The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at ***wvOASIS.gov***. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at ***WVPurchasing.gov*** with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

Header 1

List View

General Information | Contact | Default Values | Discount | Document Information | Clarification Request

Procurement Folder: 1020916

Procurement Type: Central Contract - Fixed Amt

Vendor ID: 000000173443

Legal Name: POTESTA & ASSOCIATES INC

Alias/DBA:

Total Bid: $0.00

Response Date: 04/27/2022

Response Time: 11:57

Responded By User ID: Potesta

First Name: Dana

Last Name: Burns

Email: clracer@potesta.com

Phone: 3043421400

SO Doc Code: CEOI

SO Dept: 0310

SO Doc ID: DNR2200000010

Published Date: 4/21/22

Close Date: 4/27/22

Close Time: 13:30

Status: Closed

Solicitation Description: A/E Services - North Bend SP Cokeley Campground

Total of Header Attachments: 1

Total of All Attachments: 1

Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Solicitation Response

Proc Folder:	1020916
Solicitation Description:	A/E Services - North Bend SP Cokeley Campground
Proc Type:	Central Contract - Fixed Amt

Solicitation Closes	Solicitation Response	Version
2022-04-27 13:30	SR 0310 ESR04272200000006726	1

VENDOR

000000173443
POTESTA & ASSOCIATES INC

Solicitation Number: CEOI 0310 DNR2200000010

Total Bid: 0 **Response Date:** 2022-04-27 **Response Time:** 11:57:17

Comments:

FOR INFORMATION CONTACT THE BUYER
Joseph E Hager III
(304) 558-2306
joseph.e.hageriii@wv.gov

Vendor Signature X **FEIN#** **DATE**

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Civil engineering				0.00

Comm Code	Manufacturer	Specification	Model #
81101500			

Commodity Line Comments:

Extended Description:

Architectural/engineering services and contract administration for new equestrian campground at North Bend State Park.

POTESTA
Engineers and Environmental Consultants

TRANSMITTAL MEMO

7012 MacCorkle Avenue, Charleston, WV 25304 ▪ Phone: (304) 342-1400 ▪ Fax: (304) 343-9031

To: Mr. Josh Hager
Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, West Virginia 25305-0130

Date: April 27, 2022
Project No.: 0101-22-0100

Sent Via: ☐ Mail ☐ Federal Express ☐ United Parcel Service
☐ Hand Carried ☒ Other: Uploaded to wvOASIS

Quantity	Description
1	Expression of Interest for WVDNR Cokeley Group Campground Upgrade to an Equestrian Campground North Bend State Park Solicitation Number CEOI 0313 DNR2200000010

Remarks:

By: Dana L. Burns/mh

c:

POTESTA
Engineers and Environmental Consultants

EXPRESSION OF INTEREST

Prepared for:

West Virginia Division of Natural Resources
Parks & Recreation – PEM Section

North Bend State Park
Cokeley Group Campground Upgrade
CEOI 0310 DNR2200000010

CHARLESTON
7012 MacCorkle Avenue, SE
Charleston, WV 25304
(304) 342-1400

MORGANTOWN
125 Lakeview Drive
Morgantown, WV 26508
(304) 225-2245

WINCHESTER
15 South Braddock Street
Winchester, VA 22601
(540) 450-0180

Project No. 0101-22-0100

April 27, 2022

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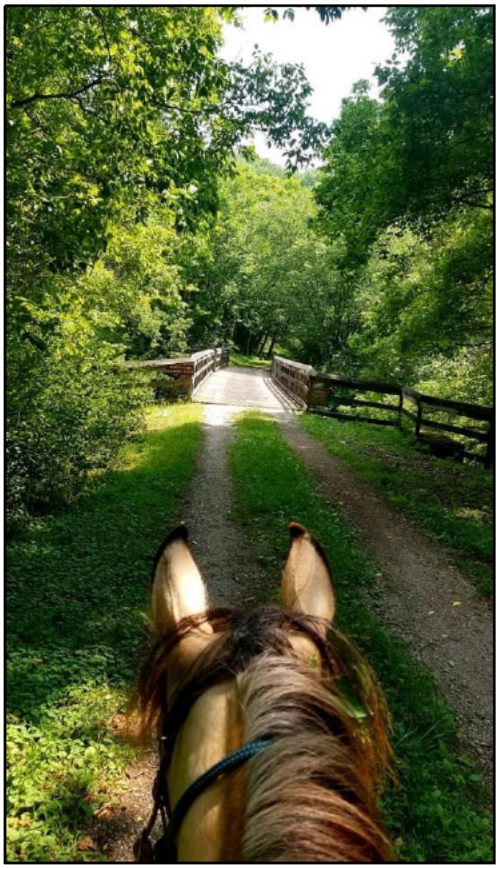
APPENDICES

EXPRESSION OF INTEREST

EXECUTIVE SUMMARY

Potesta & Associates, Inc. (POTESTA) is pleased with the opportunity to provide this Expression of Interest to the West Virginia Division of Natural Resources (DNR).



West Virginia state parks offer recreational opportunities for visitors throughout the United States and the world, thus creating tourism revenue. To this end, the DNR plans to upgrade the Cokeley Group Campground area at North Bend State Park to become the largest equestrian campground in the state parks system. POTESTA understands existing campsites in the North Bend State Park will be upgraded with water and electric to handle campers with horses. The campground will include a new horse stable barn structure consisting of approximately 20 individual stalls.

POTESTA sees the success of this project as a key step forward to enhancing North Bend State Park's recreational options and assets. POTESTA is prepared to utilize our firm's resources and experienced staff to meet the project goals. POTESTA employs a skilled horse enthusiast with extensive experience in horse camping who currently serves as a horseback riding guide in West Virginia, Ohio, Virginia, North Carolina, South Carolina, Tennessee, Illinois, Arkansas, and Alabama. Ms. Donna McCallister can provide unique insight on campground accommodations, specifically with the horse and rider in mind. As a seasoned horse owner, Ms. McCallister will be an asset to this project for the barn design to provide the most efficient usage for rider and horse, while maintaining comfort and safety and meeting the client's requirements.

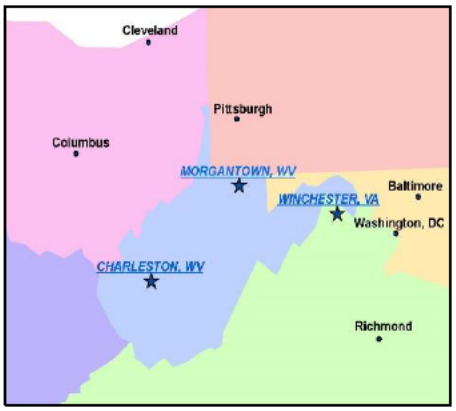
POTESTA has worked on numerous recreational engineering projects throughout West Virginia. These projects include, but are not limited to, parking, campground sites, utility design (drinking water, power/telecom, etc.), and trail enhancement projects; natural stream/pond restoration/design/permitting; endangered species studies; WVDEP Abandoned Mine Lands (AML) funded economic development, reclamation, and drinking water projects; site grading and stormwater plans for a variety of recreational, commercial, and residential developments; and a variety of infrastructure and construction projects that require state and federal permitting. Our 13 registered professional engineers have over 300 years of combined experience and are supported by a large group of engineers, scientists, designers, surveyors, and technicians. Regulatory liaison and environmental compliance are areas of exceptional strength for POTESTA.

By choosing POTESTA, our clients get the resources of a large company with the attention and detail of a small consultant. POTESTA has the ability to complete every facet of the project from beginning to end, from the preliminary (i.e., planning) study through final design and construction observation/management. POTESTA is ready to commit our experienced staff to continue developing our long-term successful relationship.

CORPORATE PROFILE

HISTORY

POTESTA was founded in 1997 as a full-service engineering and environmental consulting firm headquartered in Charleston, West Virginia. We have now expanded to a diverse staff of 74 experienced engineers, scientists, and support personnel with branch offices in Morgantown, West Virginia, and Winchester, Virginia. Our clients include local, state and federal agencies; mining, manufacturing and chemical companies; utility companies; waste management companies; K-12 schools/colleges/universities; land developers; attorneys; financial institutions; insurance companies; construction companies; and architects.



SERVICES

- Air Permitting
- Biological and Toxicological
- CADD/GIS
- Civil Engineering and Design
- Construction Monitoring
- Environmental Site Assessment
- Geotechnical Engineering
- Groundwater
- Hydrology and Hydraulics
- Landfills and Solid Waste
- Litigation Support
- Mining
- Occupational Safety and Health
- Oil and Natural Gas Consulting
- Permitting
- Remediation
- Roadway Engineering
- Sampling
- Site Design
- Storage Tanks
- Surveying and Mapping
- Water and Wastewater
- Water Quality
- Wetlands

LEADERSHIP

Our firm is managed by two principals driving POTESTA forward with their experience and emphasis on exceeding expectations. Ronald R. Potesta, President, has served as the Director and Deputy Director of West Virginia's Department of Natural Resources (WVDNR) which, during his tenure housed all of the environmental regulatory programs, had an annual budget of $23 million and 700 full-time employees. The agency at that time encompassed state environmental regulatory programs, wildlife management, and law enforcement.

Ronald R. Potesta

Dana L. Burns, P.E., Vice President, has more than 40 years' experience with civil, geotechnical, mining and environmental engineering projects. Mr. Burns, P.S., P.E., has managed numerous multi-discipline projects, including numerous AML projects and understands the importance of client communication and the internal coordination of various disciplines on a project. The public service and experience of our principals has provided POTESTA with personal relationships with many of the regulatory staff members and in-depth program knowledge of West Virginia and surrounding state's regulatory programs. POTESTA builds our contact base, stays informed on current issues, and strengthens relationships with the regulatory community by contributing and serving on various boards and commissions.

Dana L. Burns

TECHNICAL EXPERTISE

CIVIL ENGINEERING/SITE PLANNING

POTESTA's engineering staff has a broad background related to the vast field of civil engineering, including utility/infrastructure design, roadway design, development of grading plans, and storm water management. Our diverse staff of engineers, geologists, and scientists is routinely involved in these types of projects and works to support the project teams assigned to these projects on a daily basis to achieve a completed project that meets the client's expectations.

Once a project has been determined feasible through the preliminary planning stages, POTESTA's design professionals work to complete preliminary and final design plans. Frequent communication is made with the client and other design professionals to review the completed activities and obtain input for the design process.

- Site Selection/Siting Studies
- Access Roadway Design and Layout
- Utility Design/Relocation
- Earthwork Optimization
- Site Development Grading and Drainage Plans
- Hydraulic Structure Design
- Earth Retaining Structures
- Stormwater Management Plans
- Erosion and Sediment Control Plans
- Geometric Site Layout
- Vehicular and Pedestrian Circulation
- Grading and Drainage Plans, Including Excavation and Fill Optimization
- Water and Sewer Design
- Slope Stability Analysis
- Subsurface Drainage System Design
- Construction Drawings, Specifications, and Contract Document Preparation

POTESTA has a significant body of work in site design for residential, commercial and industrial clients. We have assisted numerous developers and development agencies with the creation of business industrial parks throughout West Virginia, and have been part of design teams for elementary, secondary and collegiate projects primarily associated with new building construction.

TECHNICAL EXPERTISE

SURVEYING

POTESTA proposes to utilize our own survey crews for work on this project. POTESTA will perform the surveying required for this project using in-house personnel. Our surveyors are experienced in all aspects of surveying such as topographic mapping, boundary and property surveys, and construction surveys for layout of work, record drawings, and quantity measurements. Our surveyors have worked on numerous site development, roadway and bridge construction, utility construction, and landfill development.

POTESTA is equipped with modern surveying instruments allowing efficient data processing and accurate gathering of field information. Total station instruments equipped with data collectors are utilized for complete field to office automation allowing for high levels of productivity in the field. The latest versions of software are then used to process survey data and create drawings or required end products.

