PROFESSIONAL PROFILE

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EDUCATION
MS, Hydrogeology, Western Michigan University
BS, Geology, Illinois State University

PROFESSIONAL LICENSES
Licensed Professional Geologist, Illinois (#196.000474)
Licensed Professional Geologist, Kansas (#829)
Certified Class K Wastewater Treatment Operator

Timothy V. Adams, PG

Principal Hydrogeologist

EXPERIENCE SUMMARY
Fifteen years of experience: Office Manager, Principal Hydrogeologist with Roux. Sixteen years of experience: Senior, Project, and Staff Hydrogeologist with ENSR (now AECOM).

TECHNICAL SPECIALTIES
Over thirty-two years of experience in environmental consulting services including Office Manager, Client/Program Management, Integrated Site Closure Strategy Development, Installation and Operation of Enhanced Soil and Groundwater Remediation Systems, Design and Operation of DNAPL Remediation Systems, Regulatory Negotiation Specialist, Litigation Support, Groundwater Flow and Transport Modeling, Surface and Borehole Geophysics, and Insurance Claim and Technical Settlement Support.

REPRESENTATIVE PROJECTS

Industrial Site Assessment and Remediation

- Principal Hydrogeologist for the closure design of three (3) wastewater lagoons in central Illinois. The project involved the characterization and management of sediment and stormwater for closure under Illinois EPA BOL/BOW. Remedial closure design included the in-situ stabilization (ISS) of 180,000 cubic yards of lagoon sediment combined with a soil/vegetation cap.
- Principal Hydrogeologist for feasibility options analysis, engineering design and construction of landfill capping and leachate collection system (LCS) enhancements at a closed landfill for Fortune 100 agriculture food provider in accordance with Iowa under IDNR closure permit. Services included groundwater modeling using MODFLOW® to evaluate vertical and horizontal LCS options and design.
- Principal Hydrogeologist for a 180-acre rail car maintenance facility under an Ohio EPA Consent Order. Completed RI and HHRA, and FS to address CVOC, petroleum LNAPL, and 1,4 dioxane in overburden and shallow bedrock aquifers. Ongoing RD/RA.
- Principal Hydrogeologist for site remediation and closure activities of a legacy wood preserving facility involving creosote impacted soil, surface water, and groundwater. The facility is located in central Texas and is regulated under an Administrative Order of Consent (AOC) with the EPA Region 6. Closed out the AOC and successfully prepared a Ready for Reuse Determination to facilitate redevelopment of the property.
- Principal Hydrogeologist for Response to California Water Quality Board Compliance Order to address 1,2,3-TCP in facility potable wells. Conducted Alternative Options Analysis for treatment and non-treatment options including well head treatment, alternative water source, flow modification and capture zone analysis.
- Principal Hydrogeologist for designing and implementing a mercury spill response and mitigation for a deep bedrock industrial process groundwater well completed in a drinking water aquifer. Response plan was designed, implemented, and approved under the Iowa DNR and EPA Region 7.
- Project Principal for a storm sewer rehabilitation program (15,000 LF) in Maywood, IL for a leading utility provider utilizing Cast-in-Place-Piping (CIPP). Project included the design and construction of 2 oil-water separator systems to treat a combined flow of 7,500 gpm at 2 NPDES outfalls for management of PCB subsurface and stormwater potential impacts.

