

CIVIL ENGINEERING DESIGN  
GEOTECHNICAL ENGINEERING  
ENVIRONMENTAL CONSULTING  
CONSTRUCTION MANAGEMENT  
MATERIALS TESTING  
LABORATORY ANALYSIS



# Statement of Qualifications

**Soil and Environmental  
Testing Services, Inc.**

May 2009



## SOIL AND ENVIRONMENTAL TESTING SERVICES, INC.

### PROFILE

Soil & Environmental Testing Services, Inc. (SETS) is a multi-disciplined professional engineering and environmental services consulting firm with full in-house analytical chemical laboratory and materials testing capabilities. We employ registered Civil Engineers and Geologists; Environmental Engineers & Scientists; Geo-Technical, Civil, Soils, and Structural Engineers; Industrial Hygienists; Chemists; Program/Project Management Professionals; along with Technical/Field and Support staff. Serving the Southeast since 1988, SETS has provided superior and reliable services to both the private and public sectors. Our extensive capabilities allow us to provide personalized professional service for both large and small projects, and we take pride in our track record of customer satisfaction through completing projects on time and on budget. The dedication of our staff and the commitment of resources by management are the key to our success. SETS is headquartered in Tucker, Georgia conveniently located just inside Atlanta's Interstate 285 perimeter in Dekalb County.

Our broad spectrum of professional services enables us to provide our clients with assistance throughout various phases of development from preliminary planning through final construction.

Our extensive understanding of the design, engineering, and construction process allows us to serve our clients best interest to achieve and maintain the high level of quality and continuity that our clients have come to expect and deserve.

We utilize comprehensive, state-of-the-art analytical and materials testing equipment. Over the past twenty years our engineers and consultants have worked on various new construction projects requiring materials testing as well as pre-construction projects where geotechnical engineering services were required. We have successfully completed hundreds of environmental soil, air, hazardous waste water, drinking water and groundwater projects. SETS has performed UST, CERCLA, DOD, DOE and RCRA site assessments, remedial action plans, asbestos and lead abatement management and multiple chemical analyses as well as other testing programs both in the field and in the lab. Our diversified services of chemical, geotechnical, and construction materials testing create a unique opportunity by offering one stop shopping for clients who require physical as well as chemical analysis on their samples.

## ENVIRONMENTAL SERVICES



Projects that require environmental evaluation and remedies are typically regulatory driven and can have significant legal, health, economic and social issues related to them. The key word in environmental projects is 'compliance.' Costs to attain compliance can be substantial. The environmental regulatory process usually starts with an evaluation to determine if environmental issues exist. Environmental assessments to bring real property and structures into regulatory compliance can be a complex process, often requiring comprehensive evaluations and a thorough knowledge of proven technologies, especially if the nature of the problems involve hazardous waste and similar materials. SETS multidisciplinary team of environmental scientists and engineers can provide practical, innovative solutions to environmental related issues safely, cost effectively and in time frames that help owners keep commitments. A key service advantage that SETS is able to offer are the multiple in-house laboratory capabilities that allow us to provide rapid turn around on sample analysis, which in turn helps accelerate the entire process and save time and money.

SETS offers a strong combination of experience and staff to meet the needs of our clients for a variety of environmental projects. Our full range of integrated services can be tailored to fit our client's existing capabilities and our extensive array of services allows us to customize a program to meet the needs of our clients.

### 1) **Environmental Planning Services & Documentation -**

- Environmental Impact Statements under NEPA;
- Environmental Assessments (Phases I/II/III);
- Environmental Program Management & Environmental Regulation Development;
- Economic, Technical and/or Risk Analysis;
- Vulnerability Assessments;
- Identification and Mitigation of Threats.

#### **BUDGETS & SCHEDULES**

In both a timely and cost-effective manner, SETS will work with your project team to assist you in meeting your budgets and schedules.

Based on the construction schedule and our experience with the construction process, we will create a budget and establish a program that allows us to track progress at the level of detail appropriate for each project. By being a proactive part of the construction team, we ensure that the client is aware of the inspection budget in a way that minimizes surprises, such as change orders, at the end of a project.

### **2) Environmental Compliance Services -**

- Environmental Compliance Audits;
- Compliance Management and/or Contingency Planning;
- Spill Prevention/Control and Countermeasures Plans;
- Pollution Prevention Surveys.

### **3) Waste Management Services -**

- Data Collection, Feasibility or Risk Analysis;
- RCRA/CERCLA Site investigation;
- Hazard and/or Non-Hazard Exposure Assessments;
- Waste Characterization and Source Reduction Studies;
- Waste Management Plans and/or Surveys;
- Waste Minimization/Pollution Prevention Initiatives.

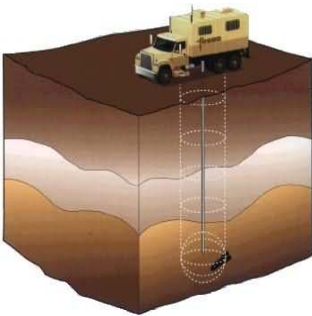
### **4) Remediation Services -**

- Preparation, Characterization, Field Investigation, Conservation and Closure of Site;
- Long-Term Monitoring/Operation (LTM/LTO);
- Containment, Monitoring and/or reduction of Hazardous Waste Sites;
- Management Oversight for Excavation, Removal, Transportation, Storage, Treatment and/or Disposal of Hazardous Waste;
- Management Oversight for UST/AST removal;
- Air Monitoring;
- Asbestos, Lead-Based Paint, Mold Assessments and Remediation.

