

MARK D. MITCHELL, P.G.
Principal

CREDENTIALS/REGISTRATION

B.S./Geology, University of Georgia, 1982

M.S./Geology, University of Georgia, 1986

Registered Professional Geologist: Georgia (#761), Florida (#2342), Alabama (#346), South Carolina (#2078), North Carolina (#1432), Tennessee (#307), and Arkansas (#1222)

FIELDS OF SPECIALIZATION

Aquifer Testing and Analysis

Groundwater Flow and Contaminant Transport Modeling (Numeric and Analytical)

Groundwater Supply Evaluation and Development

Hydrocarbon Assessments and Remediation: Underground Storage Tanks, Terminals and Pipelines

HSRA Program: Corrective Action Plans. Compliance Status Reports; Risk Assessment

HSRRA Program: Brownfields Compliance Status Reports

Phase I and II Environmental Site Assessments

RCRA Program: Groundwater Quality Assessment; Solid Waste Landfill Monitoring; RCRA Facility Investigations; Post Closure Monitoring; and Compliance Audits

EXPERIENCE

Over 30 years of experience, specializing in the implementation of hydrogeologic investigations associated with water supply and the assessment and remediation of groundwater and soils contamination. Regulatory expertise is within the RCRA, CERCLA, Brownfields, Hydrocarbon, and State Superfund arenas. Mr. Mitchell has been responsible for managing multi-disciplined projects, which includes strategic planning, site investigation, remedial alternative determination and implementation under various regulatory programs.

Prior to co-founding Genesis Project, Inc., Mr. Mitchell was a Principal Scientist/Office Manager for Geraghty & Miller Inc. in Atlanta, Georgia. During this period, Mr. Mitchell was responsible for a wide range of environmental related projects, including strategy development, and regulatory negotiations. In addition, Mr. Mitchell served as a staff geochemist at the Hanford site in Washington State. He was involved with a project to determine the suitability of the Columbia River Basalt Group as a High-Level Nuclear Waste Repository for the disposal of spent fuel rods from commercial reactors.

Genesis Project, Inc.

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GROUNDWATER FLOW AND CONTAMINANT TRANSPORT MODELING

Mr. Mitchell has been conducting groundwater flow and contaminant transport modeling for over 25 years. These services have included both analytical and numeric solutions to groundwater flow and transport problems. In addition, evaluation of hydrogeologic conditions at each site is critical in this process and includes the evaluation of aquifer parameters (hydraulic conductivity, storage, etc) and transport properties (organic carbon content, etc.). The analytical solutions routinely utilized are WinFlow™ and WinTran™. The numerical solutions (2- and 3- dimensional) include Modflow for the groundwater flow solutions and Modpath and MT3DMS for contaminant transport solutions.

Selected Projects

Department of Natural Resources Plains, Georgia

- Served as Project Manager and Hydrogeologist on the completion of a three-dimensional groundwater flow and contaminant transport model. The purpose of the model was to determine whether groundwater contamination could impact three (3) water supply wells serving the city of Plains, Georgia. The models used for this investigation included ModFlow and ModPath. Results concluded that contaminants would not impact remaining production wells.

Carrollton, Georgia

- Served as Project Manager and Hydrogeologist on the completion of a three-dimensional groundwater flow and contaminant transport model. The purpose of the model was to determine whether groundwater contamination could impact one (1) domestic water supply wells serving the a private residence in Carrollton, Georgia. The models used for this investigation included ModFlow and MT3DMS. The modeling was utilized to develop a alternate concentration limit (ACL) for the cleanup of petroleum hydrocarbons in a source area that would be protective of this water supply.

Eatonton, Georgia

- Served as Project Manager and Hydrogeologist on the completion of a analytical model for groundwater flow and contaminant transport. The purpose of the model was to determine whether groundwater contamination could impact multiple domestic water supply wells serving a rural area of Eatonton, Georgia. The models used for this investigation included WinFlow™ and WinTran™. The modeling was utilized to develop an alternate concentration limit (ACL) for the cleanup of petroleum hydrocarbons in a source area that would be protective of this water supply. In addition, a pump test was completed to calculate aquifer properties as well as determine whether impacts in the shallow aquifer my impact groundwater at depth.

Genesis Project, Inc.

GEORGIA BROWNFIELDS SERVICES

Mr. Mitchell has been involved in the Georgia Brownfields program since its inception and has been the principal investigator on over 25 properties that have been taken through the Georgia Brownfields Program. These projects have included sites on the Hazardous Site Inventory (HSI) as well as sites not on the HSI list (non-HSI). In addition, these projects have included the preparation of a Prospective Purchaser Compliance Status Report as well as a Prospective Purchaser Corrective Action Plan.