- Principal Hydrogeologist for CVOC impacts to soil, groundwater, and surface water at a rail car cleaning facility former process water system. COCs include 1,1,2-TCA and associated breakdown products. Completed successful ISCR pilot and full-scale ISCR source treatment using both soil-blending and direct injection of carbon-ZVI remedial amendment. Achieved >99% reduction of 1,1,2-TCA in blended source area. Completed Voluntary Cleanup Proposal and Cleanup Plan submittals to Kansas DHE. Ongoing performance monitoring and EUC management. Project Manager/Principal Hydrogeologist for CVOC impacts under Indiana DEM-VRP. Completed pilot and bench treatability testing for remedial design for source area soil excavation and disposal and in-situ enhanced reductive dechlorination (ERD) groundwater treatment. Removed >15,000 tons of soil in six-source areas in shallow glacial till. Achieved COC and CNTS under IDEM VRP.
- Principal Hydrogeologist for investigation and design of a zero-discharge engineered natural system (constructed treatment wetland cells) for former mine tailings site in Texas, EPA Region 6, LCRA and TCEQ. Design includes stormwater management system, leachate collection trench and CTW treatment cells and phytoplot for treated water effluent discharge.
- Project Manager/Principal Hydrogeologist for CVOC bench, multi-amendment pilot and full-scale ISCR remedial design and installation of source reduction/migration control in a sand and gravel aquifer at former landfill under Indiana DEM State Cleanup Section. Achieved greater than 90% reduction of TCE/DCE/VC in large, dissolved plume. Ongoing performance monitoring and ERC management.
- Principal Hydrogeologist for Insurance Claim and Technical Review, and settlement support (on behalf of a carrier group) of a former industrial manufacturing facility with CVOC and PCB impacts to soil, groundwater and building materials. Site is enrolled in the IDEM State Cleanup Program.
- Project Manager/Principal Hydrogeologist for CVOC-impacted investigation and remedial design addressing drift and bedrock groundwater impacts, and fate and transport analysis; nutrient-ISCR amendment injection; thermally-enhanced dual-phase extraction and source area treatment under Illinois voluntary SRP.
- Project Hydrogeologist/Manager for DNAPL remediation system design and construction at a former telecommunications facility in Missouri. Remedial systems included SVE and chemical oxidant remediation in overburden/shallow bedrock for TCE. Conducted column treatability testing for zero valent iron permeable reactive barrier (PRB) design. Installed funnel and gate PRB system in shallow bedrock aquifer to treat TCE. Received Certificate of Completion under Missouri DNR VCP. The site has been redeveloped as a campus-type commercial setting with multiple tenants.
- Project Hydrogeologist for chemical manufacturing plant Superfund Site. Conducted rotary and Nx-core drilling for bedrock monitoring wells on/off-site. Used borehole geophysical methods, hydraulic pressure tests, and straddle-packer sampling to select monitoring elevations. Performed bedrock aquifer test and slug tests to characterize bedrock/overburden aquifers in order to design remedial pump and treat system. Installed SOLINST® multilevel monitoring systems to determine horizontal and vertical CVOC distribution. The site is located in Iowa, EPA Region 7.
- Project Principal for the design of a Class II Underground Injection Control Well (UICW) and infrastructure to manage extracted cavern water at a propane storage facility in Indiana, well permitted with the Indiana DNR.
- Prepared multiple feasibility study evaluations for applying innovative technologies including thermal, and permeable reactive barrier, to remediate chlorinated solvents in a unconsolidated and bedrock aquifer environments.
- Project Manager/Senior Hydrogeologist for the design and operation of a steam injection DNAPL removal system in a heterogeneous clay till in the Chicago area. The system removed over 33,000 pounds of hydrocarbons in 5 years of operation. Received focused NFR under Illinois EPA Site Remediation Program including municipal groundwater use ordinance.
- Senior Hydrogeologist/Project Manager for the design and operation of a steam-enhanced DNAPL removal system in a silty sand in the Chicago area. Additional chemical oxidation flushing and electrical resistive heating (ERH) methods were utilized in recalcitrant TCE source areas. The project received a NFR letter from the Illinois EPA in June 1999 and was redeveloped as a shopping center.
- Project Manager for IDEM VRP closure of a fuel oil release using monitored natural attenuation (MNA) under IDEM RISC at an active animal processing facility. Prepared a combination Remediation Work Plan/Remediation Completion Report and QAPP.
- Project Manager for finalizing Corrective Measures Study and Corrective Action Implementation for an active manufacturing facility in Michigan, EPA Region 5. AOC focused on preventing impacted groundwater from discharging into the Detroit River. EI 750 determination completed demonstrating groundwater migration control for addressing GSI exceedances to Detroit River.

- Senior Hydrogeologist conducted 3D groundwater flow and transport modeling to evaluate MTBE-impact to a municipal water well field. Utilized MODFLOW® and groundwater Vistas® to simulate various pumping scenarios at the city well field and remedial system design.
- Senior Hydrogeologist performed hydrogeologic investigation activities including rotary drilling, bedrock coring, monitoring well installation, and bedrock aquifer evaluation at Pacific Island naval bases in Guam under PACDIV naval contract.
- Project Hydrogeologist conducted 2D groundwater modeling using FLOWPATH® to design groundwater pump & treat (P&T) system at former industrial telecommunications manufacturing site in North Carolina utilizing groundwater extraction wells and infiltration galleries. Project Manager for extraction well system installation activities in saprolite and bedrock.