## GEOTECHNICAL ENGINEERING AND TESTING

A building's structural integrity depends greatly on the suitability of the underlying earth materials. Diverse geologic conditions require the experience of experts such as ours to identify and provide recommendations to mitigate potential geological hazards.

Understanding the nature and composition of earth and rock below the ground surface level is a critical component of any construction project. SETS' multi-disciplinary staff of civil, environmental, and geotechnical engineers, geologists and laboratory technicians enable us to provide a broad range of geotechnical services to government, industry, architects, developers, and general contractors. We perform construction-monitoring services; field testing of earthwork, foundations, and retaining walls; and landslide stabilization construction. We can provide clients with the appropriate expertise in the following areas tailored to meet specific needs:



Every site is developed from the ground up. As a result, subsurface conditions have a major impact on the success of a project, both during and after the completion of construction.

Our professional staff of geotechnical engineers, geologists, and technicians have the training and experience necessary to provide services that define and evaluate subsurface conditions and their potential impact on proposed or existing facilities.

Providing our clients with necessary information allows them to address concerns and make informed decisions that may ultimately reduce potential liability.

- Site Suitability
- Sub Surface Investigations
- Soil Surveys
- Deep Rock Structural Analysis
- Deep Foundation Design and Inspection
- Foundation Design Recommendations
- Pile Installation and Inspection
- Soil and Rock Slope Stability Analysis
- Monitoring fill placement
- Earthwork operations
- Bearing Capacity Analysis
- Retaining Wall Design Parameters
- Settlement Analysis
- Lateral Earth Pressure Analyses
- Evaluation of Subgrades and Footings
- Design for Subgrade Improvement
- Pavement Analysis and Design
- Bridge Scour Parameter Evaluation
- Geotechnical Design of Caps and Liners
- Landslide Evaluations
- Sinkhole Remediation
- Shrink-Swell Soil Analysis
- Infiltration Analysis
- Undercut Estimates
- Dewatering Analysis

SETS has the experience, education and skills to provide cost effective solutions for your engineering projects. SETS' expertise in interpreting

subsurface conditions allows us to provide information to our clients in a timely manner. Our subsurface exploration program is an important part of our services and we assign geologists or engineers to monitor these field services for more complete acquisition of data and better understanding of the site and any relevant issues.

SETS staff is certified in engineering and geology and has many years of experience with residential, commercial, and municipal projects. Our registered professionals are familiar with local, state and federal reviewing agency requirements throughout the State of Georgia. Also on staff are registered professional civil and environmental engineers who are specialists familiar with various topographical and structural conditions.

#### **PROJECT MANAGEMENT**

SETS has a strong commitment to project management. By assigning the project manager as your day-to-day contact for the duration of your project, SETS provides continuity throughout the entire development process.

We maintain Geotechnical and Materials testing laboratories in-house. This capability adds value to our Environmental Services when decisions must be made quickly. These laboratories are staffed by highly experienced geotechnical engineers and engineering geologists, as well as chemists and soil scientists, providing a strong asset to the geotechnical consulting team.

## LABORATORY SERVICES



SETS' full service analytical laboratories perform inorganic, organic, microbiological, bulk/asbestos and air analyses using approved methodologies and quality procedures. Our laboratories, located at our company headquarters in Atlanta, Georgia, are able to work with multiple environmental matrices including but not limited to soil, sludge, drinking water, wastewater, air, and hazardous waste.

We have continuously invested in our laboratories in order to provide clients with a greater range of capabilities to meet their needs. Recent acquisitions included an ICP/MS and a High Resolution GC/High Resolution MS. With these latest acquisitions, SETS can provide clients with even lower detection limits on their analyses. Clients will no longer need to rely on expensive research institutions and colleges to get the very low detection limits now being specified on many new EPA requirements.

SETS' laboratories provide chemical analyses for most environmental matrices including drinking water, wastewater, groundwater, soil, air, sludge, hazardous waste and mixed waste. We use EPA methods as well as other approved analytical procedures for each analysis. Our stringent QA/QC protocols help ensure the data given to our clients are accurate, reliable and legally defensible. All methods are documented in our Standard Operating Procedures (SOPs) and our certified chemists have on-going training to keep up-to-date on any method amendments or new regulations that may affect their analyses.

- Chemical Testing & Analysis Services
- Wet Chemistry
- Organic & Inorganic Chemistry
- Volatiles & Semi-Volatiles
- Viscosity/Density Testing
- Electrochemistry Testing
- Chromatography
- Spectroscopy
- Thermal Analysis
- Surface Analysis/Microscopy
- Biological Testing
- Environmental and Hazardous Waste Analysis
- Water Analysis
- Regulatory Packages (SDWA, SW, etc.)

## **MATERIALS TESTING AND INSPECTIONS**

Construction materials testing and engineering is the specific branch of civil engineering that deals with the properties and science of construction materials. Typically referred to as a testing laboratory, the materials engineering laboratory deals primarily with testing, and evaluating materials quality compliance and processes used in construction.

With one of the longest established materials laboratories in metropolitan Atlanta, SETS offers proven expertise and extensive materials testing and inspection services. We have many years of experience in the areas of special inspection and materials testing as established by American Society for Testing and Materials (ASTM); AASHTO and the Army Corps of Engineers Materials Testing Laboratory. Our inspectors and technicians have practical working knowledge of construction methods and code requirements. Our team of special inspectors provides various on-site inspection services. Our knowledgeable inspectors help assure that the construction is in compliance with the applicable codes, plans, and specifications.



