

Fields of Specialization

- ▶ Civil Engineering
- ▶ Project Management
- ▶ Innovative Remediation Technologies and Strategies
- ▶ Construction Management
- ▶ Treatment Process Design
- ▶ Stormwater Design
- ▶ NPDES Permitting

Credentials/Registrations

- ▶ B.S., Civil Engineering, Auburn University, 1979
- ▶ Professional Engineer – Florida, Alabama, Arkansas, Tennessee, and Mississippi
- ▶ National Council of Examiners for Engineering & Surveying Record # 21187

Professional Affiliations and Memberships

- ▶ Society of American Military Engineers
- ▶ Water Environment Federation
- ▶ Florida Engineering Society
- ▶ National Society of Professional Engineers
- ▶ Destin Rotary Club, Board of Directors 2006-2011
- ▶ Destin Area Chamber of Commerce Board of Directors, 2008-2012
- ▶ American Heart Association, Executive Leadership Team, 2009-2010

Certifications and Training

- ▶ NCEES Certification
- ▶ Certified Hazardous Materials Manager – Master Level, 10016, USA, 1999, expired
- ▶ OSHA Hazwoper 40 Hour and annual refresher courses
- ▶ OSHA Card Holder – Association of Reciprocal Safety Councils, Inc. 12 Basic Plus course.
- ▶ TWIC Card Holder

Career Summary

Mr. Porterfield has 38 years of civil engineering and environmental experience. He has a broad range of design, permitting and management experience in both public and private engineering projects throughout the United States. Mr. Porterfield's experience includes: land development project design, assessment and evaluation of beachfront structures including retaining/sea walls, stormwater, wastewater, potable water, roads and drainage, bioremediation, remedial design, site investigations, closure certification, pollution prevention, and operation and maintenance of wastewater, hazardous waste and solid waste facilities. He has extensive experience with federal, state and local issues related to Land Development Codes and environmental regulations. Mr. Porterfield has engineering program and project management experience with private developers, municipal clients, United States Army Corps of Engineers (USACE), Navy, Air Force, US Environmental Protection Agency (EPA), US Department of Transportation (DOT), US Coast Guard (USCG), and industrial clients. He is a registered professional engineer in five states, including Florida, Alabama, Arkansas, Tennessee, and Mississippi.

Experience Summary

Expert Witness Experience

- Expert Testimony; Breazeale, Sachse & Wilson, L.L.P.; Covington, LA. This project included expert testimony for stormwater and drainage issues associated with adjacent property owner's construction of a berm and its resultant downstream affects.
- Expert Testimony; Chesser & Barr, P. A.; Walton County, FL. This project included expert testimony for stormwater and drainage issues associated with adjacent property owner's issuance of a Florida Department of Environmental Protection permit issuance in an Administrative Hearing.
- Expert Testimony; Anchors, Smith, Grimsley, P.A.; Walton County, FL. This project included expert testimony for stormwater and drainage issues associated with adjacent condominiums.
- Expert Testimony; Anchors, Smith, Grimsley, P.A.; Okaloosa County, FL. This project included expert testimony for pump system design and performance for a swimming pool system and seawall integrity assessment.
- Parker B. Smith, P.A.; Walton County, FL. This project included expert testimony for stormwater and drainage issues associated with adjacent condominiums.
- Covington, Burling; Washington, D.C. Technical expert testimony for cost recovery efforts at the Arlington Blending & Packing Superfund site in Arlington, TN.

Site Development Experience

- Civil Engineer of Record, Town of Rosemary Beach, Walton County, FL. Design and FDEP permitting services for commercial restroom connections in Rosemary Beach, FL. Technical scope included potable water and wastewater design and associated permitting and regulatory approval.
- Civil Engineer of Record, Pelican Real Estate & Development Co., Inc., Destin, FL. Design and development order services for commercial building developments in Lynn Haven and Panama City Beach, and Seagrove Beach, FL. Technical scope included potable water, wastewater, stormwater, pavement design and associated permitting and development order issuance.
- Civil Engineer of Record, Trout Branch, LLC, Destin, FL. Design and development order services for a 32 acre residential development west of Freeport, FL. Services included site layout, potable water, wastewater, stormwater, roads and pavement design, traffic study and associated permitting, major development order issuance, and FDEP permits.
- Project Manager, Seagrove Beach Climate Controlled Storage Facility, Axiom Capital Group, Walton County, FL. This project included stormwater design, wastewater grinder pump, potable water connections, coordination with Walton County Growth Management Department for development order issuance, and a Preservation Plan, and FDEP permits.
- Project Manager, Pelican Real Estate Building, Axiom Capital Group, Crestview, FL. This project included stormwater design, wastewater and potable water connections, coordination with the City of Crestview for development order issuance
- Project Manager, Pelican Real Estate, Axiom Capital Group, Walton County, FL. This project included environmental assessment, stormwater design, wastewater grinder pump, potable water connections, coordination with Walton County Growth Management Department for major development order issuance, and a Preservation Plan.