Litigation Consulting

- Principal Hydrogeologist on behalf of a defendant PRP at an EPA Region 5 Superfund site in Ohio. Providing contribution, allocation, fate & transport evaluation, remedial cost review and comparative evaluation for multiple testifying experts. Site involves CVOC plume with multiple source contribution in a high flow sand and gravel aquifer. Groundwater remedy design includes air sparge/SVE at plume areas and vapor intrusion mitigation.
- Principal Hydrogeologist for insurance coverage and defense counsel for a former industrial manufacturing site under IDEM State Cleanup Program. Provided technical review of PCB and CVOC impactes to building materials and soil and groundwater media. Reviewed claimed costs by the insured's consultant for reasonbleness and prepared remedial strategy and cost to closure opinion.
- Consulting expert for remedial cost evaluation and settlement negotiations related to soil removal and engineered barrier installation for IL SRP site closure and redevelopment of a public school. Provided technical memorandum and opinion and assisted in mediation and settlement negotiations.
- Consulting expert for evaluating investigation and remediation/closure of a chlorinated VOC impacted manufacturing site in Indianapolis under IDEM VRP. Reviewed adequacy of Certificate of Completion determination in comparison to IDEM RCG guidelines and terms of an agreed order with the City of Indianapolis. Provided affidavit regarding analysis of residual soil and groundwater and trend analysis following contaminant source treatment via soil excavation.
- Consulting expert for insurance carriers regarding the investigation and remediation activities and the associated claim costs related to sites contaminated with; petroleum products, chlorinated solvents, PCBs, 1,4 dioxane and heavy metals. Issued Report of findings regarding both incurred costs and potential future costs at the sites, including the reasonableness and appropriateness.
- Consulting expert on behalf of plaintiff for evaluating CVOC contamination and fate and transport assessment for a site in Chicago area.
- Principal Hydrogeologist for litigation support for CVOC/Petroleum co-mingled plume. Reviewed expert witness reports and provided opinion of remediation closure strategy scenarios and cost allocation for a Indiana DEM VRP manufacturing site.
- Landis+Gyr, Inc. (Plaintiff) vs. Zurich American Insurance Company (Defendant). United States District Court Northern District of Indiana Lafayette Division. Performed expert reporting and modeling of TCE in groundwater under transient pumping scenarios.

Client/Program Manager

- Client Manager for rail car tank company providing site assessment, remediation and integrated site closure and real estate support services at multiple maintenance facilities in the Midwest.
- Client Manager for national rental car corporation providing compliance, Phase I/Phase II/Phase III consulting services.
- Client Manager for global tire and auto service Fortune 500 company. Managing real estate due diligence and compliance services in the US.

PUBLICATIONS

Adams, TV, 2018. Post-Remedy Performance Results Comparing Soil Blending versus Direct Injection ISCR Source Area Treatment for 1,1,2 TCA. The Eleventh International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Palm Springs, California; April 8-12, 2018.

Markesic, S., Rossabi, J., Haselow, J., Romano, J., Adams, T. 2018 Rotary Drum Soil Blending for Source Zone Remediation: Various Application Scenarios. Remediation Journal, Wiley.

Viner, A., and Adams, TV, 2017. Innovative Remediation Strategies at Redevelopment Sites, Environmental Transactions and Brownfields Committee Newsletter, May 2017 Issue.

Adams, TV, 2016. ISCR Treatment of 1,1,2 TCA via Soil Blending and Direct Injection at a Former Process Water Holding Pond Area. The Tenth International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Palm Springs, California; May 22-26, 2016.

Adams, TV, Carlson, R, 2014. Remediation and Pathway Exclusion Closure Strategy for a Mixed Plume. The Ninth International Conference on Remediation of Chlorinated and Recalcitrant Compounds, May 2014, Monterey, California.

Adams, TV, Kyle, J., 2012. Non-Default Closure Approach.

for a TCE-Impacted Till Aquifer Above an Outwash Drinking Water Aquifer. The Eigth International Conference on Remediation of Chlorinated and Recalcitrant Compounds, May 2012, Monterey, California.