SETS provides special inspection services for the complete building envelope both during and after construction. Our experienced technicians provide verification and documentation of appropriate construction methods and materials.

### **Materials Testing & Special Inspection**

- On-site Inspections
- Reinforced & Post-tension Concrete
- Reinforced Masonry
- Asphalt & Portland Cement Concrete Mix Design
- Pavement Section Design Review
- On-site Testing of Asphalt Pavement

### **Materials Testing Laboratory**

All laboratory tests and inspections are performed without compromise and are executed in compliance with current industry standards. We maintain comprehensive quality standards that are delineated within procedural manuals and are strictly adhered to.

**Soils**

Soils Classification Plasticity  
Sieve Analysis Hydrometer  
Analysis  
Maximum Density Natural  
Density  
Consolidation Collapse  
Potential  
Expansion Index Direct  
Shear  
Resistivity & PH Sulfate  
Resistance Value  
Content

**Aggregate**

Sieve Analysis Percent  
Passing  
Specific Gravity Organic  
Impurities  
Soundness Lightweight  
Pieces

Cleanness Value Durability  
Index  
Sand Equivalent Percent  
Crushed Particles  
Asphalt Concrete  
Maximum bulk Maximum  
Theoretical  
(Specific Gravity)  
Bulk Specific Gravity, Cores  
Sieve Analysis  
Percent Bitumen Stability &  
Flow  
Fabricate & Test  
Stabilometer  
Percent Swell Film Stripping

**Concrete**

Mix Design or Review  
Compressive Strength  
Flexural Strength Length  
Change  
Masonry Forensic  
Efflorescence Linear  
Shrinkage



## **SELECT PROJECT BRIEFS**

**PROJECT NAME:** Formaldehyde testing - Temporary Housing Units

**CLIENT:** Federal Emergency Management Agency

**SCOPE OF SERVICES:**

Soil and Environmental Testing Services, Inc. (SETS) is providing services under an existing GSA Schedule (Laboratory Services) in response to a FEMA requirement to deploy teams of environmental technicians to multiple, simultaneous locations in the United States. Under this multi-million dollar contract, SETS staff takes air quality samples in over 10,000 pre-positioned, temporary housing units (THU-trailers). The samples are documented, temporarily stored, and then shipped to our servicing lab for testing, to determine the current level of air-borne formaldehyde concentrations. Required reports are generated to report field/laboratory findings.



Primary locations are Hope, Arkansas; Selma, Alabama; and Cumberland, Maryland. There have also been task orders for testing on THUs in additional states (Oregon, California, Indiana, Louisiana, Minnesota, New Mexico and Mississippi).

SETS demonstrated capabilities by responding to customer requirements - whether associated with routine or urgent tasks. SETS understand the nature of FEMA requirements, and moreover, The Department of Homeland Security in responding to high visibility, quick-turn situations. This project has served to demonstrate the following attributes: 1) ability to respond to quick-turn requirements; 2) ability to field teams and operate in multiple, simultaneous locations; 3) ability to ramp up to meet expanded requirements; 4) ability to effectively manage personnel and provide logistical support to remote teams; 5) ability to effectively manage subcontractors; and 6) ability to provide high quality/cost effective solutions - on schedule and within budget. Scheduled for completion in September 2009.

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**PROJECT NAME:** Mold/Moisture Inspections and Remediation -  
Temporary Housing Units

**CLIENT:** Federal Emergency Management Agency

**SCOPE OF SERVICES:**

In a separate multi-million dollar contract, under a GSA schedule for Environmental Services, Soil and Environmental Testing Services, Inc. (SETS) is providing services in response to a FEMA requirement to deploy teams of mold inspectors and remediators to multiple, simultaneous locations in the United States to inspect in over 10,000 pre-positioned, temporary housing units (THU-trailers).

Inspection reports, remediation plans and estimates, and ‘Pass Inspection’ labels are generated for each unit. This is a mission critical project because THU units are deployed to areas where disaster victims are in need of temporary housing.

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**PROJECT NAME:** Comprehensive Environmental Services

**CLIENT:** Hartsfield International Airport - City of  
Atlanta

**SCOPE OF SERVICES:**

SETS is a member of the project team responsible for indoor air quality monitoring and sampling for environmental compliance programs. SETS is also doing Environmental Assessments and Storm water monitoring under this contract.

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**PROJECT NAME:** MARTA Renovation and Expansion -  
Geotechnical

**CLIENT:** MARTA (QORE Property Sciences)

**SCOPE OF SERVICES:**

Member of team handling all geotechnical services for renovation and expansion of Metropolitan Atlanta Rapid Transit Authority (MARTA) train system, SETS supplied civil and geo-tech engineers that investigated MARTA overhead bridge foundations at the Peachtree-North station.

Grouting and piling were recommended to cure deep soil deficiencies identified at this location. SETS engineers supervised this remedy and provided laboratory analysis as well as field-testing of soils and rock encountered along the North expansion line. SETS supervised drilling, and soil and rock core recovery, litho logging, and managed the core shade. Our geologists provided rock core structural analysis. When necessary on the project our geo-technical engineers evaluated foundations for vertical structures, and in some cases recommended foundation improvements. Cement stabilization, grouting and piling are some of the procedures on this project that were utilized to improve foundation conditions for vertical structures along the North MARTA train lines. SETS is working on this project with QORE Property Sciences as the prime consultant.