- Civil Engineer of Record and Project Manager, Premier Planning & Development, Walton County, FL. Design and development order services for a 40 acre residential development north of DeFuniak Springs, FL. Services included site layout, potable water, wastewater, stormwater, roads and pavement design, traffic study and associated permitting and major development order issuance.
- Civil Engineer of Record and Project Manager, Galey Acquisitions, LLC, Walton County, FL. Design and development order services for a 15 unit residential condominium in the Tops'1 Development. Services included site layout, potable water, wastewater, stormwater, roads and pavement design, traffic study and associated permitting and minor development order issuance.
- Civil Engineer of Record and Project Manager, WDM Architects, Okaloosa County, FL. Master Plan, design and development order services for a 121 unit hotel. Services included site layout, potable water, wastewater, stormwater, roads and pavement design, traffic study and associated permitting and major development order issuance.
- Civil Engineer of Record and Project Manager, New Orchard Group, Walton County, FL. Design and development order services for the Redfish Village Gateway project. Services included site layout, potable water, wastewater, stormwater, roads and pavement design, traffic study and associated permitting and major development order issuance for this infill project.
- Civil Engineer of Record and Project Manager, Alpha Restoration Services, Inc., Okaloosa County, FL. This project was a redevelopment of the Consul Apartments site, which was damaged by hurricanes. Services included site layout, potable water, wastewater, stormwater, pavement design, and associated approvals for the reconstruction of the property.
- Project Manager, Judy Royal Architect, Baker, FL. This project included stormwater design, septic tank design, potable water connections, coordination with Okaloosa County Growth Management Department for development order issuance, and FDEP permits.
- Project Manager, Morgan Contracting, Inc., Okaloosa County, FL. Design and development order services for a 10 acre residential development north of Baker, FL. Services included site layout, potable water, septic tank design, stormwater, roads and pavement design, traffic study and associated permitting and major development order issuance.
- Civil Engineer of Record and Project Manager Self Storage Project, Scenic Corridor, Wallace Enterprises, Walton Co., FL. Design and development order services for an 18,000 square foot self storage development on the Highway 98 Scenic Corridor. Services included site layout, potable water, stormwater, landscape and preservation, roads and pavement design, traffic study and associated FDOT and FDEP permitting and major development order issuance.
- Drainage Report, Seascape HOA. This project included an area wide study of drainage and localized flooding of units. Recommendations were prepared along with cost estimates for implementation. Improvements included wetland permitting, outfall design, localized grading, upgrades to collection and pumping systems, and interconnecting separate basins.
- Regional Manager. Served as a Regional Manager for an office specializing in civil engineering design projects including roads, drainage, utilities and associated infrastructure projects. Provided construction administration of projects designed.

Land Use Amendments

- Small Scale Land Use Amendment (SSLUA), Coffeen Walton Co., FL. This small scale amendment was for a 9.75 acre parcel in South Walton County. Project data included the application package, traffic study, water and wastewater demand calculations, environmental

assessment, school board demand calculations, and a Compatibility Study. The public notice requirements were also completed.

- Large Scale Land Use Amendment (LSLUA), Southside of Florida, LLC, Walton Co., FL This small scale amendment was for a 40 acre parcel in South Walton County. Project data included the application package, traffic study, water and wastewater demand calculations, environmental assessment, school board demand calculations, and a Compatibility Study. The public notice requirements were also completed.
- Small Scale Land Use Amendment (SSLUA), Key Auto Sales, Walton Co., FL This small scale amendment was for a 2 acre parcel in South Walton County. Project data included the application package, traffic study, water and wastewater demand calculations, environmental assessment, school board demand calculations, and a Compatibility Study. The public notice requirements were also completed.
- Small Scale Land Use Amendment (SSLUA), MA Properties, Walton Co., FL This small scale amendment was for a 9.99 acre parcel in South Walton County. Project data included the application package, traffic study, water and wastewater demand calculations, environmental assessment, school board demand calculations, and a Compatibility Study. The public notice requirements were also completed.
- Small Scale Land Use Amendment (SSLUA), Peter Wooley, Walton Co., FL This small scale amendment was for a 5.13 acre parcel in South Walton County. Project data included the application package, traffic study, water and wastewater demand calculations, environmental assessment, school board demand calculations, and a Compatibility Study. The public notice requirements were also completed.