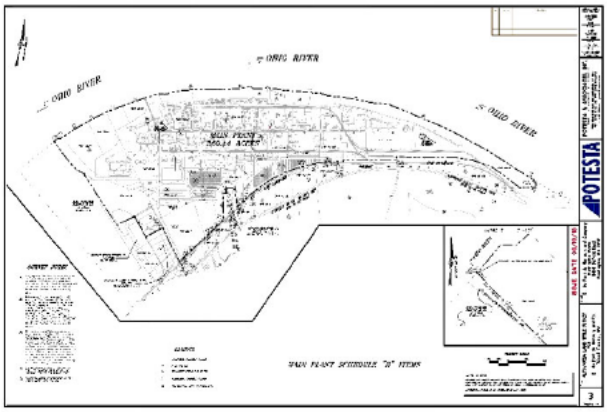
Small topographic mapping projects can be completed in-house using the aforementioned process. Larger projects are better suited for mapping using aerial photography. If necessary, POTESTA will provide the necessary surveying required for establishing ground control for aerial mapping in conjunction with our aerial mapping subcontractor. As a quality control measure, aerial mapping is field checked for accuracy by surveying cross sections or random points.

Surveys and mapping are completed to the standards as outlined by the National Map Standards as well as other applicable quality standards.

CADD

The CADD department utilizes the latest drafting/design software and computer hardware to maintain productivity at the high levels that clients demand and expect. We utilize Autodesk Civil 3D design software to prepare, revise, and manipulate drawings and engineering data efficiently. POTESTA's experienced and trained professionals allow clients' projects and assignments to be completed rapidly and at a reasonable cost.

- Surveying data manipulation including development of topographic mapping, cross sections, profiles, isopach drawings, etc.
- Site design including grading plans, drainage plans, utilities plans, right-of-way plans, etc.
- Roadway design
- Water, sanitary, sewer, electric, natural gas, and telecommunications design
- Permit drawings, maps, and exhibits
- Earthwork and planimetric quantity development
- Two- and three-dimensional graphics



TECHNICAL EXPERTISE

GEOTECHNICAL ENGINEERING

POTESTA's staff is very familiar with terrain ranging from plateaus to mountains. West Virginia and Virginia encompass rugged terrain, which presents unique challenges and hazards to mitigate threats. Our vast experience in our region has resulted in innovative approaches to the various challenges that the topography and geology present.

POTESTA can provide field engineers and geologists who are knowledgeable using the latest technologies subsurface explorations, monitoring well and piezometer installations, foundation design recommendations, slope stability analysis, retaining walls, and remedial designs as they relate to construction, mining, waste disposal, environmental remediation, and other projects. Our knowledge of the proper procedures and familiarity with local conditions allows office and field personnel to adjust the exploration plan if unanticipated field conditions are found.

SUBSURFACE EXPLORATIONS

- Attend an initial meeting with the client
- Conduct preliminary site reconnaissance
- Develop a recommended exploration program

SLOPE STABILITY ANALYSIS AND REMEDIAL DESIGN

- Utilize various methods to predict slope stability
- Analysis of existing or proposed soil embankments, rock fills, dam analysis and design, landfill design and operation, assessing the causation of slope failure, and designing remedial measures
- Analyses - circular or sliding block methods, interface friction angles, and estimate of the strength parameters of the soil or rock
- Develop preventive measures during initial project design or recommendations for to repair slope failures
- Consider various remedial measure - regarding the site to obtain more suitable conditions, management of groundwater, and design of retaining structures
- Familiar with wide variety of retaining structures - gabion baskets, soldier beam and lagging walls, sheet piles, reinforced concrete and reinforced earth slopes

FOUNDATION DESIGN RECOMMENDATIONS

- Experience with various types of foundations and will recommend the appropriate type of foundation given the anticipated application and site conditions
- Foundations - spread and strip footings, steel piles, auger-cast concrete piles, drilled piers, and reinforced mats
- Preliminary foundation design recommendations and cost analyses
- Preliminary alternatives for final recommendation
- Construction documents
- Final recommendation - construction drawings, technical specifications, recommendations for allowable bearing capacity, engineer's construction cost estimate, and contractor's bid sheet

TECHNICAL EXPERTISE

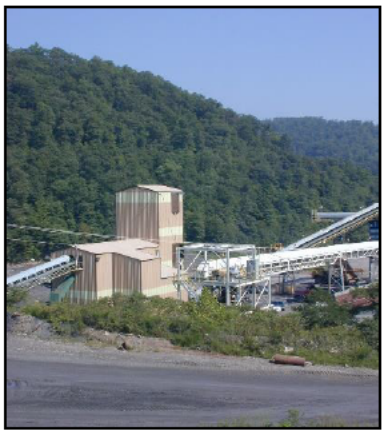
PERMITTING

Acquiring environmental permits is a critical element for the success of every project. POTESTA offers its clients exceptional expertise and experience when it comes to the permitting process, including all phases of application preparation, negotiations, modifications, compliance, and renewal at all levels of government. POTESTA has prepared the required environmental documents for numerous roadways, cross country pipelines/high voltage power lines, and site developments. POTESTA has the experience and knowledge and the regulatory relationships to provide timely, cost-effective solutions to your permitting needs.

POTESTA has completed numerous projects including environmental assessments, environmental impact statements, categorical exclusions, cultural resource studies, endangered species assessments, environmental compliance with various federal and state regulations (Clean Water Act [CWA], NEPA, and Endangered Species Act), permitting, wetlands delineation/mitigation, sampling and remediation.

Permits typically required for projects:

- Environmental Site Assessments
- Environmental Impact Statements
- Stormwater Management Permits
- Air Quality Permits
- Wetland Delineation and Mitigation Permits
- National Pollutant Discharge Elimination System (NPDES) Permits
- Groundwater Protection Plans
- Spill Prevention, Control and Countermeasure Plans
- Floodplain Management Studies and Permits



PROJECT MANAGEMENT

STAFF PROFILE

Total Staff: 74

14	Civil Engineers	1	Fish & Wildlife Specialist
16	Construction Technicians	1	GIS Specialist
4	Geotechnical Engineers	1	Horticulturalist
1	Geologist	1	Environmental Scientist
8	CADD Operators/Draftsman	1	Toxicologist
5	Surveyors	1	Economist
1	Mechanical Engineer	1	Aquatic Culturist
2	Aquatic Biologists	1	Information Technologist
5	Biologists	11	Administrative Personnel
1	Chemical Engineer		

Included are 13 registered professional engineers (P.E.), 5 registered professional licensed land surveyors (P.S.), 5 Licensed Remediation Specialists (L.R.S.), 6 West Virginia Transportation Engineering Technicians, and one Ph.D. whose specialties include aquatic biology and water quality.

ABILITY OF STAFF

- POTESTA's current workload is such that we can immediately provide construction technicians, engineers, CADD designers, and survey crews to work on this project.
- Low turnover means interacting with the same POTESTA staff - 13 registered Professional Engineers on staff with combined experience over 370 years and are supported by a capable team of engineers, designers, and surveyors.
- We have ability to take project from planning through construction - we have successfully completed similar projects.
- We stand ready to commit the personnel and resources required to complete this project in a timely, technically sound, and cost-efficient manner.
- POTESTA's large staff size will allow us to work on this project on an accelerated schedule, if necessary.
- POTESTA carries a full line of insurance coverage, including general liability, errors and omissions, and workers' compensation.
- We also have and follow a stringent internal quality control system designed to provide our clients with quality products.
- POTESTA believes the quality of our work is best exemplified by approximately 85 percent of our workload coming from repeat clients.

Charleston Office

Morgantown Office

Winchester Office

MANAGEMENT AND STAFFING

KEY SENIOR PROJECT TEAM

Good communication is the key for successful project completion. POTESTA listens to our clients and works to specify products that meet your needs. POTESTA has experience in developing this type of project and moving them through the process from start to finish.

Mr. Dana L. Burns, P.E., Vice President at POTESTA, will serve as principal-in-charge for this project. As such, he will direct POTESTA's staff, answer questions, address problems encountered and review the project budget. Mr. Burns has over 41 years of experience with civil and environmental engineering projects, including working on projects funded by Small Cities Block Grant, United States Department of Agriculture RUS, AML, United States Department of Commerce - Economic Development Administration, Infrastructure Council, and others. This experience includes serving as a project manager for various sanitary sewer projects, industrial wastewater projects, and water supply system extensions. In addition to providing technical guidance throughout the project, Mr. Burns will be responsible for maintaining the schedule and budget for the project.

Mr. Christopher Grose, L.R.S., Senior Engineering Associate, has over 31 years of experience and will serve as Project Manager for this project. His areas of expertise include geological/geotechnical explorations, surface/subsurface hydrology, hydrogeology, and landslide causation analysis/stability modeling/failed slope restoration. Mr. Grose's experience includes the design and evaluation of geotechnical explorations related to bridges, culverts, earth retention structures, slope stability and engineered fill construction. Mr. Grose currently oversees aspects of geotechnical work at POTESTA in their Charleston, West Virginia office and has worked on WVDNR, WVDEP AML, and VRP projects since 1990. Mr. Grose will evaluate slope stability issues with respect to regraded coal refuse, landslide abatement, or other steep slope applications.

Ms. Donna McCallister, Controller, has been with POTESTA since 1997. She will serve as a technical advisor for the conceptual approach throughout the planning, design, and construction aspects of the equestrian campground and barn. Ms. McCallister has a unique skill set that is perfectly suited to this project. Ms. McCallister has 45 years of equestrian experience and is currently co-owner of an 80-site horse campground, barn, and arena in Ohio. Her previous experience also includes working as a stable hand and riding instructor for a horse camp in Kentucky during the summer for six years. She is a member of Backcountry Horsemen of the Virginia Highlands, Hocking Hills Horse Trails, Ohio Horsemen's Council, and has been a featured guest on "Best of America by Horseback." She is a seasoned equestrian trail guide sharing her knowledge of horse camping and trail experience with other horse enthusiasts in multiple states. Her horse campground knowledge expands from numerous visits to private, state, and federal equestrian campgrounds and her personal relationships with owners, managers, hosts, and visitors of these areas, as well as her own campground ownership. In addition, Ms. McCallister has over 37 years of accounting management experience. Her background includes management of a historic landmark hotel property, agricultural property management, and service as the financial officer

MANAGEMENT AND STAFFING

for a construction company. Utilizing Ms. McCallister's expertise in account management and the equine industry, POTESTA is confident it can provide the best possible design of an equine campground and barn. The design will be state of the art and economical with minimal maintenance while achieving quality, comfort, and safety for the horse and rider.