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**PROJECT NAME:** CSO Creek Tunnel

**CLIENT:** City of Atlanta, Georgia (Jordan, Jones & Goulding)

**SCOPE OF SERVICES:**

Site geology, lithologging, soil and rock mapping; borehole drilling management; subsurface geotechnical data compilation and reporting.



This project is part of City of Atlanta's program to improve the city's sewer system. The federally mandated system is a 29 - foot finished diameter underground (150-200 ft. below surface), and approximately 9 miles long, to contain the combined storm water and sewer overflows. SETS subcontracted to Jordan Jones & Goulding (JJ&G) and provided geotechnical as well as geological services on the project. The magnitude of costs as well as construction related hazards calls for detailed and accurate structural analysis of underground rock conditions for the entire length of project. SETS contributed three experienced engineering and mining geologists to the project. In addition to being responsible for the routine site and rock core management, SETS conducted point load tests, Packer tests and field mapping. The field mapping was essential to establishing the lineaments in the tunnel easement. The lineaments were essential to determining mineralization, faulting, and other structural defects in the rock units. The point load tests were conducted to determine the crushing strength of the un-weathered

rock. The packer tests were conducted after each boring to determine the permeability of each interval. This project was completed on time and under budget.

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**PROJECT NAME:** Maddox Park Site Remediation

**CLIENT:** City of Atlanta/JJ&G



**SCOPE OF SERVICES:**

SETS Engineering Services developed a detailed project plan prior to initiation of field activities, to establish lines of communication and management, and to minimize risk during project execution. Waste Management Inc. was selected as waste hauler to their own landfill located in Alpharetta, Georgia. Two other truck hauling companies, Brooks and Dykes Materials Recycling, were retained for hauling clean soil out of site and for replacement fill materials into the site.

SETS retained Martin Demolition Inc. for excavation, backfill, grading, and compaction of clean soils and aggregates used for backfill. All heavy equipment used on site were recommended by owner's project manager (JJ&G), and furnished by SETS.

Throughout the duration of the project, SETS provide daily onsite geologists and environmentalists who ensured proper drilling and excavation activities, sampling of soil and groundwater. Groundwater posed a challenge in this project, and a control mechanism was put in place to check the spread of contaminants through water migration by a properly engineered dewatering plan.

The objective of this remediation effort was to remove soil and possible groundwater contamination in the vicinity of a shaft for the combined sewer overflow (CSO) tunnel. This objective was achieved on time and within budget.

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**PROJECT NAME:** Indoor Air Quality, Abatement and  
Remediation - Asbestos, Mold and other Hazards  
**CLIENT:** Georgia Building Authority - State of Georgia

**SCOPE OF SERVICES:**

SETS provided mold and asbestos inspection, testing, abatement and remediation services for a multi year project involving several major office buildings operated by the State of Georgia including a 42 story office building in downtown Atlanta and an adjacent 11 story building. Abatement services involved sealing of each floor as it was being processed so that all other floors could remain occupied while remediation/abatement services took place. All work performed by certified personnel.

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**PROJECT NAME:** Gasoline and Diesel Fuel Analyses  
**CLIENT:** U.S. EPA, Office of Research and Development  
Ecosystems Research Division

**SCOPE OF SERVICES:**

Under a multi-year Blanket Purchase Agreement (BPA) SETS laboratory staff performs the analysis of gasoline and diesel samples that have been assembled from retail locations from around the United States. Using GC/MS instrumentation these samples are analyzed for over 300 compounds. Reports have involved between 10,000 to 30,000 data points.

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**PROJECT NAME:** Asbestos Survey  
**CLIENT:** Department of Aviation, City of Atlanta, Georgia

**SCOPE OF SERVICES:**

Building inspection and survey for asbestos. Bulk asbestos identifications, contaminated asbestos containing building materials (ACM) quantity estimates. Conducted asbestos abatement daily air monitoring and clearance testing prior to demolition.

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## **SELECT RESUMES**

# JOE N. ETO, P.G.

## PRINCIPAL/GEOLOGIST

### Education

MS Engineering Geology - Georgia Institute of Technology  
MS Mineral Engineering- Georgia Institute of Technology  
BS Geology - University of Ibadan, Nigeria

### Professional Registrations

Professional Geologist, Georgia #1696

### Professional Memberships

Association of Engineering Geologists  
American Association of Surface Finishers

### Professional Certifications

Asbestos Microscopic Analyst  
Lead-Based Paint Risk Assessor  
Lead-Based Paint Risk Inspector

### Relevant Expertise

Phases I and II Environmental Site Assessment  
Subsurface Investigation  
Geotechnical Engineering Program Management

### Professional Background

Serves as the President/CEO of Soil and Environmental Testing Services, Inc. Has over twenty years experience in the geo-technical and environmental industry, including but not limited to project management, regulatory compliance, sub-surface investigations, geo-technical engineering, soil surveys/analyses, site suitability evaluations, and foundations. His experience and quality performance has saved his clients millions of dollars through direct or indirect means.

### Experience

Served as team leader with responsibility for managing multiple programs. Has a thorough knowledge of regulatory requirements and successfully managed several simultaneous projects, including the planning, budgeting, and scheduling of appropriate personnel. Served as the primary contact for all deliverables and ensured that all contract requirements were met including turn-around times.

