MONTE MARKLEY, P.G.

Education

BS Geology, Lamar University, Beaumont, Texas, May 1989

Professional Licenses

Professional Geologist
Kansas
Missouri

Professional Affiliations

Kansas Geological Society
National Groundwater Association
KDHE Environmental Conference Advisory Committee

Professional Experience

Monte Markley is a registered Professional Geologist in the state of Kansas. He currently holds the position of Wichita Branch Manager at SCS Engineers. His project experience includes engineering geology evaluations related to salt caverns, geologic isolation of fluids and compressed gasses, hydrogeological investigations at landfills and quarries, regulatory compliance, and permitting, groundwater investigations at superfund and RCRA facilities, remedial system design, cost allocation and recovery from responsible parties.

Example project experience includes:

Landfill

Mr. Markley assembled and led multi-disciplined project teams (including several design build and other alternate project delivery methods) to execute environmental and water resources' projects described below. Mr. Markley developed and implemented QA/QC procedures for environmental investigations and remedial system design.

Mr. Markley conducted soils and groundwater investigations at solid waste disposal, mining, aviation manufacturing, industrial and agricultural facilities throughout the U.S. Investigations were conducted under a variety of regulatory programs including, CERCLA, RCRA, UST and state voluntary cleanup programs. Mr. Markley was responsible for developing scopes, budget estimates and execution of projects. Included project plans (work plans, health & safety plans and quality assurance plans), investigation reports, feasibility studies (includes evaluating remedial alternatives and preparing cost estimates for source area and downgradient corrective actions), aquifer and pilot testing, monitoring plans and final remedial system design. Remediation experience includes designing and operating systems such as pump and treat, soil

vapor extraction (SVE), air sparging, bioremediation, monitored natural attenuation (MNA), excavation and land farming.

Mr. Markley possesses special expertise in conducting chlorinated solvents investigations and contaminant fingerprinting (contaminant ratios, isotopic studies) and source area/responsible party identification. Most work was conducted to be technically defensible in support of cost recovery/allocation efforts (early buy-out, litigation support and arbitration). This included developing regulatory management strategies with clients and conducting technical negotiations with regulators or other (often multiple) third parties. Mr. Markley negotiated consent and administrative orders with regulators and advised clients on technical components of environmental remediation agreements and subsequent third party reviews related to property transactions between large corporations.

Mr. Markley performed work in a variety of geologic conditions that included alluvial, coastal, fractured bedrock and deep aquifers. Fractured bedrock investigations included tracer studies, heat pulse flow meters; acoustic logs and NX wire line coring. He managed sites contaminated with hydrocarbons, chlorinated solvents, pesticides, inorganics and heavy metals.

Mr. Markley has conducted over 200 Phase I & II environmental site assessments at aviation, chemical, petroleum refining, shipbuilding, paper mill, commercial, rail, industrial, and agricultural facilities. Prepared NPDES discharge permits and Title V and NESHAPs air permits at a variety of remediation, industrial and municipal facilities to maintain regulatory compliance under the applicable regulations. Prepared industrial sewer discharge permits with local municipalities.

Mr. Markley was responsible for planning, execution and project management of soil and groundwater site investigations and remedial designs for UST sites, landfills and orphan dump sites throughout the Midwest. This included Phase I & II environmental site assessments, asbestos surveys and landfill siting studies.

Mr. Markley advised clients on regulatory compliance issues related to underground storage of compressed gases, wastewater disposal and treatment, and geologic hazards. This included regulatory negotiations with state agencies and the EPA for the permitting and installation of Class I and II Non-hazardous deep disposal wells. Prepared Class I non-hazardous disposal well permit applications and the first commercial wastewater disposal facility waste profiling and acceptance plan in the state of Kansas.

Mr. Markley served as a well site geologist for multiple underground storage observation and injection & withdrawal wells, oil & gas and Class I disposal wells across the Midwest. He was responsible for direction of field programs, picking formation tops, correlating drilling times and

lithologic descriptions to determine stratigraphic and structural position. He also selected coring and reservoir testing intervals.

Mr. Markley has obtained multi-million dollar EPA grants, prepared funding requests and grant administration on behalf of clients and secured sole source contracting on a multi-year basis. Mr. Markley conducted hydrogeologic studies including integrated water supply development and reuse for municipalities. Mr. Markley performed municipal well field design, water rights permitting and negotiations with Kansas Division of Water Resources as well as developed and implemented contaminated water beneficial reuse projects for municipal and industrial water supplies.