Sea Wall Design And Permitting Experience

- Principal Engineer, Retaining Wall Repair and Beach Restoration, Beach House Resort Condominiums, Miramar Beach, FL. Design and Construction Support for the repair of a retaining wall supporting a swimming pool, and the installation of retaining wall encompassing the entire 630 feet width of the property.
- Project Manager, Foundation Sea Wall Repair, Sand Drift Beach House Condominiums, Miramar Beach, FL. Site design and construction administration of 288 lineal feet for a foundation sea wall repair as a result of hurricane damage to the structure. Prepared Project Manual with Bid Specifications and Contract Documents.
- Project Manager, Sterling Building Services, Inc., Walton and Okaloosa County, FL. This project included design of beach walkover structures, dune restoration, FDEP permitting, structural design and evaluations.

Private Environmental Engineering Experience

- Certifying Engineer for a project in Cape Canaveral, Florida. The project involves the enhancement of the known biodegradation of chlorinated solvents in the former source area and the elimination of the discharge of contaminated groundwater into the harbor in excess of State of Florida surface water quality standards and criteria. The strategy used to accomplish these objectives was the injection of 10% Emulsified Zero-Valent Iron (EZVI), which has accomplished significant results in the destruction of dense non-aqueous phase liquid (DNAPL) chlorinated solvents, in the former source area zones having the highest concentration of chlorinated solvents. Injection of vegetable oil, as a carbon source, has also been used to stimulate biodegradation of the dissolved phase plume emanating from the former source area. In addition, supplemental Dehalococcoides ethenogenes (DHC) cultures were injected to further enhance the reduction of

COCs. A Risk Assessment was prepared and approved by the FDEP. The project is now monitoring groundwater in accordance with a Monitored Natural Attenuation Plan (NAMAP) that has been accepted by the FDEP.

- Certifying Engineer and Project Manager for a Brownfield Site in Hattiesburg, Mississippi. This previously operated drilling service facility exhibited Constituents of Concern that included chlorinated solvents and metals in soil. Groundwater monitoring was conducted to determine if groundwater concerns existed. Further soils investigation included speciation of arsenic, which indicated arsenic was not a concern. An investigation report was prepared and submitted as a component of the Mississippi Brownfields Voluntary Cleanup and Redevelopment Program. A Corrective Action Plan (CAP) was prepared and approved and included air sparging as the selected remedial technology. Total of 71 air sparging points are included in three zones. The sparge points were designed to be 20 feet deep. The sparging system encompasses an area of approximately 1.5 acres. A risk-based closure plan was submitted to the MDEQ, and was accepted with the implementation of Institutional Controls prohibiting the use of shallow groundwater at the site for consumption. The groundwater monitoring wells and the air sparging wells were all plugged and abandoned in accordance with a Closure Plan approved by the MDEQ.
- Project Manager for a groundwater monitoring program for a company engaged in the performance of heavy maintenance and modification of both narrow and wide body commercial aircraft. Baseline monitoring was initially conducted prior to tenant operations being initiated. Continuous ongoing groundwater monitoring has been conducted at the facility to ensure no additional contributions from these tenant aircraft operations. In addition, coordination with the City and U.S. Army Corps of Engineers (USACE) has been required in conjunction with investigations conducted as part of the Formerly Used Defense Sites (FUDS) program in the vicinity.
- Certifying Engineer for a Major Manufacturing Facility. Contracted for a Corrective Action Plan in accordance with Alabama Department of Environmental Management (ADEM) Investigation and Remediation Guidance Section 5.3. The Corrective Action Plan (CAP) addresses the injection of emulsified oil in a 25 x 25 foot treatment zone located in the vicinity of a monitoring well near the former source area of a major manufacturing facility. The scope of work also includes an Underground Injection Control (UIC) permit application for the implantation of the CAP. Elevated concentrations of trichloroethene (TCE) and 1,2-cis-dichloroethene (cis-DCE) were detected in the groundwater. The emulsion will be injected into the contaminated aquifer via temporary wells or direct push points to stimulate anaerobic biodegradation of the target TCE and chlorinated daughter products into non-toxic ethane and ethane resulting in reductive dechlorination.
- Project Engineer, Stennis Space Center, MS. Mr. Porterfield was responsible for certain design elements of four groundwater pump and treat systems for contaminated groundwater. Contaminants included trichloroethylene (TCE); TCE-related environmental degradation byproducts - 1,2-dichloroethylene (1,2-DCE), vinyl chloride, 1,1-dichloroethene (1,1-DCE), 1,1-dichloroethane (1,1-DCA), 1,2-dichloroethane (1,2-DCA); 1,1,1-trichloroethane (1,1,1- TCA); perchloroethylene (PCE); 1,2-dichloropropane (1,2-DCP); xylene; chloroform; ethyl benzene; benzene; phthalates; polynuclear aromatic hydrocarbons (PAHs); lindane (gamma-BHC); polychlorinated biphenyls (PCB); beryllium; arsenic; cadmium; endosulfan II; and endrin aldehyde.
- Project Engineer, Stennis Space Center, MS. Mr. Porterfield was responsible for field engineering and construction quality assurance for the installation of slurry walls and RCRA caps at two trench