Executed and managed more than 200 geo-technical and environmental projects ranging from \$1500 to \$1 million in fees. Technical expertise includes geotechnical, environmental, health and safety compliance, auditing soil and groundwater contamination assessments, and remediation and environmental regulatory strategy analysis. Has performed project management and execution of Phase I environmental assessments for numerous multiple site portfolios. In addition, has managed many Phase II environmental site assessments, underground storage tanks (USTS), asbestos and lead based paint surveys, and consulting services. Experienced in groundwater monitoring and recovery wells.

Prepared numerous bid and contract packages, prepared health and safety plans, and developed and implemented in-depth technical plans. Prepared numerous corrective action plans involving the assessment of dissolved and free phase contaminated plumes, soil and rock conditions, and design of soil remediation operations. Familiar with groundwater and soil sampling protocols, well installation, soil boring and rock coring, OSHA safety regulations, and hazardous waste management.

### City of Atlanta, Georgia – Various Project Locations

Conducted numerous site assessments for the City of Atlanta Sewer Line easement. Conducted risk based correction evaluations for the sewer line project that saved the city over \$2 million in contract change orders.

### Georgia Building Authority, University of Georgia Physical Plant

Over the past twelve years, SETS has conducted more than 35 Phase I and II Environmental Assessments at various state facilities, most of which were on college buildings and grounds. Most of the assessments and surveys were conducted under very sensitive conditions, recognizing the high human risk associated with these activities in college communities.

# **Patrick Frias, P.E.**

## **LEAD CIVIL ENGINEER**

### **Education**

B.S. in Civil Engineering – University of Maryland, College Park (1999)

### **Professional Registrations**

Professional Engineer, Georgia  
Professional Engineer, Commonwealth of Virginia

### **Certifications/Qualifications**

Engineer-in-Training State of Maryland  
AutoCAD 2007  
TR-55  
TR-20  
Flowmaster

### **Relevant Expertise**

Construction Management  
Site Plans  
Streetscape Design  
Infrastructure Improvements  
Stormwater Management  
Utility Layout

### **Professional Background**

Mr. Frias has 10 years of professional experience including construction management and development of site plans.

### **Experience**

#### **Lead Civil Engineer - Soil & Environmental Testing Services, Inc., Tucker, GA**

Mr. Frias provides engineering and environmental consulting services to SETS internal and external clients.

#### **Site / Civil Engineer, Kimley-Horn, Atlanta, Georgia**

Lead civil engineer involved in infrastructure improvements, streetscape, stormwater management, utility layout, and construction management.

- Coordinated design and construction with contractor, subcontractors, owner, City of Atlanta and Atlanta Housing Authority
- Provided streetscape design and reports for the Greenbriar LCI study. Includes design of sidewalks, utility relocation and design conflict.

#### **Site / Civil Engineer, A. Morton Thomas and Associates, Inc., Rockville, Maryland**

Involved with the development of site plans (demolition, grading, site layout, erosion and sediment control, cost estimates reports, permits, stormwater management, quality / quantity) throughout the Northern Virginia, Maryland, and Washington, DC areas.

- Designed parking lots, paving, storm drain, water, and sewer systems (layout, profiles, capacities, sizing)

#### **Construction Site Engineer, Whiting-Turner Contracting Company, Baltimore, Maryland**

Involved with site work associated at Arundel Mills outlet mall. Designed / constructed loading docks. Coordinated bidding, pricing, and scheduling of all on-site work (parking lots, loading docks, utilities). Provided schedules for all underground utilities (electrical, plumbing, storm drains), concrete pours, elevation design changes, grading, etc.

# **JOHN K. ERIGHA, P.E.**

## **SENIOR GEOTECHNICAL ENGINEER**

### **Education**

MSE Construction Engineering & Management – University of Michigan (1979)  
MSE Civil Engineering – University of Michigan (1978)  
BSE Civil Engineering – University of Michigan (1978)

### **Professional Registrations**

Registered Professional Engineer (Georgia)

### **Relevant Expertise**

Subsurface Investigations  
Foundation Analysis  
Slope Stability Analysis  
Pipe Supports Design  
Construction Management

### **Professional Background**

Twenty-eight years primary experience in the subsurface investigation of the foundations of bridges, roadways and walls, the analysis of the stability of slopes, the resolution of subgrade and pavement construction problems, and the design of pipe supports.

### **Experience**

**Soil and Environmental Testing Services, Inc. – Senior Geotechnical Engineer/Project Manager:** Manage the geotechnical engineering laboratory. Responsible for the coordination of subsurface investigations of buildings and other civil engineering structures. Assist in the conduction of Phase I and Phase II environmental site assessments. Typical projects include the following:

**Georgia Department of Transportation – Geotechnical Engineer:** Prepared/analyzed cost proposals for the foundations of various Georgia Department of Transportation (GDOT) highway structures. Reviewed GDOT consultant's bridge, roadway and wall foundation investigation reports. Investigated and wrote various GDOT in-house bridge, roadway and wall foundation project reports. Resolved field engineering problems; responsibilities included the coordination of support personnel for the resolution of subgrade, pavement, slopes and other construction problems. Reviewed various research reports, and standards of the American Society for Testing and Materials (ASTM).

#### **Westhills Presbyterian Church, Atlanta, GA**

Conducted a field test program, analyzed subsurface conditions and made recommendations for foundation design, general site development and quality assurance.