Selected Projects

*Non-HSI Prospective Purchaser Compliance Status Report (PPCSR)
Cobb County, Georgia*

- Served as Principal Investigator for several Non-Hazardous Site Inventory (HSI) sites that were taken through the Georgia Brownfields program. The investigation included: 1) the collection of soil and groundwater data for the presence of source materials; 2) the delineation of on-site groundwater impacts; and 3) the calculation of applicable risk reduction standards. Groundwater impacts at these sites included tetrachloroethene and associated degradation products; degreasing solvents (trichloroethene); and pesticides (lindane). A limitation of liability was granted for these contaminants in all cases.

*HSI Prospective Purchaser Compliance Status Report (PPCSR)
Brunswick, Georgia*

- Served as Principal Investigator for a site that was placed on the Hazardous Site Inventory (HSI). The investigation included: 1) the collection of soil and groundwater data for the presence of source materials; 2) the delineation of on-site groundwater impacts; 3) the calculation of applicable risk reduction standards (RRSs); and 4) the completion of a removal action to address impacted soil above those RRSs. Impacts at this site originated from two former dry cleaning facilities and consisted of tetrachloroethene and associated degradation products. After approval of the PPCSR, a limitation of liability was granted for these contaminants.

*Non-HSI Prospective Purchaser Corrective Action Plan (PPCAP)
Fulton County, Georgia*

- Served as Principal Investigator for a non-HSI site in south Fulton County, Georgia. The initial investigation included the collection of soil and groundwater data and the preparation of a PPCAP. An investigation was initiated after the real estate closing to complete the preparation of a PPCSR. Impacts at this site originated from an adjacent offsite dry cleaning facility and consisted of tetrachloroethene and associated degradation products.

WATER SUPPLY SERVICES

Mr. Mitchell has been involved in water supply projects for over 25 years. These projects have ranged from the development of municipal well fields to the completion of groundwater flow modeling.

Selected Projects

Hillsborough County, Florida

- Served as Project Hydrogeologist in the development of additional water supply wells for the Southwest Water Management District in Florida. Project activities included siting of new production wells, well logging, setting wells at optimal production zones, pump testing, and development of water resource development reports.

Cloudland, Georgia

- Completed a groundwater investigation and well study at a private camp in northwest Georgia. A new production well was needed due to low water table conditions from a drought in Georgia. The project included a records search, review of previous investigations, and a field investigation to identify optimal well locations. The new production well will be installed in March 2001.

Dauphine, Florida

- Served as Project Hydrogeologist on well field where saltwater encroachment had become an issue. The project included the installation of new production wells and the installation of a reverse osmosis desalinization plant.

Hillsborough County, Florida

- Served as Project Manager for a site involving potential groundwater contamination of a municipal well field in Florida. The source area consisted of mill tailings from a phosphate mining operation. The principle contaminants included uranium and radon.

EXPERT WITNESS SERVICES

Mr. Mitchell has provided expert witness services for over 20 years. These services have included the evaluation of technical data; preparation of expert reports; as well as providing depositions. These cases have included both plaintiffs and defendants.

Selected Projects

Gainesville, Georgia

- Expert witness testimony concerning the release of hydrocarbons from an underground storage tank. Activities included data evaluation, development of professional opinion and preparation and completion of a deposition on behalf of the defendant. Case was settled prior to going to trial.

Smyrna, Georgia

- Expert witness testimony concerning the release of hydrocarbons from an off-site source. Activities included data evaluation, development of professional opinion as well as preparation and completion of a deposition on behalf of the plaintiff. Case was settled out of court.

Valdosta, Georgia

- Litigation support for property owner concerning a former tenant's release of hydrocarbon constituents to both on- and off-site properties. Activities included soil and groundwater sampling on- and off-site, data evaluation, development of professional opinion as well as preparation and completion of an expert report on behalf of the plaintiff. Case was settled prior to trial.

Woburn, Massachusetts

- Litigation support concerning the release of chlorinated solvents to groundwater from a manufacturing facility. Activities included assisting expert witness in data evaluation, technical document research and preparation for deposition and testimony on behalf of a defendant.

Hillsborough County, Florida

- Served as Project Manager for a site involving potential groundwater contamination of a municipal well field in Florida. The source area consisted of mill tailings (Gypsum Stack) from a phosphate mining operation. The principle contaminants included uranium and radon.

RCRA SERVICES

Selected Projects

Plant Hatch and Vogtle, Georgia

- Project Hydrogeologist for groundwater monitoring activities for three landfills owned and operated by Southern Nuclear. Activities consist of routine groundwater sampling, and preparation of data tables, potentiometric surface maps and calculation of hydraulic gradients. The landfills are currently in a semi-annual sampling program.

