

RYAN D. FRANCIS, P.G.

Education

MS – Geology, University of Florida, 2006

BS – Geology, Northwest Missouri State University, 2003



Professional Licenses

Professional Geologist – Arkansas (No. 2005)

Professional Geoscientist – Louisiana (No. 893)

Professional Geoscientist – Texas (No. 11861)

Professional Experience

Ryan D. Francis is a licensed professional geologist with over 16 years of experience, including senior management of a nationwide portfolio of petroleum storage tank closures; technical and project management of petroleum soil and groundwater site investigations and remediation; third-party technical review; property administrative controls; and serving as the geologist-on-record for multiple environmental projects in Arkansas, Louisiana, and Texas.

As a Project Director, Ryan supports national clients in the logistics and oil & gas businesses with a focus on midstream and downstream infrastructure, such as underground and above-ground storage tanks, pipelines, and aging infrastructure; many in the U.S. greater than 75 years old. He works closely with local and state environmental quality agencies to ensure appropriate environmental protection for each project and to support clients in complicated cases involving multiple responsible parties.

He has participated in or directed numerous environmental site assessments, contamination assessments, remedial action plans, and remedial construction projects throughout the United States. Projects have typically involved due diligence investigations, liquid release response actions, site investigations, permitting, corrective action plan development, and remediation system management. Facilities have included retail gas stations, refineries, pipeline right-of-way, refined product terminals, pump stations, delivery facilities, and logistics terminals.

Chemical contamination encountered in both soil and groundwater media has included petroleum, heavy metals, PCBs, and solvents. Notable projects that Mr. Francis has been involved in are described below.

Portfolio Management

Logistics Client, Nationwide. Served as key resource in development of a successful multimillion-dollar proposal for management of petroleum storage tank closures and site remediation activities at client facilities across the United States. Upon win of proposal, provided logistical, financial, and technical management of a nationwide portfolio of project sites that included closure of aboveground storage tanks and underground storage tanks, and subsequent follow-on remediation. Led weekly meetings with strategic project personal and client contacts to ensure individual project and overall portfolio progress in accordance with client and State regulatory agency requirements.

Company Petroleum Clients, Louisiana. Acted as Louisiana portfolio manager and lead technical resource for company client projects located within the State of Louisiana. Guided projects through entire lifecycle from initiation to regulatory closure. Worked closely with clients and State regulators to apply the Louisiana Risk Evaluation/Corrective Action Program (RECAP) appropriately to each project.

Technical Document Review and Regulatory Communications

Major Pipeline Client, Louisiana, New Mexico, Texas. Provided senior technical review of first-party and third-party environmental assessment documents for the identification of technical and regulatory deficiencies.

Multiple Oil & Gas Clients, Regional. Served as the client advocate and the single point of contact for communications with State regulatory agency personnel. Coordinated and addended meetings with State regulatory agency, third-party stakeholder, and client personnel.

Environmental Due Diligence

Florida, Louisiana, and Texas. Performed Phase I and Phase II Environmental Site Assessments (ESAs) at numerous commercial, industrial, and retail facilities.

Confidential Client, Louisiana. Assisted in the coordination and completion of 33 Phase II ESAs at retail gasoline stations for a major petroleum client in a four-month time period. Conducted utility clearance activities including the oversight of ground penetrating radar (GPR) and non-intrusive detection methods at each location and supervised drilling crews during the installation of soil borings and monitoring wells.

Soil and Groundwater Investigation

Major Pipeline Clients, Louisiana. Acted as project manager and site supervisor during numerous site investigations for hydrocarbon releases from refined petroleum pipelines. Developed site specific action levels for soil contamination at multiple Sites to significantly reduce investigation and remediation costs. Prepared site investigation reports, corrective action plans, and implemented interim corrective actions in accordance with Louisiana Risk Evaluation/Corrective Action Program guidelines at sites across the state.