#### **Fellowship Christian School Football Field, Roswell, GA**

Conducted field density tests and performed subgrade inspection work.

#### **Dekalb County Parks and Recreation, Decatur, GA**

Conducted multiple Phase I Environmental Site Assessment, complying with AAI standards.

#### **Atlanta Public Schools, Atlanta, GA**

Performed environmental soil sampling work at various sites for the design and construction of school playgrounds. These samples were later analyzed for priority pollutants such as volatile organics, semi-volatile organics, pesticides, PCBs and metals (lead and arsenic).

#### **City of Atlanta CSO Tunnel Project, Atlanta, GA**

Monitored and sampled wells for volatile organics, metals, chlorides, alkalinity and BOD analysis.

# **ANWUNDO IGWE**

## **SENIOR CMT ENGINEER**

### **Education**

BS Civil Engineering - Alabama A&M University – (2001)

H.N.D. Civil Engineering Technical – Federal Polytechnic, Nigeria (1986)

### **Registration/Certification**

ACI Aggregate Field Testing Technician

ACI Aggregate Laboratory Testing Technician

NICET Level II Construction Materials Testing (Soil and Concrete)

NICET Level I Construction Materials Testing Asphalt

### **Relevant Expertise**

Erosion Control

Structural Steel and Reinforced

Concrete Design

Soil Mechanics and Foundation Design

Land Survey

Construction Technology

Highway and Transportation

Engineering

Environmental Engineering

Hydrology

### **Professional Background**

Mr. Igwe has over 21 years experience as a civil engineer.

13 years experience as a technical civil engineer in Nigeria and over eight years experience as a civil engineer in the U.S.

His expertise includes erosion control, soil mechanics and foundation design, land survey, construction technology, along with other areas.

### **Experience**

#### **Soil & Environmental Testing Services, Inc. – Project Engineer (June 2009 - Present):**

Assisting with project bids and line item/ lump sum cost estimates. Develop and build in-house civil engineering department.

#### **PSI, Inc. – Staff Engineer / Lab & QM Manager (Feb 2005 – Oct 2008):**

Responsibilities ranged from training new Lab and Field Technicians, to performing lab tests such as Triaxial Direct Shear, Permeability, Consolidation, California Bearing Ratio, Compaction Tests, Hydrometer, Specific Gravity, Atterberg Limits, Asphalt Extraction & Gradation, etc. Lab tests were performed on Home Depot projects, Panattoni Developments, and Terminus 1000 and 200 @ Atlanta. He was responsible for boring location, lab tests and soil classification for the I-575 and I-75 Expansion and Widening.

#### **ECS, LLC – Staff Engineer / Lab Manager (Dec 2002 – Feb 2005):**

Maintained the TOP Manual, Calibration and Maintenance of Equipments and Recall System. Perform AMRL & CCRL Samples. Lab tests were performed on

I-20 @ Washington Rd, Augusta, Target @ Norcross, GA, Walton Regional Med. Center, Holiday Inn @ Alpharetta, and Sunrise Senior Living Center. Boring location, drilling and soil classification was completed for Kennesaw State University.

#### **OMI, Inc. – Staff Engineer (Jan 2002 – Dec 2002)**

Perform various inspection/observations and tests pertaining to civil engineering construction projects, such as test pits and sub grade.

# **GOLNAZ ASHOURI, EIT**

## **STAFF ENGINEER**

### **Education**

B.S. – Civil Engineering, Georgia  
Institute of Technology

### **Professional Registrations**

EIT - Georgia

### **Certifications/Qualifications**

Asbestos in Buildings Inspection and  
Assessment  
OSHA 10-Hours  
Project Management Certification  
Program (PSI)  
Manager in Training Certified (PSI)

### **Relevant Expertise**

AutoCAD 2008  
Solid Edge

### **Professional Background**

Ms. Ashouri has performed a variety of engineering and environmental tasks in her career, including environmental site assessments (ESA); asbestos, lead based paint and indoor air quality surveys; assisted in the design of remediation projects and regulatory investigations of contaminated soil and water.

Ms. Ashouri has also performed structural and civil inspections, provided task coordination on construction projects, monitored contract compliance and change orders, and provided engineering consulting to various projects.

### **Experience**

#### **Staff Engineer - Soil & Environmental Testing Services, Inc., Tucker, GA**

Ms. Ashouri. Provides engineering and environmental consulting services to SETS internal and external clients

#### **Environmental Staff Engineer, Professional Services Industry (PSI), Kennesaw, Georgia**

- Conducted Phase I and Phase II Environmental Site Assessments for the properties holding identified potential or existing environmental contamination liabilities.
- Performed soil and ground water contaminant investigations in regards to Phase II Environmental Site Assessments.
- Conducted Asbestos, Lead Based Paint and Indoor Air Quality surveys for several structures.
- Participated in design and performance of remediation projects under the leadership of advanced environmental engineers performing comprehensive surfactant injections.
- Conducted soil testing and inspection, rock drilling and sampling and geotechnical laboratory testing.
- Performed construction services consulting and inspection on multiple Georgia Power caissons and auger cast piles projects.

#### **Structural and Civil Inspector, Jacobs Civil, Inc., Smyrna, Georgia**

- Provided structural and civil inspections and coordinate work flow of multiple construction activities such as concrete pours, curb and gutter work, installation of mechanical equipment, and pipe work.
- Updated contract documents to maintain a record of contract changes and design clarifications for a 60-mgd (average daily flow) wastewater treatment facility.
- Provided a record of construction deficiencies as a punch list and provide spare parts list in accordance to O& M Manuals and Specifications of the project.
- Assisted in verifying the cost estimating submitted by the contractor.