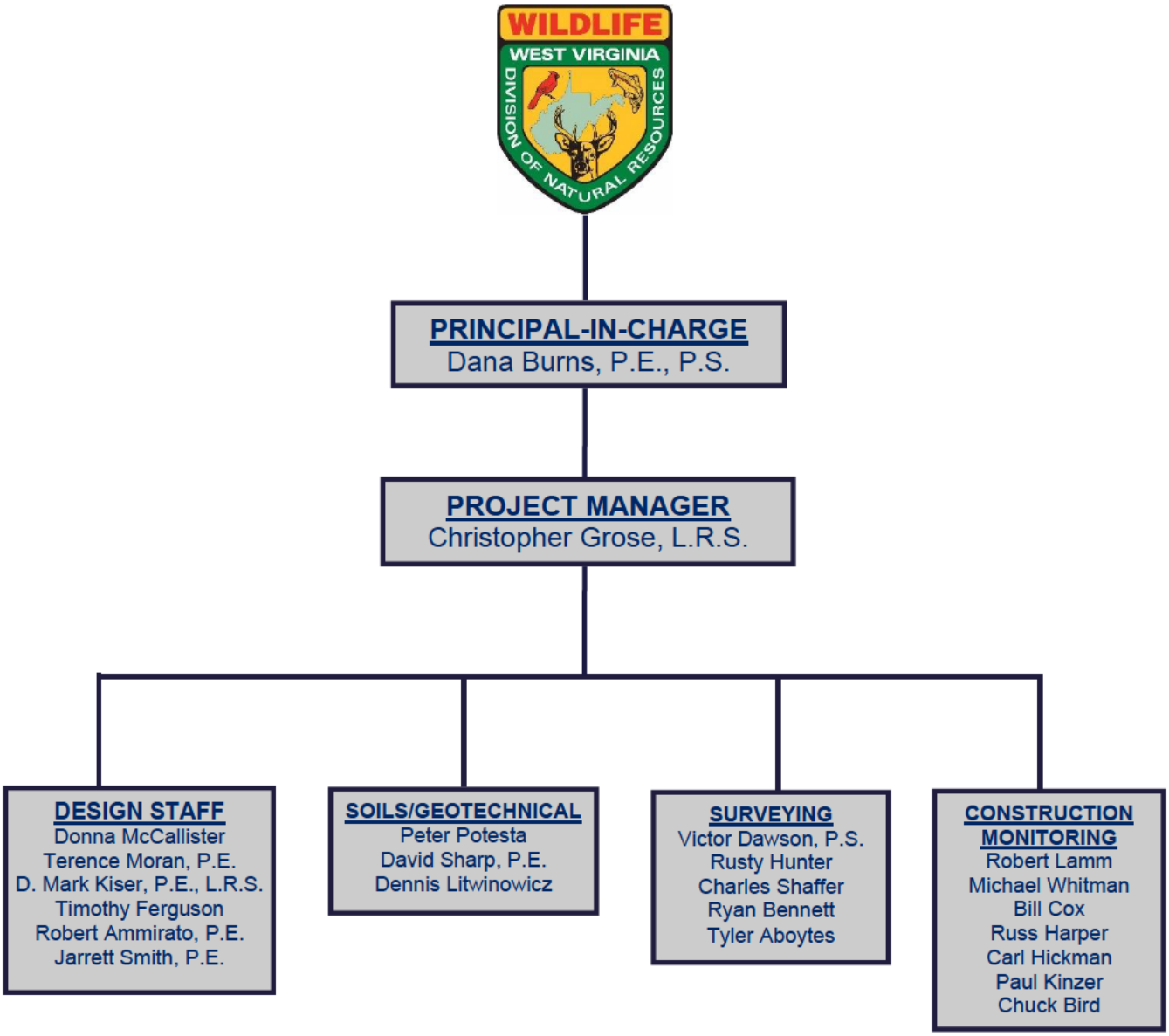
Mr. Mark Kiser, P.E., Chief Engineer. L.R.S., has over 37 years' experience in civil engineering, with particular emphasis on design and construction administration. He has been involved in the evaluation, design, and construction of numerous projects. Activities relating to these projects have included project layout, and surveying, civil engineering and design, as well as contract and bid documents. Mr. Kiser has successfully managed various design and construction projects totaling tens of millions of dollars. He will provide quality assurance/quality control via a "constructability" review.

Mr. Terence C. Moran, P.E., Senior Engineer, has over 34 years of experience on civil engineering projects, with particular emphasis on water/wastewater projects. He has served as the project manager/project engineer for 100+ water/wastewater projects, including preliminary engineering, environmental assessments, funding applications, hydraulic analysis, booster and lift station design, storage tank design, line sizing, design of treatment systems, drawings, specifications, cost estimates, bid documents, "shop drawing" review, construction management and construction inspection. Mr. Moran has completed water/wastewater projects in Barbour, Boone, Brooke, Cabell, Fayette, Greenbrier, Hardy, Harrison, Jefferson, Kanawha, Lincoln, Logan, Monongalia, Morgan, Pocahontas, Nicholas, Preston, Putnam, Raleigh, Randolph, Tucker, Wyoming, and Upshur counties in West Virginia. Mr. Moran is Project Manager for our ongoing sanitary sewer workload for Boone County Public Service District, Salt Rock Sewer Public Service District, and Sissonville PSD.

Mr. Peter S. Potesta, Senior Engineer, has over 9 years of experience in geotechnical engineering with an emphasis in landslide design, repair, and causation investigation. Other areas of expertise include civil and site development projects with an emphasis in geotechnical engineering and construction. Responsibilities have included geotechnical evaluations including management of subsurface explorations, settlement analysis, slope stability modeling, foundation analysis, well pad and horizontal directional drill construction, roadway improvements/repairs, and commercial/residential construction.

Mr. Timothy Ferguson, Senior Scientist, has over 16 years' experience in environmental compliance and permitting and has served as project manager for numerous projects. He specializes in stream and wetland identification and delineation, mitigation development and planning, and permitting with the following agencies: USACE, WVDEP, WVDNR, West Virginia State Historical Preservation Office (SHPO), United States Fish and Wildlife Service and United States Environmental Protection Agency. He is formally trained in the use of the 1987 USACE Wetland Delineation Manual from Ohio State University in 2008 and has been utilizing the Eastern Mountains and Piedmont Regional Supplement since its issuance.

MANAGEMENT AND STAFFING



Services will be performed at POTESTA's Charleston, West Virginia office. We stand ready to commit the personnel and resources required to complete this project in a timely, technically sound, and cost-efficient manner. POTESTA's large staff size will allow us to work on this project on an accelerated schedule if necessary.

PROJECT MANAGEMENT

Project Approach

GOAL/OBJECTIVE 1: REVIEW EXISTING PLANS– COMMUNICATE WITH OWNER

Once the contract is awarded, POTESTA will visit the site to gather additional information and have dialogue with onsite personnel. From this effort, we anticipate preparing our detailed scope of services. POTESTA will work with WVDNR to develop a successful team approach to the project.

GOAL/OBJECTIVE 2: DESIGN SERVICES

POTESTA will take information gathered from Goal/Objective 1 and develop preliminary plans for the WVDNR to review and make comments.

POTESTA will proceed with the final design and preparation of project specifications for the project once WVDNR has reviewed the preliminary design and we have received comments on the same, and the necessary funding has been obtained. The design can be flexible, and POTESTA will adjust the design accordingly as the situation and/or funding may dictate.

GOAL/OBJECTIVE 3: CONSTRUCTION CONTRACT ADMINISTRATION SERVICES

After bid evaluation and contractor selection by WVDNR, POTESTA proposes to complete the following construction administration and observation tasks during construction. The scope of services described below is based in part on terms and requirements of the Standard General Conditions of the Construction Contract, prepared by the Engineers Joint Contract Documents Committee, which has been used for other projects and is assumed to be used as the basis of the contract between the Agency and the contractor.

- Attend pre-construction conference.
- Review underground facilities not shown on contract documents to determine potential changes to contract documents.
- Review substitutes and “or equal” items, and issue written acceptance/denials.
- Review and approve shop drawings and samples (if required), including review of revised shop drawings if necessary.
- Review contractor work plan, if required by specification special conditions.
- Attend progress meetings and as needed meetings.
- Issue written clarifications or interpretations of the requirements of the contract documents, including issuance of additional specifications and drawings.
- Provide a nearly full-time representative to observe construction for compliance with the contract documents and observe testing by the contractor and record results on appropriate forms.
- Prepare weekly reports summarizing construction activities.
- Prepare change orders for the work, including issuance of additional specifications and drawings, if necessary.
- Review contractor invoices (i.e., Applications for Payment) and issue written recommendations for payment or denial.
- Issue Certificate of Substantial Completion to the Agency, as typically required by the contract documents.
- Provide record drawings showing “as-built” features.

PROJECT MANAGEMENT

Management Plan

We are well qualified to serve WVDNR on this project. We stand ready to commit the personnel and resources required to complete this project in a timely, technically sound, and cost-efficient manner. POTESTA's large staff size will allow us to work on this project on an accelerated schedule if necessary.

POTESTA has completed numerous recreational development projects involving geotechnical, civil, structural, geological, hydrological, and reclamation engineering; land use planning; stream and water restoration; hydrology/geology; and post reclamation land uses. We also have open ended statewide contracts with various state agencies. POTESTA's previous experience with campgrounds includes Baker's Island, Four Seasons Campground, and North Bend State Park's wastewater treatment upgrades. As a result, POTESTA will provide the required expertise to complete this project in a timely, economical, and efficient manner.

POTESTA has completed a variety of site development projects with design aspects surrounding camp sites, public access, parking, facilities, stormwater design, utility design (drinking water, power/telecom, etc.), geotechnical evaluation and design, design and permitting for natural stream/pond projects including those within the floodplain, environmental sampling, endangered species investigations, reclamation designs for WVDEP AML, and detention pond designs.

The following describes our team's technical approach and expertise as it relates to the new equestrian campground at North Bend State Park:

Surveying and Field Work

POTESTA proposes to utilize our own survey crews on this project. POTESTA will perform the surveying required for this contract using in house personnel. POTESTA has three licensed professional surveyors with over 50 years of combined surveying experience.

Our surveyors are equipped with modern surveying instruments and are experienced in all aspects of surveying such as topographic mapping, boundary and property surveys, and construction surveys for layout of work, record drawings, and quantity measurements.

POTESTA also has the environmental field crews to catalog and delineate the protected species and aquatic resources on the site that may require permitting, mitigation, or protection during construction.

Geotechnical Evaluation

POTESTA will attend an initial planning meeting with the client, conduct preliminary site reconnaissance, and develop a recommended exploration program.

PROJECT MANAGEMENT

POTESTA will create a subsurface exploration plan to allow us to gather relative and pertinent geotechnical information which will be utilized to prepare a stable and cost-effective grading plan for the project.

POTESTA's staff is very familiar with terrain ranging from plateaus to mountains. West Virginia encompass rugged terrain, which presents unique challenges and hazards to mitigate threats. Our vast experience in our region has resulted in innovative approaches to the various challenges that the topography and geology present.

POTESTA will provide field engineers and geologists who are knowledgeable using the latest technologies subsurface explorations, monitoring well and piezometer installations, foundation design recommendations, slope stability analysis, retaining walls, and remedial designs as they relate to construction, mining, waste disposal, environmental remediation, and other projects.

Our knowledge of the proper procedures and familiarity with local conditions allows office and field personnel to adjust the exploration plan if unanticipated field conditions are found.

Master Planning and Preliminary Site Design

Based on the site conditions, limitations, and information (e.g., geotechnical data, flood plain boundaries, existing site drainage features) gathered by POTESTA, our team will develop a master plan for the campground that executes WVDNR's vision.

The master plan and preliminary site design will identify current and future land-use for both green spaces and paved areas of the site.

Our 3D site model allows us to simulate the turning radius of large vehicles (e.g., horse trailers) to create a workable and efficient parking layout.

Campground Water and Electric

POTESTA has staff who can be dedicated to providing quality water engineering services to the WVDNR. POTESTA has assembled a project team that is highly qualified in providing the services necessary for this project. Mr. Terence C. Moran P.E., Senior Engineer/Project Manager, has served as project manager/project engineer for 100+ water/wastewater projects. POTESTA has the ability to complete every facet of the project from beginning to end, from the preliminary (i.e., planning) study through final design and construction observation/management.

It is during this phase that we prepare an estimate of construction costs, review this with WVDNR, and ensure we are meeting the financial constraints of the project.

Before proceeding to permitting and final design, POTESTA will review the preliminary site design with WVDNR and make revisions based on your input.

PROJECT MANAGEMENT

Permitting

POTESTA is one of West Virginia's preeminent environmental consulting firms. Our relationship with regulatory agency staff and familiarity with their procedures will allow us to efficiently prepare the various permit approvals needed for the construction of this project.

Following WVDNR's approval of the preliminary site design, POTESTA will proceed with preparing the required permit applications for this project.

Following agency review and comment period, POTESTA will implement required changes and prepare the project for final design.

Final Design

The final design phase consists of preparing final sealed construction drawings, specifications, and contract documents to allow for the project to move to the bidding and construction phase.

POTESTA's staff has extensive experience creating construction drawings and specifications for WVDNR projects.

Bidding and Construction

POTESTA has a refined process for taking publicly funded projects to bid and seeing them through construction. We will provide clear and robust contract documents to aid WVDNR in the bidding process and provide support services throughout the construction process.

Our network and reputation in the construction industry will ensure that WNDNR has a competitive bidding process and meets all regulatory guidelines.

