, Washington. Additionally, Mr. Marsden evaluated the future remediation costs and prepared alternative future cost analysis. Prepared expert declaration and case was settled just prior to deposition.

### Hydrogeology and Fate & Transport

- Provide expert technical services and deposition testimony in the interpretation of groundwater flow and contaminant distribution and movement in the subsurface environment.
- Technical expert in case relating to environmental damages possibly arising from the historical operations of a wastewater disposal associated with crude oil extraction in the area of Bakersfield, California. Mr. Marsden conducted hydrogeologic characterization of regional aquifers and groundwater geochemistry to assess the nature, extent, and the possible contribution to the brine water in agricultural area.

- Technical expert in case relating to environmental damages arising from the historical operations of a bulk fueling facility in Pleasant Hill, California. Mr. Marsden conducted fate and transport evaluation of petroleum hydrocarbons to assess the nature, extent, and timing of releases and the possible contribution to the groundwater beneath neighboring residential area. Mr. Marsden prepared an expert declaration and provided deposition testimony in this matter. Case was settled prior to trial.
- Technical expert in multiparty mediation involving commingled chlorinated solvent groundwater plumes in Palo Alto, California. Mr. Marsden prepared expert reports, provided technical presentation during mediation and rebuttal to other technical experts.

### Other Related Engagements and Experience

- Project Manager and technical expert in an ongoing case relating to environmental damages arising from the historical operations of a pesticide manufacturing facility and RCRA permitted solvent disposal facility in San Jose, California. Mr. Marsden has evaluated the scope of work and the various costs associated with conducting a RCRA Facility Investigation (RFI) of the site and has assisted counsel in forming a PRP group of former owners, operators, and waste generators. Mr. Marsden worked with regulators (DTSC) and PRPs to negotiate a Corrective Action Consent Agreement for the site.
- Technical expert for a coverage claim relating to natural resource damages (NRD) arising from historical operations of mercury mining activities in Northern California. Mr. Marsden is responsible for the evaluation of the technical process and the reasonableness and necessity of costs associated with habitat equivalency valuation used in valuing the NRD claim.
- Project Manager and expert for a coverage claim relating to environmental damages arising from the operations of a dry cleaning facility in Sonoma, California. Mr. Marsden was responsible for categorizing and evaluating the reasonableness of past costs and projecting future costs. Mr. Marsden conducted an ongoing reasonableness evaluation of the investigation and remedial strategies of the insured's consultant.
- Project Manager and expert for a coverage claim relating to the environmental damages arising from the operations of a solvent repackaging facility in La Mirada, California. Mr. Marsden was responsible for categorizing and evaluating the reasonableness of past costs and projecting future costs. Mr. Marsden conducted an assessment of the contribution and possible allocation of costs associated with site-specific groundwater contamination to a larger regional groundwater contaminant.
- Project Manager for cost allocation dispute for commingled solvent plume at site in Silicon Valley. Managed and conducted the evaluation of large volumes of historical data including aerial photographs, technical reports, facility records, and deposition testimony. Mr. Marsden conducted analysis of the effects of depositional environment on contaminant fate and transport. Mr. Marsden developed technical arguments to assist client in cost recovery action. Participated in strategy meetings with attorneys and managed the preparation of expert reports, rebuttal reports, deposition testimony, and trial preparation.
- Project Manager for an arbitration relating to the transfer of petroleum impacted sites in California between petroleum marketers. Mr. Marsden was responsible for evaluating the technical data associated with soil and groundwater impacts of total petroleum hydrocarbons, BETX, MTBE, and TBA and preparing expert opinion reports for use in the arbitration.
- Project Manager for an EPA Region IX Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) site in Scotts Valley, California. Mr. Marsden managed the project for the responsible party from investigation through remedial action. Amended National Pollutant Discharge Elimination System (NPDES) permits. Issued specifications for subcontractor selection and acted as construction manager for site activities. Performed community relations and regulatory negotiations. Prepared work plans, sampling plans, quality assurance plans, health and safety plans, data management plans, feasibility studies, and remedial design plans. Contaminants consisted of chlorinated hydrocarbons and heavy metals.
- Project Manager for technical analysis in support of expert opinion for case involving the environmental impacts of carbon tetrachloride contamination in groundwater and surface water from a major chemical manufacturer RCRA facility in Northern California. Mr. Marsden conducted an analysis of the distribution, possible sources, and fate and transport of contaminants at the site.
- Project Manager for surface water/groundwater interaction at two Navy bases in Southern California. Conducted investigations of the groundwater systems at the Bases evaluating the distribution of contaminants including fuels, MTBE, metals, and solvents. Performed an evaluation of the interaction between the surface water and groundwater systems geochemistry, stable isotopes, hydrostratigraphic interpretation, channel morphology, stream gauging, tidal studies, aquifer test analysis, and saltwater intrusion studies. Developed conceptual models of the flow systems and constructed numerical flow models.
- Project Manager for a coverage claim relating to natural resource damages (NRD) arising from historical industrial

operations in Commencement Bay, Washington. Mr. Marsden is responsible for the evaluation of the technical process and reasonableness associated with habitat equivalency analysis (HEA) and the development of discount service acre years (DSAYs) used in valuing the NRD claim and possible allocation. Mr. Marsden was responsible for evaluating the technical process utilized and educating Counsel and Insurer regarding the approach.