#### **Staff Engineer, Sunbelt Structures, Atlanta, Georgia**

- Maintained on time delivery of material for smooth operations for subcontractors and GADOT
- Calculated the amount of material required for construction of different sizes of box culverts based on detail plan reading

# NAAMAN T. DEES

## FIELD TECHNICIAN

### Education

B.S. – Business Administration,  
Colorado Technical University  
Additional Studies – Civil Engineering –  
Southern Polytechnic University

### Certifications/Qualifications

Nuclear gauge certified (Troxler  
Certification)  
ACI Concrete Field Testing Level One  
ACI Concrete Strength Testing  
Technician

### Relevant Expertise

AASHTO, AMRL, CCRL standards  
compliance

### Microstation

### Professional Background

Mr. Dees has over 6 years of professional experience including roles as a concrete field testing technician, laboratory technician and construction materials laboratory manager (concrete).

### Experience

#### Sr. Field Technician - Soil & Environmental Testing Services, Inc., Tucker, GA

Mr. Dees is responsible for quality control/quality assurance testing functions for construction materials in the field and the laboratory.

#### Staff Professional Concrete Lab Manager, NOVA Engineering and Environmental, Atlanta, Georgia

- Review and evaluate the overall concrete testing (field & laboratory) and consulting service program provided by NOVA
- Perform field audits of concrete sampling and testing personnel. Audits include verifying that relevant equipment is being used, maintained, and calibrated
- Ensure an efficient communication system is maintained for non-compliant test data notification
- Oversee laboratory personnel, equipment, procedures, and reporting to ensure compliance with all applicable ACI, ASTM, AMRL, AASHTO, CCRL, and other industry standards
- Provide training and mentoring for entry-level concrete technicians

#### Physical Lab Technician, Headwater Resources, Taylorsville, Georgia

- Perform various soil test on fly ash (coal power plant waste) for various uses
- Perform various ASTM standards including ASTM's C-109, C-618, C-1012, and C-441
- Test soils, rock, asphalt, and concrete cylinders for overall quality
- Use Multi-Pycnometer to determine specific gravity and bulk density of fly ash and bottom ash
- Use Denver moisture analyzer for accurate moisture determination

#### Construction Inspector, Georgia Department of Transportation, Atlanta, Georgia

- Performed inspections for grading, drainage, curb & gutter, and paving
- Inspected erosion and sedimentation installations for development sites
- Performed inspections of permitted utility installations for traffic control and restoration of county right-of-way and corridor locations
- Compliance
- Maintained project reports, records, and files.
- Performed asphalt inspections including recording temperatures and monitoring paving operations for quality and density.

# PAROMITA DEBROY

## SENIOR ENVIRONMENTAL CHEMIST

### Education

Ph.D. Chemistry, Supra Molecular & Organometallic Chemistry, Indian Institute of Technology - Kharagpur  
M.Sc. Organic Chemistry, University of Calcutta

### Other Relevant Qualifications

Research chemist

### Relevant Expertise

- Conversant with the syntheses, purification, characterization of various organic and organometallic compounds in milligram and multigram scale.
- Experienced in ex-situ and in-situ synthesis of organometallic compounds using standard *Schlenk techniques*.
- Skilled in isolation and separation of organic and inorganic compounds by TLC, crystallisation and column chromatography.
- Ability to devise short synthesis using transition metal mediated reactions.
- Skilled in the interpretation of spectroscopic and analytical data (NMR, MS, UV/Vis, IR, CHN) for characterization of unknown compounds.
- Hands on experience in UV-Vis-NIR, Cyclic Voltammetry, Fluorescence, GC-MS, 300 & 400 MHz. Varian NMR, Gas Chromatography and HPLC
- Conversant with molecular modeling using HyperChem 6.0 software.
- Ability to write research papers elaborating research results in a clear and concise manner.

### Professional Background

Ms. Debroy has substantial experience as a research chemist and educator, plus practical experience as an environmental laboratory chemist.

### Experience

**Soil & Environmental Testing Services, Inc. – Senior Environmental Chemist:** Ms. Debroy is responsible for performing analyses on client submitted samples for environmental regulatory examination and other requirements using appropriate methods and procedures. Preparation of reports and documentation, maintenance and calibration of instruments and ensuring that all QA/QC protocols are followed.

### Bengal College of Engineering and Technology, India

Head of the Department of Chemistry

- Planned and developed lesson plans, and daily class work for chemistry students.
- Presented information and instruction in different manner which helped the students not only to secure high rank in academic tests but also excel in competitive exams and job interviews.
- Worked as a team with colleagues, college counselors, administrators, and with the parents for the benefit of the students.

### Indian Institute of Technology, India

Junior Research Scholar (Chemistry Department)

- Assisted professors in teaching organic chemistry and in tutorials.
- Duties included set-up of daily experiments in the chemistry laboratory, maintaining proper discipline and safety in the laboratory, and assisting students with questions/answers.

### Research and Publications

Post Doctoral

#### Preparation of Chiral Cholestanofluorene and Its Electron-Rich Derivatives for Isolation of a Stable Cation-Radical Salt.

Paromita Debroy, Ruchi Shukla, Sergey V. Lindeman and Rajendra Rathore. *Journal of Organic Chemistry* **2007**, *72(5)*, 1765-1769.