We also have the construction inspection staff and experience to provide for "boots on the ground" physical inspection of the contractor's work and quality control.

PROJECT MANAGEMENT

Once again, our experience with WVDNR projects makes us familiar with the process for contractor payment applications, distribution of payment, and the final inspection process. This will ensure that all parties are kept informed and satisfied throughout the construction phase.

Work will be performed out of POTESTA's Charleston, West Virginia office or on site as may be required. We are well qualified to serve WVDNR on this project. We stand ready to commit the personnel and resources required to complete this project in a timely, technically sound, and cost-efficient manner. POTESTA's large staff size will allow us to work on this project on an accelerated schedule if necessary.

POTESTA's principal-in-charge will be responsible for contract management (administration) and shall coordinate and direct all aspects of the project. The principal-in-charge will review the proposed project, work with the project manager to assemble a project team and appoint key staff to develop a proposed scope of work. The principal-in-charge and project manager will visit the site with WVDNR to review site conditions and the proposed services to be completed and guide the preparation of a detailed proposal and cost estimate. A written proposal including a detailed scope of work and an associated manhour and cost estimate will then be prepared and submitted to WVDNR for review. The project manager will review the proposal with the WVDNR including a task-by-task discussion of work items and the related costs. Upon WVDNR's approval of the proposal, the project manager will arrange for the start of project activities. The principal-in-charge will provide the project manager the required staff and resources necessary to complete the project activities, will review the project budget and schedule during performance of the project, and will provide a final QA/QC review of the documents prior to submittal to the WVDNR. Mr. Dana Burns, P.E. will serve as the principal-in-charge on this project. Day-to-day project activities for this project will be performed under the direction of our project manager, Mr. Chris Grose. The project manager will develop a detailed step by step project work plan so that the project activities are completed in a correct manner, on budget, and on time. They will also review work products at intermediate points and prior to project completion. They will conduct project status reports which may include weekly meetings, memos, or telephone calls with the WVDNR project manager as required. The project manager will supervise the day-to-day work in progress, will coordinate with POTESTA's subcontractors to provide necessary services, and review work products at intermediate points and prior to submittal to the WVDNR.

POTESTA will utilize the appropriate classification of staff to conduct activities required for the project. Our large, experienced staff allows us to respond quickly, provides flexibility, and will provide for the opportunity of high-level input from in house experts on complex multi-disciplinary projects. Our normal method of staffing projects is to assign a small project team with total responsibility for completion of the work to the client's satisfaction and budget. Where necessary, the team can draw on the expertise available within POTESTA's large staff. POTESTA offers a large staff with the efficiency and rates normally associated with a small firm.

Project Budget Control

The project manager will be responsible for monitoring the project budget and keeping the principal in charge informed of its status. POTESTA's staff enters time into POTESTA's InFocus computer system on a daily and/or weekly basis. POTESTA's project managers can access InFocus at any time, thus allowing "real time" control of project costs. In addition, field representatives routinely keep track of subcontractor costs on a daily basis. Thus, we can, in effect, keep track of the total project costs on a

weekly basis. Our subcontractors commonly invoice at monthly intervals and there is seldom a discrepancy between our field representative's pay items and our subcontractor's invoice.

Schedule Control

Direct responsibility for schedule control lies with the project manager. Initially, the project manager will review schedule requirements to see how they can be achieved given the anticipated scope of work. As the project progresses, the project manager will monitor progress and compare it with the established schedule on a weekly basis keeping the principal-in-charge aware of the schedule's status. In this manner, the principal-in-charge can make staff adjustments to allow the project manager to maintain the project schedule. If circumstances develop that make it impossible to maintain the project schedule, the project manager will contact the WVDNR project manager to develop a mutually acceptable adjustment to the schedule and/or work plan.

Location of Facilities

POTESTA will complete the work under this contract in our Charleston, West Virginia office. Our subcontractors are located in the Charleston area or other strategic locations and are quite familiar with the location of the subject site.

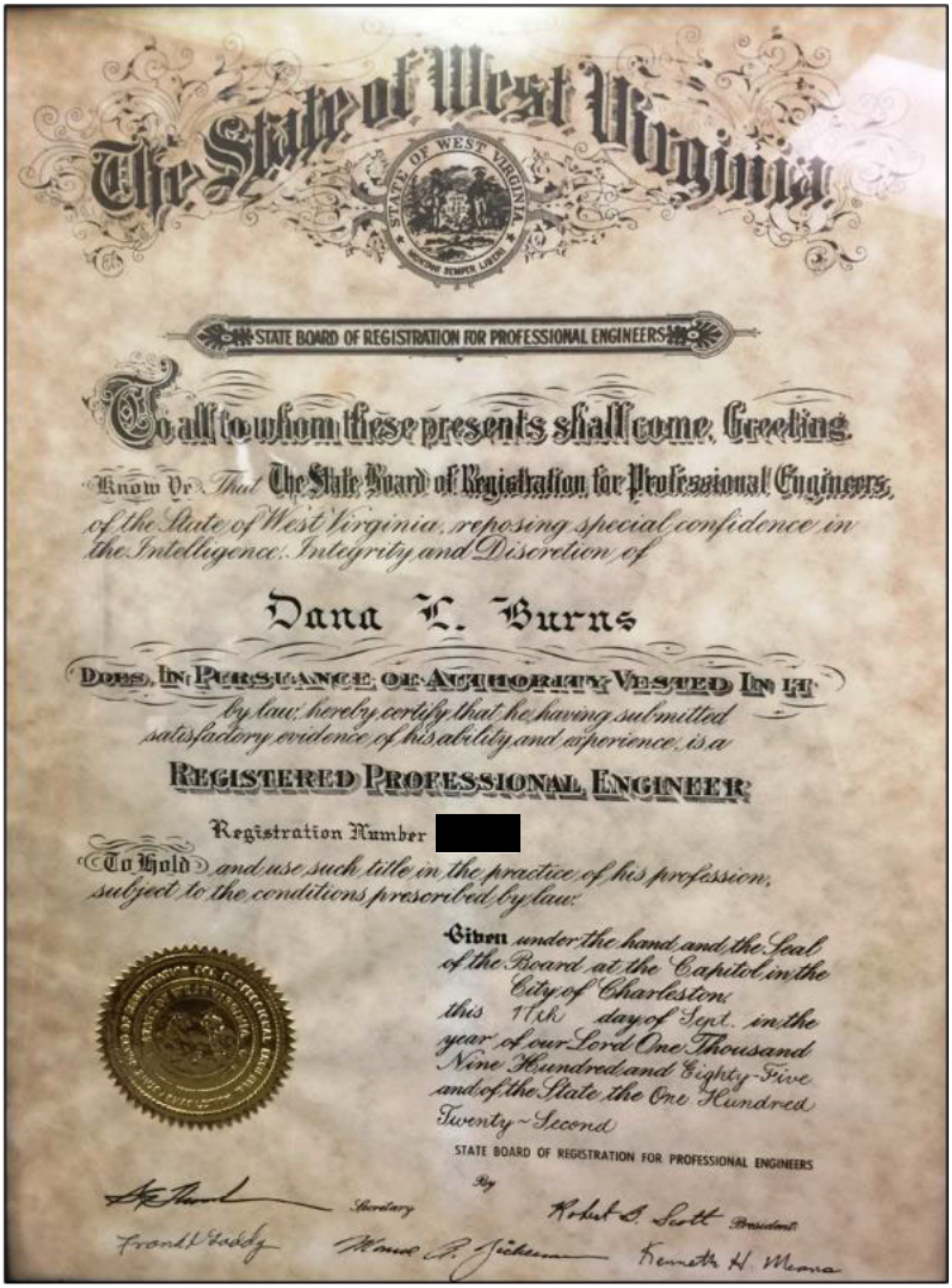
Quality Assurance/Quality Control

Submittals to the WVDNR will be reviewed and commented on by the project manager and the principal-in-charge prior to submittal to the WVDNR. Both the project managers and the principal in charge have worked on numerous WVDNR projects, and thus understand the level of detail and expectations for WVDNR projects. POTESTA utilizes standardized Quality Assurance/Quality Control (QA/QC) practices such as consistency checks, color coding of checked copies/calculations, and review of method of measurements versus quantity tallies to meet QA/QC expectations.

CERTIFICATES/REFERENCES

Primary Staff Professional Certifications

Dana L. Burns, Principal-In-Charge



The State of West Virginia

STATE OF WEST VIRGINIA

MONTANI SEMPER LIBERI

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

To all to whom these presents shall come, Greeting.

Know Ye, That The State Board of Registration for Professional Engineers, of the State of West Virginia, reposing special confidence in the Intelligence, Integrity and Discretion of

Dana L. Burns

Does, In Pursuance of Authority Vested In It by law, hereby certify that he having submitted satisfactory evidence of his ability and experience, is a

REGISTERED PROFESSIONAL ENGINEER

Registration Number [redacted]

To Hold and use such title in the practice of his profession, subject to the conditions prescribed by law.

Given under the hand and the Seal of the Board at the Capitol in the City of Charleston, this 17th day of Sept. in the year of our Lord One Thousand Nine Hundred and Eighty-Five and of the State the One Hundred Twenty-Second

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

By

Secretary

Robert S. Scott President

CERTIFICATES/REFERENCES

Terence C. Moran, Senior Engineer

The State of West Virginia

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

To all to whom these presents shall come, Greeting.

Know Ye That The State Board of Registration for Professional Engineers, of the State of West Virginia, reposing special confidence in the Intelligence, Integrity and Discretion of

Terence C. Moran

DOES, IN PURSUANCE OF AUTHORITY VESTED IN IT by law, hereby certify that he having submitted satisfactory evidence of his ability and experience, is a

REGISTERED PROFESSIONAL ENGINEER

Registration Number [redacted]

To Hold and use such title in the practice of his profession, subject to the conditions prescribed by law.

Given under the hand and the Seal of the Board at the Capitol in the City of Charleston, this 13th day of Feb. in the year of our Lord One Thousand Nine Hundred and Ninety Six and of the State the One Hundred Thirty Second

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

Secretary

President

Kenneth H. Means Robert B. Scott Frank Hubley

CERTIFICATES/REFERENCES

Certificate of Liability Insurance

POTESTA carries a full line of insurance coverage including general liability, errors and omissions, and workers' compensation.

POTE&AS-01 NGONZALEZ

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 3/8/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME:
Ames & Gough 8300 Greensboro Drive Suite 980 McLean, VA 22102	PHONE (A/C, No, Ext): (703) 827-2277 FAX (A/C, No): (703) 827-2279 E-MAIL ADDRESS: admin@amesgough.com

INSURED	INSURER(S) AFFORDING COVERAGE	NAIC #
Potesta & Associates, Inc. 7012 MacCorkle Avenue, SE Charleston, WV 25304	INSURER A : Valley Forge Insurance Company A(XV)	20508
	INSURER B : Continental Insurance Company A(XV)	35289
	INSURER C : National Fire Insurance Company of Hartford A(XV)	20478
	INSURER D : Evanston Insurance Company	35378
	INSURER E :	
	INSURER F :	

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR X Contractual Liab. GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY PRO-JECT LOC OTHER:			6057035330	3/7/2022	3/7/2023	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 100,000 $ 15,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
A	AUTOMOBILE LIABILITY X ANY AUTO OWNED AUTOS ONLY SCHEDULED AUTOS HIRED AUTOS ONLY NON-OWNED AUTOS ONLY			6057035327	3/7/2022	3/7/2023	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $ $
B	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DED X RETENTION $ 10,000			6057035358	3/7/2022	3/7/2023	EACH OCCURRENCE AGGREGATE	$ 9,000,000 $ 9,000,000 $
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) Y/N N N/A If yes, describe under DESCRIPTION OF OPERATIONS below			6057035344	3/7/2022	3/7/2023	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000
D	Professional Liab.			MKLV7PL0005188	3/7/2022	3/7/2023	Per Claim/Aggregate	5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Pollution Liability is included in the Professional Liability policy and shares the limits per the policy terms and conditions.