Mr. Markley conducted deep aquifer investigations for chlorinated solvents in the Ogalalla aquifer of western Kansas and completed suitability of continued use reports for Class I non-hazardous injection well in western Kansas. He prepared permit applications and hydrogeological assessments for municipal and industrial landfills in 15 Kansas counties.

Mr. Markley developed compacted clay liner design specifications, conducted borrow pit investigations and geotechnical evaluations of soils for construction of landfill and lagoon liners. He is experienced with mud rotary, air rotary, hollow-stem auger, geoprobe and bucket auger drilling methods. Conducted wire line coring, packer tests and aquifer testing to evaluate subsurface conditions related to landfill and earthen dam design.

Specific projects demonstrating this experience are outlined below:

Groundwater Remediation, Brooks Landfill, Wichita Kansas. Mr. Markley was the project manager for the Brooks Landfill groundwater remediation site in Wichita, Kansas. The site investigation consisted of delineating a 7,900-foot long chlorinated solvent plume that crossed beneath a major river. He also directed the pilot testing, design, construction, and start-up of the air sparge and pump and treat remedial systems for the site. The air sparge system treats a 2,000-foot wide plume emanating from the landfill. The air sparge system delivered more than 1,300 CFM of air to 66 sparge wells. The pump and treat system design included groundwater modeling to determine capture zones, aquifer drawdown and stream/aquifer interactions for downstream NPDES outfalls. This design was successful in cleaning up the contamination and he is now assisting the city of Wichita with the final stages of project decommissioning and closeout.

Integrated Groundwater Remediation and Beneficial Reuse Project, 4th & Carey Site, Hutchinson, Kansas. Mr. Markley was the project manager and principal hydrogeologist for the investigation of a large alluvial aquifer system in Hutchinson Kansas that was heavily impacted by industrial solvents that exceeded MCL's in over half of the City's municipal supply

wells. He was responsible for directing and conducting contaminant investigations, aquifer testing, groundwater modeling, hydrogeological evaluations for determining, treatment requirements, recharge rates and sustainable yields. This include source water protection strategies, source control for contaminants and design of a new municipal high yield well field. The system resulted in the beneficial reuse of over 8 MGD of groundwater from an over appropriated aquifer system via Reverse Osmosis treatment with concentrate disposal via deep injection wells. He was also the principal negotiator with the responsible party Technical Advisory Committee and was instrumental in helping the City allocate, recover and structure a $32 million dollar settlement from the various PRP's.

Former Hazardous Waste Landfill, Valley Center, Kansas. Mr. Markley is the project manager and principal hydrogeologist for implementation of remedial design system upgrades for chlorinated solvent contamination from regulated RCRA units that have impacted groundwater to levels it qualifies as hazardous waste. This includes MNA evaluations, pump and treat system design and regulatory negotiations with both the EPA and KDHE. This project has been on schedule and on budget since he assumed control of the project 18 months ago.

Agricultural Tillage Equipment Manufacturing Facility, Hutchinson, Kansas. Mr. Markley is the project manager for the remediation of a former foundry and paint waste disposal area. The contaminants were lead chromate paint and lead, arsenic and chrome foundry wastes. He was responsible for developing remedial cost estimated and executing the remediation activities over a two year period. The estimated costs were $3.9 to 4.3 Million and the project was completed for $4.1 million dollars. **The client has already received regulatory approval of unconditional clean closure of the site**. This client has also retained Mr. Markley to remediate a paint solvent spill that has impacted groundwater and this portion of the project is currently in the planning stages.

Publications and Presentations

In-Well Temperature for Monitoring Air Sparging Pathways, Eisenbeis, J.E. and Markley M.R., Battelle's First International Conference on Remediation of Chlorinated and Recalcitrant Compounds, May 1998.

Evaluation of Reverse Osmosis Pretreatment Options for Chlorinated Solvent Contaminated Groundwater, Kimball, R.E and Markley M.R., American Water Works Association Annual Convention Proceedings, 2005

American Academy of Environmental Engineers Grand Prize Award and American Consulting Engineers Council Honor Award for Design of the Brooks Landfill Air Sparging System, 1999

Fundamentals of Salt Cavern Storage in Kansas, Kansas Department of Health & Environment Industrial Geology Seminar, Fall 2008

Karakalpakstan Deep Aquifer Study, Republic of Uzbekistan, Kansas Geological Society, April 9, 2008

Gilbert-Mosley Groundwater Remediation Project
Presented at Kansas Water & Environment Federation 54th Annual Conference, April, 1999