disposal areas. Bentonite slurry walls were installed around the trench fill areas extending 45 to 50 feet below land surface. RCRA caps were installed consisting of a 24-inch thick foundation layer, a 24-inch thick clay layer, a geomembrane layer, an 8-inch drainage layer, and a 24-inch thick protective/vegetative soil cover. Downgradient of the trench fill areas, a passive reactive barrier was installed whereby a preferential flow pattern was created with the installation of slurry walls and a sand “window” that contained a proprietary iron based medium to dechlorinate the halogenated VOCs in the plume.

Municipal Engineering Experience

- Project Manager, Emergency Permit to Open Oyster Lake, Walton County. This project involved preparation of a permit application for an emergency permit as a result of Hurricane Ivan impacts. This involved a rapid turnaround and coordination with FDEP and USACE.
- Project Manager, J.D. Miller Landfill Permit Renewal, Walton County, FL. This project included preparation of a permit application, new monitoring well installation, and recommendations for improvements in the monitoring program.
- Project Manager, Main Street Road Improvements, City of Destin, FL. This project included road design, stormwater design and permitting, and preparation of bid documents.
- Project Manager and Process Design Engineer, Various Municipal and Industrial Clients in Mississippi, Alabama, and Florida. Engineer of Record for the design of multiple wastewater treatment plants. These WWTPs included municipal and industrial facilities, as well as groundwater remediation systems. Responsible for the concept design and the management of the various discipline designs (i.e., mechanical, electrical, and structural). Managed the project through construction activities. Facilities included:
 - Panama City, FL WWTP
 - Long Beach/Pass Christian, MS WWTP
 - Louisiana Land and Exploration Refinery WWTP – Saraland, AL
 - AMPEX WWTP – Opelika, AL
 - Uniroyal Chemical Co. Groundwater System – Bay Minette, AL
 - Arlington Blending & Packaging Groundwater Treatment System – Memphis, TN
 - Wright Landfill Groundwater Treatment System – Okaloosa Co., FL
- Operator Training and O&M Manual Preparation – Project Engineer and Trainer for multiple municipal wastewater treatment plant startups and preparation of O&M Manuals for these facilities. This work required plant design review and input to the design from an operational standpoint, preparation of the O&M Manuals, preparation of training materials, conducting training sessions for the municipal operators, and treatment plant startup. These tasks were performed for:
 - Butler, AL – hydrograph controlled release lagoon WWTP
 - Opelika, AL – oxidation ditch WWTP
 - Pascagoula/Moss Point, MS – step aeration activated sludge WWTP
 - Riviera Utilities (Foley, AL) – oxidation ditch WWTP

Federal Contracting Experience

- Program Manager, Louisville District Architecture/Engineer Services. This \$1M/year, 5-year contract was a Firm Fixed Price Indefinite Delivery contract. Delivery Orders included the Surface Water and Ground Water Quality Sample Collection and Analysis for the Lake Okeechobee and Western Hillsborough Aquifer Storage and Recovery Pilot Projects; a Corrective

Action Plan Resolution for the Charles L. Waples Army Reserve Facility in Anderson, IN; a Preliminary Assessment/Preliminary Investigation, and Phase 1 Remedial Investigation (PA/SI/RI) at the former Air Force Plant 39 in Chicago, IL; well abandonment at the Lexington-Bluegrass Army Depot (LBAD) outside of Lexington, KY; a Supplemental Site Inspection at the former Hanna City Air Force Station in Peoria County, IL; and an Engineering Evaluation and Cost Analysis (EE/CA) and Action Memorandum at the former Kentucky Ordnance Works (KOW) in Paducah, KY.