CERTIFICATE HOLDER	CANCELLATION
EVIDENCE OF COVERAGE	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE

ACORD 25 (2016/03)

CERTIFICATES/REFERENCES

References

Marshall University
Mr. Jeff Pratt
Director of Facilities Planning and Management
400 Hal Greer Boulevard
Huntington, WV 25775
Ph.: (304) 636-6479
Pratt65@marshall.edu

Huntington Sanitary Board
Mr. Pat Taylor, P.E.
Engineer for Huntington Water Quality Board
PO Box 7098
Huntington, WV 25775
(304) 993-7999
ptaylor@huntingtonsb.com

West Virginia American Water
Mr. Brett Morgan
Engineering Manager
1600 Pennsylvania Avenue
Charleston, WV 25302
Ph.: (304) 340-2011
Fax: (304) 340-2061

NORTH BEND RAIL TRAIL

West Virginia Division of Natural Resources
West Virginia State Parks
Wood, Ritchie, Doddridge and Harrison Counties, West Virginia

As a result of significant flooding along portions of one of West Virginia's unique state parks, the North Bend Trail, Potesta & Associates, Inc. (POTESTA) was charged with preparing flood repair construction documents for work along this 61-mile former railway corridor.

This linear state park is only one of two type parks within the state. The railroad right-of-way provides a biking, hiking and riding non-motorized trail experience from just east of Parkersburg to Clarksburg, West Virginia, following closely the route of U.S. Route 50. The trail is part of the 5,500-mile coast to coast American Discovery Trail.

A flood caused significant trail damage at 32 bridges and 10 tunnels along the railway corridor, requiring trail restoration designs and hillside slope stabilization solutions to repair the trail to its railroad grade profile. The design documents had to meet the Federal Emergency Management Agency's initial flood repair estimate.

HATFIELD-MCCOY/WATERWAYS WATER LINE EXTENSION

Boone County Public Service District
Boone County, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained to provide engineering services for extension of Boone County Public Service District (BCPSD) water lines to the proposed Hatfield-McCoy trailhead facility and the Boone Waterways facility.

The design concept involved extending water line from Julian to approximately 10 new customers, crossing a four-lane highway and a river. Approximately 12,000 linear feet of 12-inch, 8-inch and 6-inch water line were designed, as well as four river crossings. Services included:

Crossing of Little Coal River

1. Completing a hydraulic evaluation of the extension to size proposed water line, including flow testing of the existing system.
2. Preparing a preliminary engineering report and funding application for submittal to the West Virginia Infrastructure and Jobs Development Council.
3. Preparing drawings, specifications, and a cost estimate.
4. Preparing permit applications to the West Virginia Department of Health and Human Resources, West Virginia Division of Highways, U.S. Army Corps of Engineers and West Virginia Public Land Corporation, and interacting with those entities until permits were issued.
5. Providing bidding phase services, construction management services, and full-time construction observation.

POTESTA's services were provided on a "fast track." Design commenced in June and construction was completed in July of the following year. The project was completed under budget.

BOY SCOUT CAMP WATER AND SEWER SYSTEMS AT DILLEY'S MILL

Buckskin Council – Boy Scouts of America
Pocahontas County, West Virginia

Potesta & Associates, Inc. (POTESTA) worked with the Buckskin Council of the Boy Scouts of America (BSA), the West Virginia Department of Environmental Protection (WVDEP) and the West Virginia Department of Health and Human Resources (WVDHHR) to correct problems with the existing drinking water and sanitary sewer systems at the Buckskin Reservation at Dilley's Mill, Pocahontas County, West Virginia.

After problems were discovered at the camp, the BSA asked POTESTA to review the sanitary sewer system and make recommendations regarding the upgrade and replacement of the existing lines. POTESTA was also asked to evaluate the existing sewage lagoon to determine if the facility was of adequate size. A site review of well locations, tank site, sewage treatment lagoon and alignment and location of both water and sewer lines was completed, and a report on problems identified and recommendations for correction was submitted to the BSA.

POTESTA provided administration and oversight of closure and abandonment of two of the camp's drinking water wells and the drilling of a replacement potable water well. Evaluation, recommendations and a master plan for replacement of the existing sanitary sewer system were provided by POTESTA engineers. The camp's sewage treatment lagoon was evaluated and recommendations were made for completely rehabilitating the lagoon to meet current regulatory standards.

POTESTA provided regulatory liaison and assistance with the forms required for well closure and abandonment, installation of a replacement well and replacement of the existing sewer system. Bid packages were developed for the required work and POTESTA worked closely with the BSA to issue and administer the contract with the successful bidder. After evaluation, the sewage lagoon was found to need replacement, and POTESTA worked with the BSA to provide design and construction of the replacement facility.

CHARLESTON GREENSPACE PROJECT

Charleston Area Alliance
Charleston, West Virginia

Potesta & Associates, Inc. (POTESTA) completed grading plan development, geotechnical design, and coordination/design of required utility relocations/services for the Charleston Area Alliance. POTESTA's services were provided under a design team which was managed by Andropogon Landscape Architecture in Philadelphia, Pennsylvania. POTESTA worked with both the City of Charleston and the West Virginia Division of Highways to prepare design plans for the construction of an approximately 1-acre greenspace area to be constructed near the corner of Leon Sullivan Way and Washington Street in Charleston, West Virginia. The plan called for the installation of several terraced retaining walls, a recalculating stream feature and a reflection pool. Additional requirements included surface treatments such as stone pavers, concrete walkways and site lighting.

Plans for the water feature included the collection of storm water runoff from an adjacent commercial building roof. This water was collected and routed into a buried cistern system which was designed by POTESTA to provide a water source for the recirculation to feed the water feature constructed at the site. POTESTA also worked with the landscape architecture firm to provide geotechnical design recommendations related to several retaining walls which were incorporated into the design.

POTESTA prepared both design plans and specifications for this project and was also involved in the bidding and permitting phases of the project.

PRIOR EXPERIENCE

GEOTECHNICAL ENGINEERING SERVICES PROPOSED OUTDOOR ADVENTURE CENTER AND SKI SCHOOL

Snowshoe Mountain, Inc.
Pocahontas County, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by Snowshoe Mountain, Inc. to provide geotechnical recommendations regarding the proposed Outdoor Adventure Center and Ski School Buildings.

POTESTA mobilized a track-mounted drill rig and advanced a total of 10 borings to make geotechnical recommendations regarding the proposed structures. The total footage of borings was 200 feet. Standard penetration blow counts, water levels, and other pertinent information was recorded on the boring logs.

Upon completion of the laboratory testing, POTESTA compiled the information obtained and prepared a geotechnical evaluation report. The report summarized the field program, including a general description of the sites, as well as general recommendations for the proposed cut and fills for the proposed building, information of the nature of the material present (including addressing the suitability of the on-site soils for reuse as engineered fill), and highlight particular problems or special features of the existing conditions. The report also discussed the advantages, disadvantages, and costs associated with the various foundation types considered for the various features of the proposed buildings and provided strength parameters for soil to be used in design.

DAVIS CREEK TRAIL ASSESSMENT AND PRIORITIZATION PROJECT

Kanawha State Forest Foundation
Charleston, West Virginia

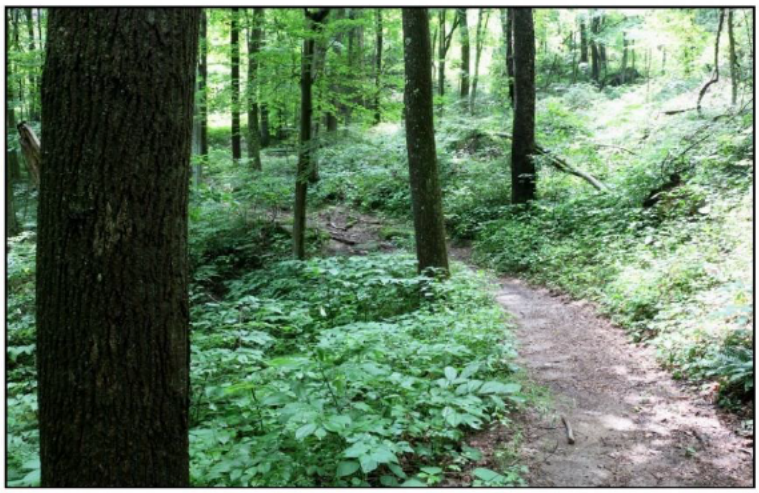
Potesta & Associates, Inc. (POTESTA) was retained by the Kanawha State Forest Foundation to assess the current conditions of the Davis Creek Trail located within the Kanawha State Forest, prioritize segments of the trail, and establish remedial options to bring the trail back to the pinnacle trail that is once was.

The Davis Creek Trail is approximately a 1.9-mile trail within the 9,300-acre forest. The trail has many access points and links up to various amenities, such as shelters, picnic areas, playgrounds, Ellison Pond, and the park's swimming pool.

POTESTA reviewed the existing conditions of the trail for various deterioration parameters based on tread and condition, erosion issues, gradient, and cross slope. After the site reconnaissance was completed, trail segments were assigned an assessment rating of good, moderate, or severe. Remediation options were assigned to each condition and cost engineer's cost estimates were developed for the construction of the remediation.

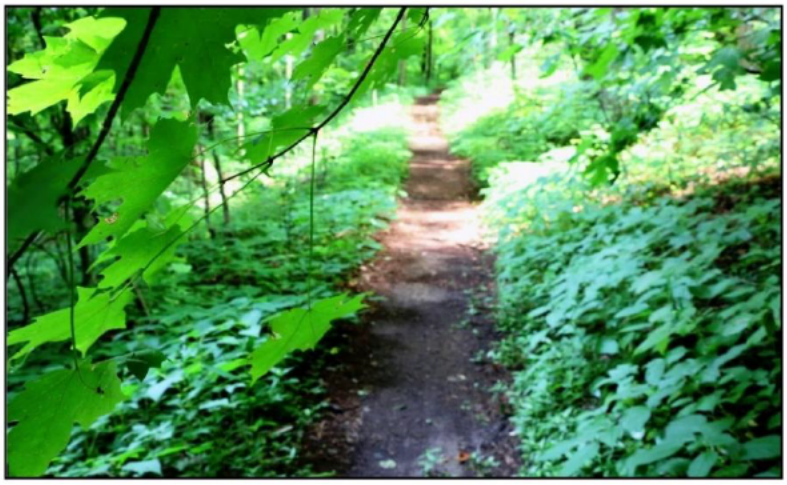
WALLACE HARTMAN NATURE PRESERVE

Kanawha County Parks & Recreation Commission
Charleston, West Virginia



Potesta & Associates, Inc. (POTESTA) was retained by the Kanawha County Parks & Recreation Commission (KCPRC) to develop a trail master plan for the newest greenspace within the Charleston city limits. This 52-acre parcel was donated to KCPRC in 2001. A conservation easement for the property was also donated to the West Virginia Land Trust (WVLT). The easement permanently protects the natural, scenic and recreational values of the preserve.

As part of the trail master plan, all the existing trails were located in the field using a GPS survey unit and that information was incorporated within the base mapping. This effort allowed for accurately locating the trails in relation to the property lines. From this effort, more than half of the proposed trail system already existed onsite. The master plan creates a trail system ranging from a series of short hikes to the possibility of a loop system over 2 miles long. Each trail segment has some significant site features such as rock outcrops, streams, waterfalls or nice vistas.



Three trailheads are envisioned, as well as possible expansion of the preserve. Phasing and cost opinions were also provided.