Adams, T.V., Zei, T., 2012. Update: Full-Scale Enhanced Bioremediation of CVOCs in a Sand and Gravel Aquifer. The Third Biennial Southeastern In-Situ Soil and Groundwater Remediation Conference, Raleigh, NC.

Adams, T.V., 2010. Full-Scale Enhanced Bioremediation of CVOCs in a Sand and Gravel Aquifer. The Seventh International Conference on Remediation of Chlorinated and Recalcitrant Compounds, May 2010, Monterey, California.

Knoepke, S.K., Matthys, A., Adams, T.V., Eifert, W., 2009. Pilot-Scale Treatment Evaluation of Phyto and Wetland Technologies for the Remediation of AMD. The Tenth International Symposium on In-Situ and On-Site Bioremediation, May 2009, Baltimore, Maryland.

Adams, T.V., Vierkant, G., 2008. Multiple Amendment Pilot Testing for Full-Scale CVOC Remedial Design. The Sixth International Conference on Remediation of Chlorinated and Recalcitrant Compounds, May 2008, Monterey, California.

Adams, T.V., Murphy, R., 2006. Achieving Closure for Multiple TCE Plumes in a Bedrock Aquifer. The Fifth International Conference on Remediation of Chlorinated and Recalcitrant Compounds, May 2006, Monterey, California.

Groher, D., and Adams, T., 2005. Low-Quality Steam Injection to Enhance Conventional In-Situ Remedial Technologies. Annual Conference on Soils, Sediments, and Water, University of Massachusetts, Amherst, October 2005, Amherst, Massachusetts.

Adams, T.V., Sopcich, D., and Senn, A., 2004. PRB Installation to Remediate TCE in a Bedrock Aquifer. The Fourth International Conference on Remediation of Chlorinated and Recalcitrant Compounds, May 2004, Monterey, California.

Adams, T.V., Sopcich, D., and Senn, A., 2002. Closure Strategy at Four Sites Impacted by Chlorinated Solvents. The Third International Conference on Remediation of Chlorinated and Recalcitrant Compounds, May 2002, Monterey, California.

Adams, T.V., Sopcich, D., and Hunter, T.A., 2001. Remediation and Closure Strategy for TCE in Fractured Bedrock. Innovative Strategies for the Remediation of Chlorinated Solvents and DNAPLs in the Subsurface, April 1-5, 2001, San Diego, California.

Adams, T.V., Vierkant, G., and Smith, G.J., 2000. Chlorine Dioxide Treatment of TCE in Fractured Bedrock. The Second International Conference on Remediation of Chlorinated and Recalcitrant Compounds, May 22-25, 2000, Monterey, California.

Adams, T.V., and Smith, G.J., 1998. DNAPL/LNAPL Remediation in Clay Till Using Steam-Enhanced Extraction. The First International Conference on Remediation of Chlorinated and Recalcitrant Compounds, May 18-21, 1998, Monterey, California.

Adams, T.V., and Smith, G.J., 1993. Designing a DNAPL Removal System in a Heterogeneous Clay Till Using Enhanced Vapor and Groundwater Extraction. American Geophysical Union, Fall 1993 Meeting, December 6 through 10, San Francisco, California.

Smith, G.J., Adams, T.V., and Basile, A.J., 1994. Evaluating DNAPL Removal in a Low-Permeability Media Using the SIMPLER Process. HazMat Central Conference Program, April 12 through 14, 1994, Rosemont, Illinois.

Smith, G.J., Adams, T.V., and Basile, A.J., 1992. Evaluating DNAPL Removal in a Low-Permeability Porous Media Using Steam-Enhanced Vapor and Groundwater Extraction. AGWSE i n conjunction with NGWA, Aquifer Restoration: Pump-and-Treat and the Alternatives Conference, September 30 - October 2, 1992, Las Vegas, Nevada.

Adams, T.V. and D.R. Hampton 1990. Effects of capillarity on DNAPL thickness in wells and in adjacent sands. International Association of Hydrogeologists Conference on Subsurface Contamination by Immiscible Fluids, April 18-20, Calgary, Alberta, Canada.

Adams, T.V. and D.R. Hampton 1989. Laboratory study of DNAPL behavior in wells and adjacent porous media. 34th Annual Midwest Groundwater Conference, October 18-20, Kalamazoo, Michigan.