Anniston, Alabama

- Project Geologist for investigation activities associated with the implementation of a Part B permit. Investigation activities include real-time plume delineation of PCB impacted soils and data support for expert witness testimony.

Cayce, South Carolina

- Served as Project Hydrogeologist for the completion of a RCRA Facility Investigation at a steel manufacturing facility in South Carolina. The site activities included the implementation of a RFI at the site, a wetlands delineation study, and development of life cycle remedial costs associated with the disposal of electric arc furnace (EAF) dust and post closure care of an EAF dust landfill.

Atlanta, Georgia

- Served as Environmental Manager for the completion of a RCRA Facility Investigation at a Copper Chromium Arsenate plant in Georgia. As Environmental Manager, Mr. Mitchell has assisted in the development of the request for proposal, selection of qualified consultants, reviewed project deliverables and provided expert services in the development of soil and groundwater investigation activities to determine contaminant source areas and contaminant transport.

Savannah, Georgia

- Served as Project Officer for the completion of a RCRA pond investigation in coastal Georgia. The purpose of the investigation was to determine whether previously exempt RCRA waste could be removed from the pond to provide increased capacity for the pond's future use. The results of the investigation will be provided to the regulatory community to allow removal of the material as a non-hazardous waste, resulting in substantial cost savings for removal and disposal.

CERCLA/STATE LEAD SITE SERVICES

Selected Projects

Anniston, Alabama

- Project Manager/Hydrogeologist for an abandoned zinc plating facility. Investigation activities have included the identification of source areas for metals (Zn, Cd, Pb) contamination to soil and groundwater. Key actions have included: 1) successfully removed Pb from the list of "constituents of concern" based on background sample analysis; and 2) eliminating the need for an active groundwater remediation system based on a hydrogeologic evaluation which confirmed no impact to the drinking water aquifer.

Atlanta, Georgia

- Served as Project Officer, under the HSRA program, for the investigation of releases from numerous Dry Cleaning facilities. The purpose of the projects was to provide sufficient data to submit a HSRA notification to the State of Georgia. Data collection activities included historical research, a hydrogeological study to determine site-specific hydrogeological characteristics, characterization of waste, and completion of shadow scoring using the reportable quantities screening method.

Valdosta, Georgia

- Served as Principal Hydrogeologist, under the HSRA program, for the investigation of a release of spent solvents at a facility in north Georgia. The purpose of the project is to determine how shallow groundwater contamination had effected a deep bedrock water supply well. The project included the development of a hydrogeological study to determine site-specific hydrogeological characteristics and an investigation into the construction of the water supply well.

Rome, Georgia

- Served as Project Officer, under the HSRA program, for the investigation of a release of styrene at a facility in northwest Georgia. The purpose of the project is to provide sufficient data to notify the State of Georgia under HSRA and whether the site would be place on the Hazardous Site Inventory (HSI). The project included historical research, a hydrogeological study to determine site-specific hydrogeological characteristics, characterization of waste, and completion of Exposure Pathways Analysis. Based on the results of the study, sufficient data was submitted to the State of Georgia, which kept the site from being placed on the HSI.

PETROLEUM HYDROCARBON SERVICES

Selected Projects

Several Locations, Georgia

- Currently serve as Project Manager at several hydrocarbon release sites in Georgia. Activities have included Corrective Action Plan development, remedial system design system installation, system operation and litigation support. Remedial actions include development of risk based corrective action (RBCA) levels, free product recovery and groundwater corrective action.

Columbia, South Carolina

- Currently serve as Project Manager on the evaluation and development of a recovery system for a No. 2 fuel oil spill covering approximately 3 acres. A recovery system had been installed by others in 1990 and was having little success. Genesis Project evaluated the hydrogeology of the system as well as the system hardware. Based on this evaluation Genesis Project developed an alternative system design to recover free product. The system is currently recovering approximately 275 gallons per week.

Several Sites in Georgia and Alabama

- Currently serve as Project Manager at several hydrocarbon release sites in Georgia and Alabama. Activities have included RBCA evaluations, Corrective Action Plan development, remedial system design system installation, system operation and litigation support. Remedial actions include development of risk based corrective action (RBCA) levels, free product recovery and groundwater corrective action.

Bremen, Georgia

- Served as Project Officer for the development of a CAP at a Petroleum Pipeline Breakout Tank Farm in north Georgia. The impacted media at the site included free product gasoline, adsorbed phase and dissolved phase impacts. Mr. Mitchell incorporated Risk Assessment into the Plan, which concluded that free product removal was the only active remedial action required at the site. In addition, remedial design included on-site treatment equipment to lower the amount of equipment required for free product removal and recovery.