- Program Manager for Navy Clean II projects in Northern and Southern California. Managed project's team and was primary liaison with the Prime Contractor. Negotiated scopes of work and budgets with Prime Contractor and assisted with preparation of work plan cost estimates. Supervised and coordinated the performance of Contract Task Orders (CTO). Assisted the client in designing site investigations and developing site strategies. Provided technical review and QA/QC for documents and other deliverables.
- Project Manager for a coverage claim portfolio relating to past costs for reclamation of uranium mines in New Mexico and a mercury mine in Arizona. Mr. Marsden was responsible for overseeing review of all discovery documents, preparation of site chronologies, review and analysis of deposition and trial testimonies, and evaluation of past costs including development of expert opinions.
- Project Manager for a coverage claim relating to environmental damages arising from the historical operations of a manufacturing and testing facility near Mesa, Arizona. Mr. Marsden conducted a technical evaluation of soil and groundwater impacts of various VOCs and perchlorate. Mr. Marsden was responsible for categorizing and evaluating the reasonableness of past and future costs.
- Project Manager for a coverage claim relating to environmental damages arising from the operations of several dry cleaning facilities in Northern and Southern California. Mr. Marsden was responsible for categorizing and evaluating the reasonableness of past costs. Mr. Marsden conducted an ongoing reasonableness evaluation of the investigation and remedial strategies of the insured's consultant.
- Project Manager for a coverage claim relating to environmental damages arising from the discharge of radioactive wastes to a municipal sewer system in Portland, Oregon. Mr. Marsden was responsible for categorizing and evaluating the reasonableness of past costs.
- Project Manager for a coverage claim portfolio relating to environmental damages arising from historical operations of former MGP facilities across the state of Kansas. Mr. Marsden is responsible for overseeing review of all discovery documents, preparation of site summaries and chronologies, and the evaluation of future costs for environmental activities.
- Project Manager for technical analysis in support of expert opinion and testimony for case involving a claim against a major petroleum company and the potential impact of an oil production field in the Central Valley on groundwater quality.
- Project Manager for a coverage claim portfolio relating to environmental damages arising from historical operations of power generation facilities including former MGP sites across several states. Mr. Marsden is responsible for overseeing the review of all discovery documents, preparation of site chronologies, and evaluation of past costs.
- Managed and provided technical analysis in support of ongoing litigation at several former and active petroleum refineries across California and Canada and at several chlorinated solvent sites across Silicon Valley. Coordinated staff review, attended strategy meetings with attorneys, assisted with deposition, expert report preparation, and preparation for trial.
- Client Director for PG&E projects, overseeing technical and management issues associated with several former PG&E Power plants, MGPs and surplus properties. Issues include Phase I/II investigations of surplus properties, evaluation of technical issues petroleum hydrocarbons, PAHs, PCBs, and metals (predominantly arsenic) in soil and groundwater, removal actions for soil impacted with metals, regulatory negotiations with offices of the DTSC, RWQCB, and county agencies, and support to in-house and outside counsel.
- Project Manager for Coatings Manufacturing Facility, North San Francisco Bay. Managed multiple complex stages of remedial investigation and restoration. Investigated the extent of arsenic and solvents in soil, ground water and surface water. Responsible for the selection, pilot testing and ongoing operation of groundwater remediation system. Participate in ongoing meetings with working group that includes regulators, community groups and representatives of surrounding property owners to assist client with strategy development, public relations, and agency negotiation.
- Project Manager for the regional groundwater modeling effort in support of a state Superfund project regional remediation. Collaborated in the development of a regional groundwater flow (Modflow) and fate and transport model. Managed client and regulatory review and approval.
- Project Manager for Preliminary Endangerment Assessments for new school construction in Oakland, CA.
- MEW Superfund Site, Mountain View, California. Directed site characterization field program investigating dense non-aqueous phase liquid (DNAPL) plumes beneath a site within the



MEW Federal Superfund project. Supervised the installation of groundwater and vapor-extraction wells, a soil gas survey, aquifer testing as part of the field program, and evaluating percent contribution.

- Project Manager for major petroleum marketer, California. Managed subsurface investigation of several gasoline service stations. Developed conceptual remedial designs for soil and groundwater. Managed installation, operation, and maintenance of a bioremediation system using an aboveground fixed film bioreactor.

**REPRESENTATIVE EXPERT RETENTIONS**

General Super Plating Company v PKG Equipment, Inc. (2010), State of New York, Onondaga County, Expert Report, Testified at trial.

American International Specialty Lines Insurance Company v. Chubb Custom Insurance Company (2011), Superior Court of the State

of California, County of Los Angeles, Declaration, Deposition, case settled.

Block v. Helix and Huddleston v. Haber (2012), Expert report, deposition, case settled.

Embee, Inc. fka Embee Plating v. Safeco Insurance Company of America, et al., Orange County Superior Court, Expert report, deposition, case pending.

Gardner Family, LLC, et al. v. Crimson Resource Management Corp. (2017), United States District Court, Eastern District of California, Expert report, deposition, case settled.

**PUBLICATIONS**

“Use of Flowing Artesian Well to Determine Aquifer Transmissivity,” San Diego State University Senior Thesis, 1987.