Major Pipeline Client, Sarepta, Louisiana. Provided primary management and team leadership of delineation and remediation activities on a project site with impacted groundwater identified on four separately owned adjacent properties. Coordinated with adjacent property owners and site representatives during sonic drilling installations of more than 24 monitoring wells, 20 recovery wells, and 60 air sparge and soil vapor extraction wells. Conducted multiple aquifer testing events and resulting calculations to determine affected aquifer groundwater classification. Managed the operations and maintenance of a dual-phase extraction remediation system to ensure compliance with state permits.

Confidential Client, Tatum, New Mexico. Acted as field liaison for project management during all phases of on-site activities including coordination of field personnel during well installation and groundwater monitoring. Provided field management and oversight for the installation of monitoring wells via air rotary drilling equipment.

Confidential Client, Illinois and Louisiana. Managed soil and groundwater investigation activities in association with divestiture confirmation sampling. Provided oversight during installation of groundwater monitoring wells and conducted soil and groundwater sample collection. Coordinated

off-site access with neighboring properties as necessary for delineation of affected soils and groundwater.

Major Pipeline Client, Cape Girardeau, Missouri. Managed soil investigation activities in association with a pipeline release within an existing excavation. Conducted affected soil delineation activities and coordinated the creation of an activity and use limitation (AUL) area in conjunction with Missouri Brownfields/Voluntary Cleanup Program guidance.

Soil and Groundwater Remediation

Major Oil & Gas Client, Baton Rouge, Louisiana. Developed corrective action technology plan highlighting multiple remediation techniques of which chemical oxidation was the chosen method. Oversaw the installation of multiple component injection wells specifically designed for the chemicals of use during the remediation event. Provided field support during the injection and monitored groundwater parameters to calculate the performance of the chemical reagent. Continuously monitored groundwater constituent concentrations to determine the long-term effectiveness of the corrective action to address the area of concern.

Major Pipeline Client, Natchitoches, Louisiana. Served as project manager and site supervisor during the installation of over 30 air sparge and soil vapor extraction (AS/SVE) wells via sonic driller technology wells at the project site in central Louisiana. Wells were connected to a trailer-mounted internal combustion vapor extraction system complete with system monitoring and telemetry technology. Air sparging was provided via an air compressor working in conjunction with the SVE system. System operation continued for approximately 8 months and resulted in reduction of chemical of concern (COC) concentrations in excess of 95% and facilitated early regulatory closure.

Confidential Client, Palatka, Florida. Assisted with the installation of more than 20 shallow groundwater removal wells in association with the use of a dewatering system for lowering the water table in the area of an excavation. Ensured proper operation of the mobile air stripper unit and conducted effluent water testing in accordance with water discharge permit requirements.

Petroleum Storage Tank Systems

Confidential Client, Lake City, Florida. Provided primary oversight during a petroleum contaminant source removal which utilized standard track-hoe excavator methodology as well as large-diameter auger technology. Source removal included the removal and disposal of all the on-site underground petroleum storage tanks and installation of a single tank system. Coordinated and directed subcontractors to achieve successful removal of impacted soil on a first-of-its-kind project for the company.

Confidential Client, Louisiana, Texas, and Oklahoma. Conducted site inspections of underground and aboveground petroleum storage tank systems for backup generator installations at field stations for a major telecommunications provider. Reviewed SPCC plans and spill response procedures at each location in addition to site maintenance records.

Confidential Client, Florida and Louisiana. Construction oversight and verification sampling for UST removals. Preparation of closure request for leaking underground storage tank (LUST) sites under Florida Pre-Approval and Louisiana RECAP programs.

Logistics Client, Nationwide. Acted as senior manager of logistical, financial, and technical responsibilities of a nationwide portfolio of project sites that included closure of aboveground storage tanks and underground storage tanks, and subsequent follow-on remediation. (Also listed in

Portfolio Management section above).

Publications and Presentations

Francis, R.D., *Groundwater Gauging During Local Flooding as a Proxy for Aquifer Pumping Tests to Demonstrate Hydraulic Connectivity*, Battelle 2019 Bioremediation Symposium poster presentation, April 2019