



Genesis Project, Inc.

ENVIRONMENTAL SERVICES

MARK D. MITCHELL, P.G.
Principal Hydrogeologist



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) - Arkansas (#1222)

Georgia On-site Sewage Management System Soil Investigations: Georgia DPH
Investigations for the regulatory permitting of on-site waste management systems

PRACTICE AREAS

Expert Services: Cases involving Environmental Contamination, and Potable Water Resources

Due Diligence Investigations: Phase I and II Environmental Site Assessments

Georgia Brownfields (HSRRA): Corrective Action Plans & Compliance Status Reports

Georgia HSRA Program: Corrective Action Plans, Compliance Status Reports, etc.

Groundwater Flow and Contaminant Transport Modeling: Numeric and Analytical

Groundwater Supply Evaluation and Development: Aquifer Testing and Analysis

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

RCRA Program: Groundwater Quality Assessment; Solid Waste Landfill Monitoring, etc.

RECENT CONTINUING EDUCATION

Introduction to FEMA Flood Maps and Flood Studies 2019

Basics of Soil Resources: Classification, Mapping and Databases 2021

Basics of Water Resources: Wetland Basics 2022

EXPERIENCE

With over 36 years of experience, Mr. Mitchell has completed projects involved with both water resource development and environmental contamination across the United States. This experience includes development of public and private water supply systems, due diligence activities, environmental site investigations, fate and transport studies, risk evaluations and remediation of soil and groundwater as well as representing clients as an expert witness.

Prior to co-founding Genesis Project, Inc., Mr. Mitchell was a Principal Scientist/Office Manager for ARCADIS/Geraghty & Miller Inc. in Atlanta, Georgia. During this period, Mr. Mitchell was responsible for a wide range of environmentally related projects, including strategy development, regulatory negotiations and client support. Mr. Mitchell started his career as a staff geochemist at the Hanford site in Washington State where he was involved with a project to determine the suitability of the Columbia River Basalt Group as a High-Level Nuclear Waste Repository.

EXPERT WITNESS SERVICES

Mr. Mitchell has provided expert witness services for over 30 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

Brooklet, GA

- Expert witness services concerning the spill of petroleum hydrocarbons from an accident involving a tanker truck. Activities included data evaluation, development of professional opinion as well as completion of a deposition on behalf of the defendant. The case was settled prior to going to trial.

Adairsville, GA

- Expert witness services concerning a land use application for a proposed aggregate quarry. Activities included data evaluation, development of professional opinion and preparation and completion of a letter to the Bartow County Planning Commission for a Rezoning and Land Use Amendment along Georgia Highway 140 for the construction of a mining quarry (aggregate). The letter was prepared on behalf of concerned landowners in the immediate vicinity of the proposed quarry. The application to rezone the property was denied by the Planning Commission.

Lakeland, Florida

- Litigation support concerning the degradation of water quality and subsequent treatment activities at a community public water system in Lakeland, Florida. The concern was the presence of total trihalomethanes (TTHM) and Haloacetic Acid in drinking water and the conversion from a chlorine-based treatment (sodium hypochlorite) system to a chlorine dioxide treatment system.

Gainesville, Georgia

- Expert witness services 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. The case was settled prior to going to trial.

Smyrna, Georgia

- Expert witness services 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. The 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. The 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 principal contaminants included uranium and radon.

DUE DILIGENCE SERVICES

Mr. Mitchell has been involved in 100's of Due Diligence Projects over his 30+ year career. These projects have varied from small commercial developments to large industrial manufacturing facilities. Recent examples of this work include:

Selected Projects

Multiple Phase I ESAs – Stone Mountain Commercial Development Portfolio

- Mr. Mitchell was the lead investigator on multiple Phase I Environmental Site Assessments (ESAs) of 12 buildings on seven (7) separate parcels on an accelerated 3-week delivery schedule. He immediately constructed a labor-loaded, critical-path project schedule to meet the project due date on budget. These tasks included resource management, schedule development, and implementation.

Phase II ESA – Milton Ave

- Mr Mitchell was the principal investigator on a Phase II ESA for the Atlanta BeltLine, Inc. (ABI) on a portion of the 4-mile Southside Trail corridor. The project was completed a “fast-track” (3-week) to enable the ABI to internal deadlines. In addition, he led an effort to prepare a cost estimate of any corrective action required, including a survey of potential asbestos containing materials (ACMs). This estimate was submitted within three (3) days of the request. All work was completed in 22 days.

DCA-Compliant Phase I-II ESA – Metro Atlanta

- Mr. Mitchell was the primary investigator on a Georgia Department of Community Affairs (“DCA”) compliant Phase I-II ESA for an apartment complex being converted to a senior residence center. DCA requires site-specific environmental assessment for all development proposals being considered for funding public housing. These assessments include multiple non-ASTM scope tasks. redeveloping the property and converting to a senior residence center. Genesis Project mobilized to conduct the Phase I ESA, which included 14 non-scope issues for a ASTM Phase I ESA (wetlands, State waters, floodplains, noise, water leas/mold, asbestos, lead-based paint, lead in drinking water, radon, PCBs, endangered species, other hazards and considerations, historic preservation and vapor intrusion) Based on the Phase I ESA, offsite Recognized Environmental Conditions were identified during the file review and onsite testing of soil and groundwater was completed. Upon receipt of the data, Genesis Project catalogued and analyzed the data, presented our conclusions that abatement of the asbestos and lead-based paint found, then prepared and submitted our final report which was accepted without revision.

GEORGIA BROWNFIELDS SERVICES

Mr. Mitchell has been involved in the Georgia Brownfields program since its inception and has been the principal investigator on over 50 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.

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 an 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.

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.

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 South Georgia. The purpose of the project is to determine how shallow groundwater contamination had affected 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 placed 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.

WATER SUPPLY SERVICES

Mr. Mitchell has been involved in water supply projects for over 35 years. These projects have ranged from the development of municipal well fields to the completion of groundwater flow modeling.

Selected Projects

Atlanta, Georgia

- Completed a groundwater investigation and well study for an irrigation well for a private residence in Atlanta (Buckhead) Georgia. A new well was needed due to drought in Georgia that limited the homeowner's ability to maintain \$100,000s in landscaped areas. The project included a records search, review of previous investigations, and a field investigation to identify optimal well locations.

Smyrna, Georgia

- Completed a groundwater investigation and well study for a water supply well for a private club in Smyrna, Georgia. The project included a records search, review of previous investigations, and a field investigation to identify optimal well locations.

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 was 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 principal contaminants included uranium and radon.

SURFACE WATER INVESTIGATIONS

Mr. Mitchell has been involved in surface water projects and its interaction with groundwater for over 38 years. These projects have included investigations involving both contaminated surface water impacting groundwater resources as well as contaminated groundwater impacting surface water resources. In addition, the interaction of stormwater on native soils and property development including the calculation of discharge rates the determination of whether flooding is possible.

Selected Projects

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 surface water impacted by mill tailings from a phosphate mining operation. The principal contaminants included uranium and radon.

Fulton County, Georgia

- Served as Project Manager for a site involving potential surface water contamination originating from impacted groundwater. The source area consisted of industrial businesses that had impacted soil and groundwater with chlorinated hydrocarbons.

Fulton County, Georgia

- Conducted percolation testing on a commercial property for the installation of a permeable parking lot. The objective of the study was to determine if the native soils were capable of handling the recharge of surface water originating from peak rainfall in the local area and avoid flooding in the parking area.