PRIOR EXPERIENCE

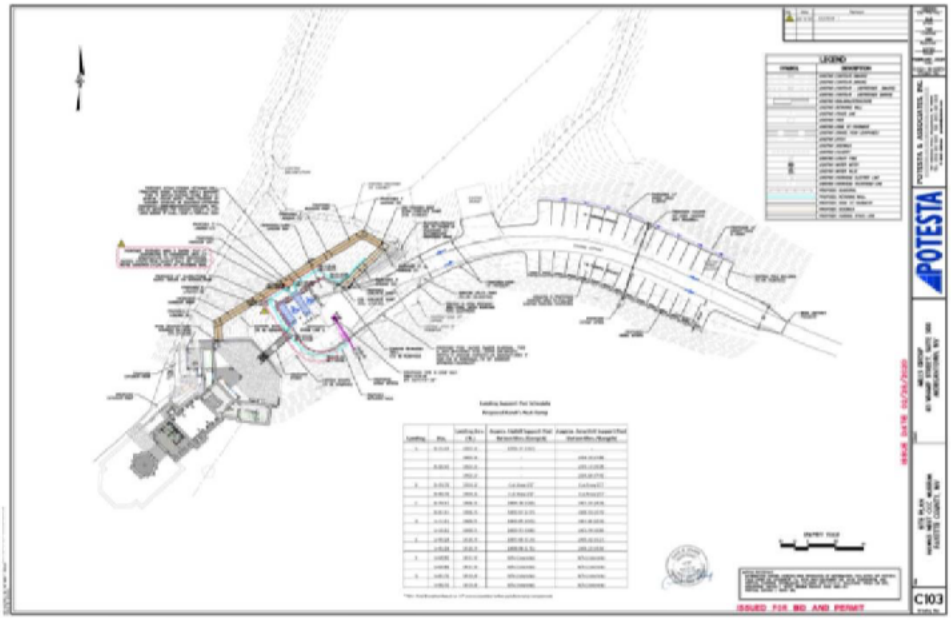
HAWKS NEST MUSEUM ADA ACCESS AND PARKING AREA IMPROVEMENTS

Mills Group, LLC
State Route 60 near Ansted, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by Mills Group, LLC (Mills Group) for engineering consulting services for the proposed Hawks Nest Museum project located on State Route 60 near Ansted, West Virginia. Project tasks included topographic surveying and civil/site design for the two new proposed ADA access points on the northeast side of the building and upgrading the existing parking area.

The topographic survey included the generation of a topographic map with 1-foot contour intervals. POTESTA established horizontal and vertical control at the site and performed conventional surveying. POTESTA located visible existing utilities as they pertain to the property. POTESTA provided a hard copy of the topographic survey, as well as an electronic file in AutoCAD format.

POTESTA performed the civil/site design for the proposed two additional ADA access points. The topographic mapping and site survey were used to prepare construction-level design drawings associated with the additional ADA access.



DAVIS & ELKINS COLLEGE
MCDONNELL CENTER PARKING LOT

Davis & Elkins College
Elkins, Randolph County, West Virginia

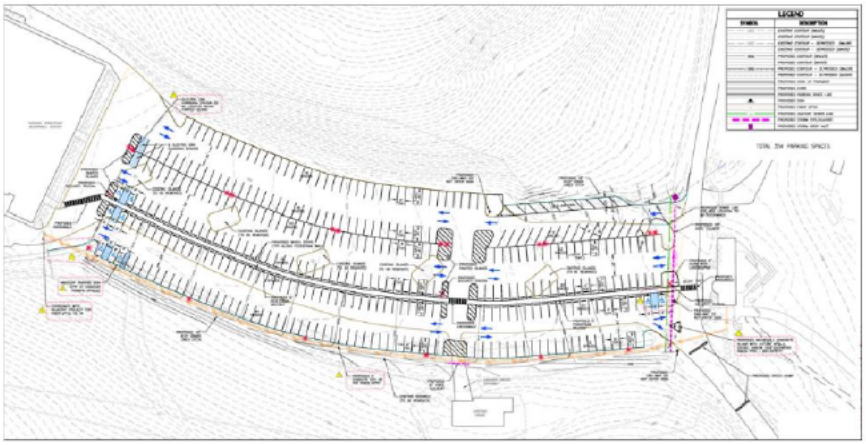
Potesta & Associates, Inc. (POTESTA) was retained by Davis & Elkins College for engineering consulting services associated with redesigning the existing McDonnell Center Parking Lot at Davis & Elkins College in Elkins, Randolph County, West Virginia. The renovations of the parking area included new parking stalls and driving lanes, as well as extensions of the parking area to increase capacity.

POTESTA's civil site design for this parking lot renovation included the following:

- Utilization of topographic mapping and site surveys previously prepared by POTESTA to generate construction-level design drawings including a site grading plan, demolition plan, erosion and sediment control plan, stormwater plan, and supplementary detail drawings.
- Sizing and locations of the storm water collection system, drop inlets, buried pipes, and discharge protection.
- Preparation of detailed drawings for drop inlets, pipe profiles, trench details, sidewalk details, pavement sections (with stone base and pavement thicknesses), curbs, and erosion and sediment control details.

POTESTA's construction administration services for this project included:

- Providing a senior engineer or staff engineer to visit the site during construction.
- Issuing construction observation report documenting the activities being conducted during the site visits.
- Reviewing shop drawing submittals and providing comments as necessary.
- Reviewing pay applications that included site work components.



DAVIS & ELKINS COLLEGE MYLES PLAZA

Mills Group, LLC
Elkins, Randolph County, West Virginia

Potesta & Associates, Inc. (POTESTA) was retained by Mills Group, LLC for engineering consulting services associated with the proposed Myles Plaza at Davis & Elkins College in Elkins, Randolph County, West Virginia. The project included renovations of the area around and adjacent to Robbins Chapel to include parking lots, new sidewalks, hardscapes, and green spaces. The project also included a new featured entry to Hermanson Campus Center, as well as a roof extension between Hermanson Campus Center, Harper-McNeeley Auditorium, and Myles Center for the Arts.

POTESTA's engineering and geotechnical services for this project included the following:

- Providing geotechnical recommendations regarding the suitability of the site for construction of the proposed plaza and roof structure.
- Coordinating private utility locating services using geophysical methods including electromagnetic scanning and ground penetrating radar. These services provide the horizontal designation of buried utilities.
- Utilization of topographic mapping and site surveys prepared by POTESTA to generate construction-level design drawings including a site grading plan, demolition plan, erosion and sediment control plan, stormwater plan, and supplementary detail drawings.
- Sizing and locations of the storm water collection system including, but not limited to, drop inlets, buried pipes, and discharge protection.
- Preparation of detail drawings for drop inlets, pipe profiles, trench details, sidewalk details, pavement sections (with stone base and pavement thicknesses), curbs, and erosion and sediment control details.

J. G. BRADLEY CAMPGROUND REMEDIATION AND REDEVELOPMENT

West Virginia Department of Environmental Protection
Office of Environmental Remediation
Dundon, West Virginia

Potesta & Associates, Inc. (POTESTA) was contracted by the West Virginia Department of Environmental Protection (WVDEP), Office of Environmental Remediation to complete an environmental site assessment (ESA), risk assessment, remediation feasibility study, and to develop a remediation work plan in accordance with the Voluntary Remediation Program (VRP) guidelines.

The J. G. Bradley Campground Project was an effort by the Central Appalachian Empowerment Zone (CAEZ) to improve a lowland portion of property adjacent to Buffalo Creek near Dundon, West Virginia. The site was operated as a former rail facility from the early 1900s through the mid-1960s. The West Virginia Department of Transportation, Division of Highways (WVDOH) planned to use the site as a waste area for fill generated during the construction of the new Dundon Bridge in 2006-2007. POTESTA incorporated the placement of the fill into the remedial design for the site.

The ESA consisted of advancing and sampling 26 soil borings, installing monitoring wells, performing groundwater monitoring, performing surface water and sediment sampling, and preparation of an ESA report.

POTESTA then performed an Ecological and Human Health Risk Assessment to evaluate impacts to potential receptors. Based on the Risk Assessment and the contaminants of concern for this site, POTESTA developed a Remediation Feasibility Study and developed a Remediation Work Plan in accordance with VRP guidelines. POTESTA worked closely with WVDEP representatives and communicated with CAEZ to develop a remediation plan that could be implemented with minimal costs and would fit into the plans to develop the site as a campground.

CLOSING

We look forward to continuing to serve WVDNR on the North Bend State Park Cokeley Campground Project and bring it to completion. POTESTA will make our experienced personnel immediately available for this project. Our commitment is to provide quality service, rapid response, project completion, and to exceed your expectations for services performed under this project. We believe the track record of our professionals demonstrates our abilities, and we look forward to once again serving WVDNR and our great Mountain State.

APPENDIX A

Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Centralized Expression of Interest
Architect/Engr

Proc Folder: 1020916			**Reason for Modification:**
Doc Description: A/E Services - North Bend SP Cokeley Campground			Addendum #3 issued to publish agency responses to all vendor submitted questions.
Proc Type: Central Contract - Fixed Amt			
Date Issued	**Solicitation Closes**	**Solicitation No**	**Version**
2022-04-21	2022-04-27 13:30	CEOI 0310 DNR2200000010	4

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Customer Code:

Vendor Name :

Address :

Street :

City :

State : **Country :** **Zip :**

Principal Contact :

Vendor Contact Phone: **Extension:**

FOR INFORMATION CONTACT THE BUYER
Joseph E Hager III
(304) 558-2306
joseph.e.hageriii@wv.gov

Vendor Signature X Dana L. Burns **FEIN#** **DATE**

All offers subject to all terms and conditions contained in this solicitation

ADDITIONAL INFORMATION

The Acquisitions and Contract Administration Section of the Purchasing Division ("Purchasing Division") is soliciting Expression(s) of Interest ("EOI" or "Bids") for The Division of Natural Resources ("Agency"), from qualified firms to provide architectural/ engineering services per the attached specifications and terms and conditions.

The mission or purpose of the project for which bids are being solicited is to provide necessary engineering, and other related professional services to design, specify and provide construction contract administration services for the construction of an equestrian campground, which will include a new horse stable barn structure as well. Each existing campsite will be upgraded with water and electric services.

INVOICE TO	SHIP TO
DIVISION OF NATURAL RESOURCES	STATE OF WEST VIRGINIA
PARKS & RECREATION-PEM SECTION	JOBSITE - SEE SPECIFICATIONS
324 4TH AVE	
SOUTH CHARLESTON WV 25305	No City WV 99999
US	US

Line	Comm Ln Desc	Qty	Unit Issue
1	Civil engineering		

Comm Code	Manufacturer	Specification	Model #
81101500			

Extended Description:
Architectural/engineering services and contract administration for new equestrian campground at North Bend State Park.

SCHEDULE OF EVENTS

Line	Event	Event Date

	Document Phase	Document Description	Page 3
DNR2200000010	Final	A/E Services - North Bend SP Cokeley Campground	

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Centralized Expression of Interest
Architect/Engr

Proc Folder:	1020916		**Reason for Modification:**
Doc Description:	A/E Services - North Bend SP Cokeley Campground		Addendum #2 issued to extend bid due date.
Proc Type:	Central Contract - Fixed Amt		
Date Issued	**Solicitation Closes**	**Solicitation No**	**Version**
2022-04-19	2022-04-27 13:30	CEOI 0310 DNR2200000010	3

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Customer Code:

Vendor Name :

Address :

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Principal Contact :

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SOUTH CHARLESTON WV 25305	No City WV 99999
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SCHEDULE OF EVENTS

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Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Centralized Expression of Interest
Architect/Engr

Proc Folder:	1020916
Doc Description:	A/E Services - North Bend SP Cokeley Campground
Proc Type:	Central Contract - Fixed Amt
Reason for Modification:	Addendum #1 issued to correct page 2 and 3 of the solicitation documents.

Date Issued	Solicitation Closes	Solicitation No	Version
2022-03-31	2022-04-20 13:30	CEOI 0310 DNR2200000010	2

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Customer Code:

Vendor Name :

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Vendor Contact Phone: **Extension:**

FOR INFORMATION CONTACT THE BUYER
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Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Centralized Expression of Interest
Architect/Engr

Proc Folder: 1020916			**Reason for Modification:**
Doc Description: A/E Services - North Bend SP Cokeley Campground			
Proc Type: Central Contract - Fixed Amt			
Date Issued	**Solicitation Closes**	**Solicitation No**	**Version**
2022-03-25	2022-04-20 13:30	CEOI 0310 DNR2200000010	1

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Customer Code:

Vendor Name :

Address :

Street :

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Principal Contact :

Vendor Contact Phone: **Extension:**

FOR INFORMATION CONTACT THE BUYER
Joseph E Hager III
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The mission or purpose of the project for which bids are being solicited is to provide necessary engineering, and other related professional services to design, specify and provide construction contract administration services for the construction of a new headquarters, efficiency apartment, and maintenance building in Elk River Rail Trail, in Clay County, West Virginia.