- Project Manager, Royal D'Iberville Development and U.S. Army Corps of Engineers, Mobile District. This project was the preparation of an Environmental Impact Statement (EIS) for a potential new casino development in Coastal Mississippi. The EIS was prepared in accordance with USACE and EPA requirements to obtain Section 404 and Section 10 permits.
- Program Manager, Mobile District Architecture/Engineer Services. Environmental and civil engineering services at a variety of installations though out the South Atlantic Division. These included site investigation, sanitary sewer design, spill control and countermeasure plans. Locations included Hurlburt Field, Eglin AFB, Tyndall AFB, as well as far reaching locations such as California and Honduras.
- Program Manager, Jacksonville District Architecture/Engineer Services. Environmental and civil engineering services at a variety of installations though out the Jacksonville District Boundaries. These included site investigation, underground storage tank removal specifications and contract documents, spill control and countermeasure plans. Locations included facilities throughout the state of Florida.
- Project and Program Manager, Mobile District Remediation Services. Environmental remediation and construction services at various military installations throughout the South Atlantic Division. Projects included remediation of a former fire training area with excavation and thermal treatment of hydrocarbon contaminated soil at Ft. Rucker, AL, landfill capping of contaminated soils at the former Alabama Army Ammunition Plant, removal and in-place closure of greater than 50 underground storage tanks at Brookley Field and Barin Field.
- Project and Program Manager, Louisville District Remediation Services. Mr. Porterfield was responsible for one \$10M TO be used by New England District for the Ottati & Goss Superfund Site for EPA Region II. He negotiated a Task Order for asbestos abatement, PCB ballast removal, and building demolition in Arlington Heights, IL.
- Project Manager, U.S. Department of Transportation Remediation Services. Removal of underground storage tanks and installation of new double wall Convault tanks for an upgrade of the backup generator fuel supply at the New York TRACON facility in Hempstead, NY. The New York TRACON is the air traffic control facility for La Guardia, Newark, Kennedy, Islip, and other smaller airports.
- Program Manager, USACE Nashville District PRAC, \$12.5M CR or FFP— Mr. Porterfield had overall operational, administrative, and contractual responsibility for four TOs ranging from \$17K to \$12M: Summit Equipment Superfund Site, Akron, OH, (excavation of PCB contaminated soil); Fort Campbell, KY (UST/AST upgrades); Middlesboro, KY (demolition of sewer treatment plant), and WSM Radio Tower, Brentwood, TN (UST/AST upgrades for FEMA).
- Field Engineering Oversight, 03/01-2/02, U.S. Navy NORTHDIV, Remedial Action Contract, Slurry Walls and RCRA Caps – Site 007, NASA Stennis Space Center, MS, - Mr. Porterfield provided construction oversight for the construction of two slurry walls, and associated RCRA caps. He had quality assurance responsibilities to ensure subcontractor conformance of the slurry

walls, and technical management of the caps. He was able to quickly resolve potential field change issues leading to project completion as scheduled. Responsible for the construction activities of four pump and treat systems which include iron removal, coagulation, flocculation, UV oxidation, carbon adsorption, sand filters, and sludge filter press unit operations.

- Delivery Order Manager, 05/01- 04/03, Air Force Center for Environmental Excellence (AFCEE), 3P-AE, Site Assessments 400 and 600 Area Tank Farms, Q4 Drone Crash Site, and Tyndall Compliance Sites, Tyndall AFB, FL, - Mr. Porterfield was the Delivery Order Manager for the Site Assessments for the 400 and 6000 Area Tank Farms, Q4 Drone Crash Site and the 500 Area Pipeline. This Delivery Order No. 0015 was conducted under the AFCEE 3P-AE contract. Mr. Porterfield had responsibility for scoping, project planning documents, managing field crews, team members, drillers, and surveyors. Data validation was conducted at the completion of fieldwork. The scope included head space analysis, soil sampling and analysis, monitoring well installation, groundwater sampling and analysis. Documents required included Site Assessment Reports for each site and Remedial Action Plans.

Solid Waste Experience

- JD Miller Landfill; Walton County, FL - Groundwater monitoring and reporting, preparation of groundwater monitoring biennial reports, permitting and regulatory assistance, and subsurface soils exploration.
- Wright Landfill; Okaloosa County, FL – Design, permitting, and bidding construction services of groundwater remediation, budgetary and process/operating cost analysis (of the groundwater treatment system), surveying, mapping, GIS, and GPS services, miscellaneous engineering studies, groundwater monitoring and reporting, and permitting and regulatory assistance.
- Ciba-Geigy Corporation; McIntosh, AL – Active landfill gas control system expansion, Subtitle C landfill expansion, subsurface soils exploration, groundwater remediation, budgetary and process/operating cost analyses, groundwater monitoring and reporting, surveying, mapping, GIS, and GPS services, miscellaneous engineering studies, and permitting and regulatory assistance.
- Alabama Army Ammunition Plant; Childersburg, AL – Subtitle D landfill expansion, C&D landfill construction, permitting and regulatory assistance, subsurface soils exploration, and miscellaneous engineering studies.
- Holsten Army Ammunition Plant; Holsten, TN – Fly ash/coal tar landfill closure, Subtitle D landfill expansion, C&D landfill construction, permitting and regulatory assistance, subsurface soils exploration, and miscellaneous engineering studies.
- M&T Chemical; Axis, AL – Budgetary and process/operating cost analysis, surveying, mapping, GIS, and GPS services, miscellaneous engineering studies, groundwater monitoring and reporting, subsurface soils exploration and permitting and regulatory assistance.