#### Hexabenz[4.4.4]propellane: A Helical Molecular Platform for the Construction of Electroactive Materials.

Paromita Debroy, Sergey V. Lindeman and Rajendra Rathore. *Organic Letters* **2007**, *9(21)*, 4091-4094.

#### Duplexiphane: A Polyaromatic Receptor Containing Two Adjoined $\Delta$ -Shaped Cavities for an Efficient Hopping of a Single Silver Cation

Susanna J. Emond, Paromita Debroy and Rajendra Rathore. *Organic Letters* **2008**, *10(3)*, 389-392.

# JOHN PHILLIPS

## LABORATORY MANAGER

### Education

B.S. / 1988 / Chemistry;  
Georgia Institute of Technology

### Relevant Expertise

EPA Regulatory Chemical Methodology  
Groundwater Monitoring  
Soil Sampling and Analysis  
TCLP Analysis  
Gas Chromatography  
Liquid Chromatography  
Mass Spectroscopy  
Inductively Coupled Plasma  
Total Organic Carbon  
Wet Chemistry Procedures  
Geo-Technical Analysis  
Quality Assurance  
Laboratory Accreditation  
Environmental Site Assessments  
Sample Preparation  
Safety Protocols

### Professional Certifications

Certified Wastewater Laboratory Analyst

### Professional Background

Mr. Phillips' experience includes GC/MS, GC/FID, GC/ECD, HPLC, ICP-AES, ICP-MS, and TOC methods and instrumentation as well as data validation. He is responsible for maintaining and troubleshooting instrumentation, ensuring that all QA/QC protocols are followed, and preparing and reviewing analytical reports.

Additional responsibilities include preparing analytical standards, sample extractions, ordering supplies, and ensuring that sample holding times and turnaround times are met. He is knowledgeable of EPA methods for chemical analysis, and has developed Standard Operating Procedures for the implemented methods. In addition, Mr. Phillips has successfully managed and trained several analytical chemists.

Mr. Phillips has successfully completed numerous large-scale projects for both private sector and government clients involving a wide range of chemical and physical testing. His meticulous attention to detail has prevented costly repeat analyses and his experience in instrument maintenance helps ensure that work is completed on schedule and according to specifications.

Mr. Phillips regularly participates in proficiency testing programs and quality control audits, achieving exemplary results, and maintaining laboratory certifications. He also attends technical training seminars and professional conferences to keep his knowledge and skills current.

### Experience

**Soil and Environmental Testing Services, Inc. – Laboratory Manager** Mr. Phillips has twenty years experience in commercial analytical chemistry and manages the SETS chemical laboratories. He is experienced in analyzing water and soil samples for volatile and semi-volatile organics, pesticides, PCB's, herbicides, metals, total organic carbon, particle-size distribution and numerous wet chemistry parameters.

**Hygeia Laboratories – Chemist**

**Analytical Services, Inc. – Chemist**

**EcoTek LSI – Chemist**

# ROBERT BARTHOLOMEW

## SENIOR CHEMIST

### Education

B.S. – Chemistry, Howard University,

### Relevant Expertise

HPLC  
GC  
GC/MS  
AA  
LIMS  
QA/QC

### Professional Background

Mr. Bartholomew has over 20 years of professional experience in analytical chemistry including.

- Proficiency in using USEPA methods to extract and analyze PCB, pesticide, volatile, semi-volatile, GRO, DRO and heavy metals on GC, GC/MS, AA, and HPLC..
- Ability to effectively and successfully maintain and troubleshoot GC, GC/MS, AA, HPLC, and mercury analyzer, which always result in little or no down time.
- Skills in using GC, GC/MS, HPLC, and automatic absorption spectroscopy in laboratory

### Experience

#### Senior Chemist - Soil & Environmental Testing Services, Inc., Tucker, GA

Mr. Bartholomew brings his considerable experience, knowledge and skills to activities requiring extensive understanding of complex chemical analyses. Clients looking for information and resolution to solving issues that are supported by these analyses can rely upon Mr. Bartholomew's dedication and commitment to providing the best possible services.

#### Organic –Chemist Supervisor, Advanced Chemistry Laboratory, Norcross, Georgia

Analyze environmental samples on HPLC, GC, and GC/MS. Troubleshoot and maintain GC/MS, HPLC, and GC equipment. Run proficiency and quality assurance.

- Supervise junior chemist in extraction and in the analyzing of extraction on GC, GC/MS, and HPLC.
- Train junior chemist, review and validate all data for proficiency.
- Researched, developed, and improved methods for quality assurance resulting in lower production cost for the company.

#### Senior Chemist, TEG, Kennesaw, Georgia

Utilized USEPA methods to extract and analyze volatile and semi-volatile organic compounds on GC/MS, and GC. Extracted and analyzed heavy metals using AA. Reviewed and validated all reports.

- Trained other chemists in the operation and maintenance of equipment.
- Formulated and implemented a safety program.
- Initiated a GLP program and also improved SOP for the company.

#### Toxicology Supervisor, Bureau of Laboratories, Washington, D.C.

Extensively used and maintained GC, GC/MS, HPLC, and EPOS in toxicology laboratory. Performed proficiency testing, as well as quality control and assurance.

- Developed and improved research methods for enzyme kinetic in substance abuse lab.

Implemented a fully automated laboratory that reduced laboratory time by 50%