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DNR2200000010	Final	A/E Services - North Bend SP Cokeley Campground	

ADDITIONAL TERMS AND CONDITIONS

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ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: CEOI DEP22*10

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:
(Check the box next to each addendum received)

[ ]	Addendum No. 1	[ ]	Addendum No. 6
[ ]	Addendum No. 2	[ ]	Addendum No. 7
[ ]	Addendum No. 3	[ ]	Addendum No. 8
[ ]	Addendum No. 4	[ ]	Addendum No. 9
[ ]	Addendum No. 5	[ ]	Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

_____
Company

Dana L. Burns
_____
Authorized Signature

_____
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.
Revised 6/8/2012

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

(Name, Title)

(Printed Name and Title)

(Address)

(Phone Number) / (Fax Number)

(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that: I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.

(Company)

(Authorized Signature) (Representative Name, Title)

(Printed Name and Title of Authorized Representative)

(Date)

(Phone Number) (Fax Number)

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (*W. Va. Code* §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: Potesta & Associates, Inc.

Authorized Signature: Anna L. Burns Date: April 27, 2022

State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 27 day of April, 2022

My Commission expires February 14, 2024

AFFIX SEAL HERE

OFFICIAL SEAL
Rhonda L. Henson
Notary Public
State of West Virginia
My Commission Expires
February 14, 2024
1978 Wolf Pen Drive
Charleston, WV 25312

NOTARY PUBLIC Rhonda L Henson

APPENDIX B

DANA L. BURNS, P.E., P.S.
Vice President

EDUCATION

M.S. Civil Engineering, 1979
West Virginia University

B.S. Civil Engineering, 1978
West Virginia University

EMPLOYMENT HISTORY

1997-Present	Potesta & Associates, Inc.
1994-1997	Terradon
1979-1994	GAI Consultants, Inc.
1978-1979	West Virginia University
1976-1977	West Virginia Department of Highways (summers)

PROFESSIONAL REGISTRATIONS

- Professional Engineer – West Virginia, Illinois
- Professional Surveyor – West Virginia

PROFESSIONAL CERTIFICATIONS

40-Hour Health and Safety Training

SERVICE ON BOARDS AND COMMISSIONS

- Environmental/Technical Committee member – West Virginia Coal Association
- Environmental Committee member – Kentucky Coal Association
- Past Board of Directors member and current Waste Team Chairman on the Environmental Safety and Health Committee – West Virginia Manufacturers Association
- Environmental and Safety Committee member – Independent Oil and Gas Association of West Virginia
- Environmental Committee member – West Virginia Oil and Natural Gas Association
- Past President – West Virginia Society of Professional Engineers, Professional Engineers in Private Practice
- Past President and past Board of Directors member – American Council of Engineering Companies West Virginia Chapter
- Past Chairman of Transportation Committee – American Council of Engineering Companies West Virginia Chapter
- Past Board of Directors member – Society of American Military Engineers Huntington Post
- Member Committee D-18 on Soil and Rock – American Society for Testing and Materials (ASTM)

PROFESSIONAL AFFLIATIONS

- American Society of Civil Engineers
- National Society of Professional Engineers
- WV Society of Professional Surveyors

AREAS OF SPECIALIZATION

Management of design and permitting of civil, environmental, geotechnical, and mining engineering projects. Siting, design, and permitting of industrial and municipal waste disposal sites; reclamation of abandoned mine lands; and development of stormwater management plans and groundwater sampling programs. Environmental/reclamation liability assessments. Development of site plans for commercial and industrial facilities including hydrologic and hydraulic analyses. Expert witness testimony. Directs engineering division including day-to-day operation of headquarters and three branch offices concerning staffing, coordination, training, business development; and overall management of technical and support staff.

dlburns@potesta.com

PROFESSIONAL EXPERIENCE

Civil/Site Design

Utility extension, site grading plans, stormwater management, roadway design, and permitting for site development:

- Residential subdivisions
- Commercial developments

University of Charleston – Principal-in-Charge for the following projects:

- Development of topographic mapping of campus
- Evaluation of storm sewer system
- Civil site services – UC Pharmacy School, New Hall, Middle Hall, and Brotherton Hall
- Design of new campus entrance roadway

Marshall University – Principal-in-Charge for the following projects:

- 400 bed housing project
- Biotechnology Center
- Fifth Avenue parking and 6th Avenue parking facility
- Jomie Jazz Center
- Childcare Center
- Mid-Ohio Valley Center
- Campus landscape master use plan
- Campus improvements project
- MU Graduate College South Charleston campus
- Student Center and Henderson Center
- Bookstore addition
- University Heights

Glenville State University – Principal-in-Charge for the following projects:

- Student Residence Hall
- Athletic Convocation Center and Forestry/Survey Class Center

West Virginia University – Principal-in-Charge for a sidewalk repair project located near Allen Hall on the Evansdale Campus in Morgantown, West Virginia.

The Villages at Coolfont – Principal-in-Charge to provide environmental and engineering consulting services for the redevelopment of the Coolfont Recreation property in Morgan County, West Virginia to create a second home community with high-end amenities:

- Phase I Environmental Site Assessment
- American Land Title Association (ALTA) boundary and property survey of 997 acres
- Completed an assessment of the facility's sanitary sewer wastewater treatment plant to facilitate acquisition of the property.
- Participated in week long planning charette with client, land planners, and other design consultants to assess characteristics of property, identify opportunities and constraints, obtain input from local residents and businesses, and develop design guidelines.
- Land use plan including 1,300 homes, a village center, spa, expansion of an existing lake, a proposed second lake, walking/hiking/biking trails, and the necessary infrastructure.
- Civil engineering design for potable water and wastewater treatment facilities.
- Selected source well locations, drilled 3 source test wells, and completed field testing and permitting.
- Designed 300 gallon per minute potable water treatment plant.
- Designed 2- 316,000-gallon water storage tanks and 75,000 LF of distribution system.
- Completed the design and permitting for a 448,000-gallon per day membrane bioreactor wastewater treatment plant, including the design of a 70,000 LF collection system.
- Assisted with permitting required for the development of the new lake and upgrades/expansion of the existing lake (included were Section 404 individual permit and Section 401 water quality certification).
- Prepared roadway and stormwater management plans, including typical pavement sections, road profiles, geometric layout plan, culvert and drop inlet sizing, drainage conveyance pipe and channel profiles, and miscellaneous stormwater management details.

City of Charleston – Inspection and preparation of rehabilitation design for Parking Garage No. 1.

Tucker County Industrial Park – Principal-in-Charge for the design which included water and sewer lines, stormwater management design, roadway design, pavement design, site grading plan, master plan, and geotechnical exploration/foundation recommendations.

Principal-in-Charge for site grading plans, stormwater management system, site surveying, roadway/parking lot design, wetland delineation/mitigation, and construction monitoring for the 400,000-square foot Coldwater Creek distribution center in Parkersburg, West Virginia.

Principal-in-Charge for the civil/site design for the new Sissonville Middle School in Kanawha County, West Virginia. Project included site grading plan with more than 230,000 cubic yards of earthwork to obtain 20 acres of level ground for a 74,000-square foot school, football field, soccer field, baseball field, access roadways, and parking areas. Project included utility designs for water service and sanitary and sewer. Stormwater collection systems and erosion and sediment control plan/permit completed.

Principal-in-Charge for civil/site design for new Riverview High School and Bradshaw Elementary School in McDowell County, West Virginia. Project included 2,500 linear feet of relocated WV Route 80, relocation of 1,200 feet of Oozley Branch, and site work (grading, stormwater drainage, geotechnical recommendations, sanitary sewer, water, and electrical services) to serve the two schools. Project design included site survey, geotechnical exploration, foundation recommendations, design of excavation slopes, layout of schools, parking areas and athletic fields, utility design, roadway relocations plans, and stream relocations plans. Responsible for the design and preparation of contract bid documents (specifications and drawings) for civil/site work. POTESTA served as a subconsultant to ZMM on this project.

Principal-in-Charge for civil/site design and permitting associated with the construction of three synthetic fuel pellet plants in McDowell County, Nicholas County, and Kanawha County, West Virginia. Project included developing synthetic fuel manufacturing facilities on inactive surface mining sites. Services included subsurface exploration, foundation recommendations, grading plans, stormwater management plans, preparation of permit applications, and construction monitoring for site grading and foundation construction. The McDowell County site included a water source study to identify and select water sources for the manufacturing process. The three plants had a construction cost of $25 million. Project was a design/build arrangement with POTESTA working directly for the owner.

Carmeuse Lime & Stone – Principal-in-Charge of engineering and environmental services for the expansion of current quarry operations at Winchester quarry in Winchester, Virginia. The expansion includes the addition of two new vertical lime kilns and associated equipment, increasing their current aggregate crushing operation, and expanding their rail system to allow for increased shipping of product.

- Design included grading, stormwater management, and an access road crossing for a rail loop encircling the lime kilns and aggregate crushing areas with rail spurs for loading and unloading of product to connect to two mainline rail carriers.
- The total project track length consists of approximately 29,000 linear feet of rail.
- The design of the rail expansion includes trackside ditches, culverts, stormwater management systems, gas line relocations and crossings, rail crossings, and internal plant roadways, as well as grading for the expanded aggregate plant and lime kilns.
- Additional designs included civil/site services for a new office building and design of the sanitary water treatment system for this building.
- Acquired the necessary approvals to construct this project, such as approvals from local planning and zoning, inspections, health departments, and state governments such as Virginia Department of Transportation, Department of Environmental Quality (DEQ) and Department of Mining and Mineral Extraction (DMME).
- Conducted wetland delineations, developed reports, and completed applications to the Norfolk District (Northern Virginia field office) of the United States Army Corps of Engineers (USACE).

Development of specifications for a sand mound treatment system in the U.S. Air Training Center near Pittsburgh, Pennsylvania.

Water Lines, Water Storage Tanks, and Water Treatment Plants

New extensions and replacement of existing lines:

- Cassity Fork Water Supply Extension Project – Randolph County, WV (Project Manager)
- Godby Branch Water Supply Extension Project – Logan County, WV (Project Manager)
- Beaver Creek Water Supply Extension – Upshur County, WV (Project Manager)

- Buff Creek/Trace Fork – Putnam County, WV (Principal-in-Charge)
- Route 60 – Putnam County, WV (Principal-in-Charge)
- Boone County PSD numerous extensions – Boone County, WV (Principal-in-Charge)

West Virginia American Water Company – Principal-in-Charge for construction administration/monitoring for Poca River Water Line Extension Project, Cabell County Water Line Extension Project, Contract No. 7, Spite Road Water Line Extension Project, and Fisher Ridge Water Line Extension Project. Work included construction monitoring, preparation of weekly reports, review of contractor submittals, review of contractor invoices, and preparation of records drawings for 100,000+ linear feet of water line extensions.

City of Philippi – Principal-in-Charge for municipal water system upgrade project. Work included design of two replacement booster stations, two new water storage tanks, new pumps for an existing booster station, a 1,500-foot water line extension, and telemetry systems. Drawings, specifications, and a cost estimate were prepared.

West Virginia American Water Company – Principal-in-Charge for Residuals Handling Facility project at the 32 MGD Kanawha Valley Water Treatment Plant, including coordination design consultant. Design included sludge pumping station, 950,000-gallon reinforced concrete gravity thickener, two belt filter presses, chemical feed systems, plate settler, and associated control and piping. Work included preparing design concept, surveying, subsurface exploration, preparation of drawings, specifications, cost estimate and permit applications, conductance of pre-bid public relations meeting, evaluation of bids, construction observation, review of contractor submittals, review of change order requests, and review of contractor invoices.