Construction Administration Experience

- Construction Administration, 393 North Business Park, Oden Hardy Construction, Santa Rosa Beach, FL. Construction administration services for the construction of an office/retail/warehouse complex including shop drawing review, periodic observation of construction activities to ensure conformance with the plans and specifications. Assumed responsibility as Engineer of Record.
- Construction Administration, Value Place Hotel, MDH Builders, Ft. Walton Beach, FL. Construction administration services including shop drawing review, periodic observation of construction activities to ensure conformance with the plans and specifications, certification of stormwater, potable water and wastewater systems.

- Construction Administration, Cypress Preserve Condominium; Classic Investments of Florida Magnolia, LLC; Ft. Walton Beach, FL. Construction administration services of a 150 unit condominium complex including shop drawing review, periodic observation of construction activities to ensure conformance with the plans and specifications, certification of stormwater, potable water and wastewater systems.

Regulatory Experience

- Alabama Department of Environmental Management; Montgomery, AL. Responsibilities included administration of wastewater construction grants, water quality studies of streams and modeling for wasteload allocation studies, industrial treatment plant design review, operation and maintenance inspections of municipal and industrial wastewater treatment plants, issuance of National Pollutant Discharge Elimination System (NPDES) permits for municipal and industrial dischargers, industrial pretreatment coordinator for the State of Alabama.

Management of Large/Government Contracts

- Delivery Order Manager, Air Force Center for Environmental Excellence (AFCEE), 3PAE Contract, Site Assessments 400 and 600 Area Tank Farms, Q4 Drone Crash Site, and Tyndall Compliance Sites, Tyndall AFB, FL. Mr. Porterfield was the Delivery Order Manager for the Site Assessments for the 400 and 6000 Area Tank Farms, Q4 Drone Crash Site and the 500 Area Pipeline. This Delivery Order was conducted under the AFCEE 3P-AE contract. Mr. Porterfield had responsibility for scoping, project planning documents, managing field crews, team members, drillers, and surveyors. Data validation was conducted at the completion of fieldwork. The scope included head space analysis, soil sampling and analysis, monitoring well installation, groundwater sampling and analysis. Documents required included Site Assessment Reports for each site and Remedial Action Plans.
- Delivery Order Manager, Air Force Center for Environmental Excellence (AFCEE), ENRAC, Emergency Evaluation and Repair and Maintenance to Bulk Fuel Tanks and Piping, Tyndall AFB, FL. This DO was conducted under the AFCEE ENRAC contract. Mr. Porterfield had responsibility for scoping, project planning documents, managing field crews, tank inspectors, tank cleaning, welders, and a surface preparation and coating crew. The scope included API inspection of tanks, confined space entry and tank cleaning, welding repairs to the tanks, lead abatement for the surface preparation of the existing coatings, and application of new coatings to the tanks and piping. Documents required included inspection reports, as built drawings, and QA reports for field activities.
- Program Manager, U.S. Army Corps of Engineers, Louisville District, A/E Services. This \$1M/year for 5 year contract was a Firm Fixed Price Indefinite Delivery contract. Delivery orders included the Surface Water and Ground Water Quality Sample Collection and Analysis for the Lake Okeechobee and Western Hillsborough Aquifer Storage and Recovery Pilot Projects. This \$990,000 DO included collection and analysis of surface water, storm water, and groundwater samples in support of the Everglades Restoration ASR Pilot Projects.
- Program Manager, USACE Mobile District PRAC, \$15M ID/IQ FFP. Mr. Porterfield was responsible for six TOs: Alabama Army Ammunition Plant, Childersburg, AL (three TOs for lead removal, stabilization, and cleanup of sludge basin) Brookley AFB, Mobile, AL (UST removal) Fort Rucker, AL (two TOs for thermal treatment, transport/disposal, well abandonment, and UST/AST removals) and Escambia Treating Company Superfund Site, Pensacola, FL (maintenance of creosote NPL site). TOs included the following:

- Project Manager, USACE Mobile District, Brookley AFB, Mobile, AL, \$2.0M FFP. Mr. Porterfield managed the removal of USTs and associated appurtenances at Brookley Field. Removed, decontaminated, and disposed of 29 USTs, associated piping and ancillary equipment. Mr. Porterfield decontaminated and closed in-place 11 USTs, associated piping and ancillary equipment. Also closed in-place approximately 17,500 feet of pipeline and distribution pipes in an industrial area covering 47 acres. Accomplishments: Developed an innovative approach to clean the pipes prior to removal and disposal by using a “pigging” operation. Saved the government money by crediting \$350K back on a unit price basis from several tasks. Received a letter of commendation from USACE.
- Project Manager, USACE Mobile District, Ft. Rucker, AL, \$1.5M. Mr. Porterfield managed this remediation project for the excavation and removal of over 10,000 cubic yards of POL contaminated soils from an abandoned fire training area at Ft. Rucker. Thermally treated soil on-site that was reused as backfill material. Managed the excavation and removal of over 3,000 tons of contaminated soil at six CAMUs. Accomplishments: Received a commendation letter from the USACE. Developed a unique cleanup solution that avoided disposal of groundwater and rainwater off-site by using water as quench water for the thermal treatment unit. Performed in-situ contaminant profiles of trenches to predetermine the off-site disposal options prior to excavation in order to streamline traffic flow of roll-offs and dump trucks.
- Project Manager, USACE Mobile District, OLF Barin Field, AL. Mr. Porterfield managed this \$670K contract for the remediation of USTs in a 15-acre residential site. Conducted a geophysical survey to locate and identify tanks, and removed and disposed of 15 fuel and 15 butane tanks. Accomplishments: Twelve of the butane tanks were located but still filled with butane. Developed an assembly on the valve structure to flare gases on-site and in-place with no adverse impact on the environment or the surrounding residential community. Received a letter of commendation from USACE.
- Project Manager, USACE Mobile District, Ft. Rucker, AL, \$200K FFP. Mr. Porterfield managed this TO contract for the remediation and removal of one UST, three ASTs, the abandonment of deep wells (500-600 feet), and demolition of four buildings. Accomplishments: Developed alternate approach to grouting when it was determined that the 40 year old pumps were damaged and could not be removed from the casing.
- Program Manager, USACE Nashville District PRAC, \$12.5M CR or FFP. Mr. Porterfield had overall operational, administrative, and contractual responsibility for four TOs ranging from \$17K to \$12M: Summit Equipment Superfund Site, Akron, OH, (excavation of PCB contaminated soil); Fort Campbell, KY (UST/AST upgrades); Middlesboro, KY (demolition of sewer treatment plant), and WSM Radio Tower, Brentwood, TN (UST/AST upgrades for FEMA).
- Program Manager, USACE Louisville District PRAC, \$25M CR or FFP. Mr. Porterfield was responsible for one \$10M TO used by New England District for the Ottati & Goss Superfund Site for EPA Region II. Negotiated a Task Order for asbestos abatement, PCB ballast removal, and building demolition in Arlington Heights, IL. Performed extensive marketing efforts to identify new Task Order opportunities from various end users.

- Project Manager, USDOT, Federal Aviation Administration, Hempstead, NY, \$5M CR and FFP. Mr. Porterfield managed the projects under this remedial action program for multiple FAA sites in EPA Regions I and II. Managed a \$500K TO on Long Island for the removal and replacement of specialized vaulted USTs with remote sensors and data output at an active Air Traffic Control Station on Long Island, NY. Interfaced with Nassau County Department of Health and Fire Department, NYSDEC regulators responsible for tank removal and installation regulations, as well as on-site FAA and DOT representatives. Accomplishments: Successfully removed and installed USTs and equipment adjacent, below and inside FAA facilities without impacting operations that include overall control of eastern U.S. air traffic.
- Project Manager, USEPA, Emergency Response Contract, Regions V and VI, \$5M CR. Mr. Porterfield managed six tasks under this cost-reimbursable contract for the remediation of PCBs, metals, petroleum, hydrocarbons, and solvents contaminated soil at various sites within the two regions. Accomplishments: Completed response action successfully with no lost time accidents.
- Project Manager, United States Coast Guard, Mobile, AL. Mr. Porterfield managed eight tasks under a \$500K CR contract to remediate oil and chemical spills. Accomplishments: Completed projects successfully within budget and schedule with no lost time accidents.
- Program Manager, USACE Mobile District, AL. Mr. Porterfield was responsible for a \$12M, three-year FFP ID/IQ HTRW contract that included site investigations, drilling, installation of monitoring wells, hydrogeological testing, topographic and geophysical surveys, remedial design, asbestos surveys, lead paint surveys, multimedia sampling, wastewater treatment design and site closure, UST identification and removal, contaminated soil excavation/removal/transportation and disposal, and soil vapor extraction pilot studies for federal facilities. Accomplishments: Successfully managed contract to annual ceiling capacity.
- Project Manager, The Arlington Blending and Packaging Group; Arlington Blending and Packaging Superfund Site, Memphis, TN. Mr. Porterfield managed this \$4M project to perform treatability studies and remedial design for LTTD of pesticides from soils, stabilization/solidification of treated soils and carbon adsorption treatment of groundwater contaminants for this Superfund site. Negotiated changes to the Record of Decision with EPA resulting in an Explanation of Significant Differences being issued. The EPA negotiations were based on groundwater modeling that changed the remedy from an aqueous phase carbon treatment system to natural attenuation. Mr. Porterfield submitted designs for review and prepared bid packages. Coordinated and supervised the activities of engineers and subcontractors. Also managed field studies in support of design and conducted community awareness briefings. Accomplishments: Selected to provide expert testimony for resolving cost allocation issues.
- Program/Project Manager, USACE Jacksonville District, Various Locations in FL. Mr. Porterfield was responsible for a \$750K per year ID/IQ FFP UST environmental services contract at 20 formerly used defense sites (FUDS). Prepared plans and specifications for the removal of USTs. Conducted site and geophysical investigations to identify and locate USTs and prepared SPCC plans for navigation facilities. Accomplishments: Devised innovative plan at Fort Pierce to remove offshore horned scullies to avoid impacting nesting habitat of sea turtles.
- Project Manager, CSX Transportation, Gautier, MS. Mr. Porterfield managed the remedial investigation/remedial action plan for a 12-acre former creosote pole treating facility. The facility was impacted by tidal waters and buried debris. Unusual migration patterns were found due to the buried debris. Conducted monitoring of adjacent private wells to determine possible adverse effects to residents. A risk assessment was also conducted to determine appropriate cleanup

levels, and submitted to the Mississippi Department of Environmental Quality. Mr. Porterfield evaluated remedial action alternatives to address all or portions of the contaminants at the site. Accomplishments: Developed a cost effective remedial action plan based on the Risk Assessment.

- Project Engineer, Alabama Department of Environmental Management. Mr. Porterfield was responsible for coordinating USEPA Construction Grant activities for municipal wastewater treatment plants. Prepared supporting documentation and technical review for the issuance of NPDES permits, reviewed plans and specifications, and inspected municipal and industrial wastewater treatment plants. Reviewed for approval engineering reports for industrial wastewater treatment designs and plans. Mr. Porterfield wrote NPDES and SID permits for major industrial discharges. Reviewed and inspected land application systems for wastewater treatment disposal. Also conducted a study of landfill leachate from statewide facilities to develop a strategy for landfill leachate management. Mr. Porterfield performed water quality modeling of discharges from municipal and industrial dischargers to set treatment/discharge levels. Interfaced with EPA on all issues. Accomplishments: Promoted to Industrial Pretreatment Coordinator by superiors because of excellent job performance.

Technical Reports and Presentations

- Porterfield, L.H. 2016. *The Effect of Emulsified Zero Valent Iron on Trichloroethene in the Presence of Chlorofluorocarbon 113*. Florida Remediation Conference, Orlando, FL
- Porterfield, L.H. 2016. *Using Synergistic Remediation to Promote the Risk-Based Cleanup of Chlorinated Ethenes at a Historical Train Derailment*. Alabama Department of Environmental Management Groundwater Conference. Montgomery, AL
- Porterfield, L.H. 2015. *History and Advances in Remediation Technologies*. Alabama Department of Environmental Management Brownfields Conference. Montgomery, AL
- Porterfield, L. H. 1994. *An Alternative Groundwater Treatment System for Volatile Organic Compounds*. Water Environment Federation. Innovative Solutions for Contaminated Site Management Conference. Miami, Florida.
- Porterfield, L. H. 1985. *A Hydrograph Controlled Release/Low Rate Spray Irrigation System*. Alabama Department of Environmental Management and Alabama Association for Water Pollution Control Innovative/Alternative Processes Seminar.

Publications

- Porterfield, L. H. 1993. *Underground Storage Tank Closure: Traditional vs. Turnkey*. Petroleum Marketing Management. Pg. 5-6.
- Porterfield, L. H. 1993. *Underground Storage Tank Closure: Traditional vs. Turnkey*. ECON Magazine. Pg. 18 & 24.
- Porterfield, L. H. 1983. *A Regulatory Approach to Sanitary Landfill Leachate*. Alabama Department of Environmental Management.