West Virginia American Water Company – Principal-in-Charge for evaluation of Town of Pineville water treatment plant and water distribution system, including observation of system during site visit, records review, discussions with regulatory officials, and issuance of findings in a report.

Tucker County Development Authority – Principal-in-Charge for design of approximately 10,000 feet of water line and sewer line to serve an industrial park, including a lift station. Drawings, specifications, and a cost estimate were prepared. Also performed construction administration services.

West Virginia Bureau for Public Health – Principal-in-Charge for services associated with Source Water Assessment Protection Plans (SWAPP) for 38 public water systems throughout West Virginia. Services provided included windshield surveys to identify and locate (via GPS) potential contaminant sources (PCS's), review of regulatory databases, entering data into Access database, and preparation of summary reports.

City of Philippi – Principal-in-Charge for relocation of water lines due to proposed roadway. Relocation included approximately 4,000 feet of 1-inch to 12-inch diameter pipe, fire hydrants, meters, and valves. Prepared construction drawings, specifications, and quantities.

West Virginia American Water Company – Principal-in-Charge for hydraulic analysis for water supply extensions (total of 23 miles) in Cabell County, West Virginia, including line sizing and design of booster station and PRVs.

Management of design, permitting, and construction monitoring of more than 40 miles of new waterline serving rural communities in southern West Virginia.

West Virginia Department of Abandoned Mine Lands – Detailed design and preparation of construction drawings, specifications, contractor's bid sheet, and engineer's cost estimate for six-mile water line extension including fire protection. Project included 90,000-gallon water tank, booster station, and pressure relief valves. Extension tied into Norton Harding Jimtown PSD System and served town of Cassity in Randolph County.

West Virginia Department of Abandoned Mine Lands – Detailed design and preparation of construction drawings, specifications, contractor's bid sheet, and engineer's cost estimate for a half-mile water line extension to serve Beaver Creek near Junior in Randolph County.

West Virginia Department of Abandoned Mine Lands– Management of four Phase II water studies and five Phase I water studies to determine if water supplies had been affected by coal mining. Work included resident interviews, mine map searches, area reconnaissance, obtaining water samples, reviewing water analysis data, preparing conceptual designs and associated costs and preparation of summary report.

Sewer Lines and WWTPs

Washington County Industrial Development Agency – Design of a holding tank and ventilation system vault near Houston, Pennsylvania.

West Virginia American Water Company – Principal-in-Charge for evaluation of wastewater collections systems and treatment plants for two municipalities (Oak Hill and White Sulphur Springs) in West Virginia. Included were site visits to observe system, discussions with system operators and regulatory officials, records review, compilation of DMR data and issuance of findings in reports.

Geotechnical

Subsurface exploration, evaluation, and design of remedial measure for landslides:

- Soldier beam and lagging retaining walls
- Gabion walls
- Grade/drain/compact in-place
- Geo-grid reinforcement with grade/drain/compact in-place

Plasma Processing Corporation – Management of subsurface exploration and preparation of soils report near Ravenswood, West Virginia.

West Virginia University – Principal-in-Charge for the following projects:

- WVU Intermodal Parking Garage on the Medical Center Campus – geotechnical and civil engineering
- WVU Engineering Building – geotechnical evaluation

Principal-in-Charge for Williamson Landslide Project involving an abandoned mine land site. Geotechnical exploration and design of 480-foot long soldier beam and lagging retaining wall with tiebacks to support loose mine spoil backfill along the edge of a previously mined area with steep terrain. Project was required to protect an existing 125-bed nursing home facility.

Landfills/Solid Waste/Waste Disposal

Design and permitting of new landfills and development of cell closure plans:

Municipal Landfills –

- West Virginia Solid Waste Management Board/Monongalia County Sanitary Landfill – Morgantown, WV
- North Folk Landfill – Wheeling, West Virginia
- Disposal Service, Inc. Landfill – Hurricane, WV
- Sycamore Landfill, Inc. – Hurricane, WV
- City of Charleston Landfill – Charleston, WV
- Mingo County Landfill – Mingo County, WV
- Omar Landfill – Omar, WV
- Pocahontas County Landfill – Marlinton, WV
- HAM Sanitary Landfill – Peterstown, WV
- Kanawha- Western Landfill – Cross Lanes, WV
- S&S Landfill – West Milford, WV
- Brooke County Landfill – Brooke County, WV
- Wetzel County Landfill – Wetzel County, WV
- WVDEP's Landfill Closure Assistance Program
  - Montgomery Sanitary Landfill – Montgomery, WV
  - Wyoming County Sanitary Landfill – Pineville, WV
  - Jackson County Sanitary Landfill – Ripley, WV
  - City of Moundsville Landfill – Charleston, WV

Industrial Solid Waste (Fly Ash, Bottom Ash, Scrubber Sludge) –

- Mobay Hazardous Waste Landfill – Natrium, WV
- American Cyanamid (4 projects) – Willow Island, WV
- Client confidential – Parkersburg, WV
- Monsanto Company (multiple projects) – Nitro, WV
- Harrison Power Station – Haywood, WV
- Fort Martin Power Station – Morgantown, WV
- Mount Storm Power Station – Mount Storm, WV
- Keystone Power Station – Elderton, PA
- New Castle Power Station – New Castle, PA
- Conemaugh Power Station – New Florence, PA
- Alcoa Corporation – Newsburg, IN
- Portsmouth Power Station – Portsmouth, VA
- F.B. Culley Power Station – Newburgh, IN
- Hatfield Power Station – Masontown, PA
- Armstrong Power Station – Armstrong County, PA
- Cheswick Power Station – Springdale, PA

Design, permitting, economic analyses, and preparation of construction bid documents for coal ash/refuse sites including HDPE and PVC liner systems:

- Virginia Electric and Power Company
  - Portsmouth Power Station ash pond to dry fill conversion project
  - Mount Storm Interim Ash Site
- Pennsylvania Electric Company

  - Keystone Coal Ash/Coal Refuse Site
- Allegheny Power Station
  - Hatfield Ash Site

WVDEP Office of Waste Management – Development construction drawings, technical specifications, contractor's bid sheet and engineer's cost estimate for closure of Montgomery Sanitary Landfill. Work included leachate collection system, cap and double walled leachate tank.

WVDEP Office of Waste Management – Development of construction drawings, technical specifications, contractor's bid sheet, and engineer's cost estimate for final closure of the Wyoming County Landfill. Work included site assessment, double walled leachate tank, pump station, and connection of leachate line to Center Public Service District sanitary sewer.

WVDEP Office of Waste Management – Development of interim closure plans including leachate collection system, adequacy of groundwater monitoring wells and soil cover for the Jackson County Landfill and the City of Moundsville Landfill.

WV Solid Waste Management Board's Monongalia County Sanitary Landfill – Management of three liner expansions, borrow area determination, minor permit modifications, 1.6 MG double-lined leachate pond design, construction monitoring, and investigation of future alternatives.

Disposal Services, Inc. – Evaluation of landfill expansion and leachate minimization. Preparation of permit application for Phase I Cell 3 and Phase II including drawings, specifications, and CQA manual. Preparation of construction drawings for Phase I Cell 3 Stage I and management of construction monitoring. Preparation of erosion and sedimentation control plan, soldier beam and lagging retaining wall, gabion basket retaining wall, and assistance on FERC permit to relocate gas line in Hurricane, West Virginia.

S&S Landfill – Preparation of Landfill Expansion Revisions, permit revisions, and permit negotiation. Detailed review of hydrogeology and groundwater flow regime. Management of QA/QC for landfill expansion including clay/synthetic liner system, double walled leachate tank, sedimentation pond, drainage channels, and associated facilities in Harrison County, West Virginia.

Pocahontas County Solid Waste Authority – Management of miscellaneous services including preliminary closure plan, evaluation of leachate treatment alternatives, repair of tear in synthetic liner, preparation of annual reports, and surveying for Pocahontas County Landfill in Marlinton, West Virginia.

Kanawha County Solid Waste Authority – Investigation of potential landfill fire at Kanawha Western Landfill. Detailed geologic and hydrologic studies, monitoring well installation, and preparation of associated sections of landfill permits.

- North Fork Landfill – Wheeling, WV
- Sycamore Landfill – Hurricane, WV

Rhone-Poulenc Ag Company – Management of non-hazardous industrial landfill design project involving design report, technical specifications, construction drawings, QA/QC manual, operation manual, permit application, and environmental assessment. Included meetings with EPA Region 3 and WV Division of Natural Resources. Also, three site selection studies. Complete geologic and hydrogeologic investigations including installation of monitoring wells.

Tennessee Valley Authority – Economic analyses of wet versus dry disposal processes, including conveyor belts, trucks, and sluicing by pipe for fly ash and bottom ash.

Pennsylvania Electric Company – Evaluation of natural and synthetic liner systems for coal ash/coal refuse sites. Preparation of permit applications for the New Castle ash site and Mitchell scrubber sludge disposal site:

- Pennsylvania Power Company
- Allegheny Power System

Coordinator of the compilation of data for a RCRA Part B permit application for a hazardous waste transfer facility in Parkersburg, West Virginia including SPCC plan.

Sludge sampling programs at the Institute, West Virginia plant of Union Carbide Corporation and the Tri-State Terminal of Ashland Petroleum Company.

Siting studies, including environmental impacts and economic analyses, for industrial waste and coal ash/refuse sites:

- Peabody Coal Company – slurry impoundment

- Rhone Poulenc Ag Company – 3 sites for industrial landfill
- Virginia Electric and Power Company – Mt. Storm Power Station
- Southern Indiana Gas and Electric Company – 4 sites at F.B. Culley Station
- Aloca Generating Corporation – 7 sites at Warrick Station

American Cyanamid Company – Management of QA/QC monitoring program for the first RCRA industrial waste impoundment in EPA Region 3. Composite liner system consisted of 3-foot soil-bentonite liner and two 60-mil HDPE synthetic liners separated by HDPE drainage net. Provided on-site testing laboratory. Daily and weekly project reports were provided. Prepared summary report and necessary "certifications" for submittal to WV Division of Natural Resources and EPA in Willow Island, West Virginia.

American Cyanamid Company – Management of QA/QC monitoring program for a stormwater retention basin consisting of 3' soil bentonite liner with concrete overlay. Daily, weekly, and project summary reports were prepared in Willow Island, West Virginia.

American Cyanamid Company – Preparation of plans, specifications, and permit application for the closure of an industrial waste disposal site. The capping system included geogrid to assist in supporting the overlying HDPE liner and soil cap in Willow Island, West Virginia.
Electric Power Research Institute – Preparation of the Coal Ash Disposal Manual and various manuals for the High Volume/Low Technology Fly Ash Utilization Program.
Electric Power Research Institute – Development of a computer program that provides a detailed cost estimate for a coal ash disposal area.

Rhone Poulenc Ag Company – Evaluation of settling characteristics for an emergency fly ash disposal pond and design of associated modifications at a plant in Institute, West Virginia.

American Cyanamid Company – Management of QA/QC monitoring for a closure of a 3-acre hazardous waste disposal area with sludge stabilization and an HDPE cap. Provided an on-site testing laboratory, daily and weekly project reports, a summary report, and agency required certifications in Willow Island, West Virginia.

American Cyanamid Company – Management of QA/QC monitoring for the stabilization and capping of 10-acre hazardous waste equalization basin in Willow Island, West Virginia.

Rhone Poulenc Ag Company – Sampling/sounding of two basins containing sludge from secondary biological treatment of industrial wastewater and subsequent determination of sludge quantities.

Development of alternative truck transportation cost schemes:

- Industrial and Hazardous Waste Management Study – Allegheny County, PA
- Holcomb, KA Power Station – Sunflower Electric Cooperative
- Portsmouth Station remote ash structural fill – Virginia Electric and Power Company

Roadway Design

Principal-in-Charge for design of new entrance roadway to the University of Charleston and the utility extension, surveying, and general civil engineering for a 440-bed dormitory. Project was a design/build.

West Virginia Divisions of Highways – Inspection of bridge and highway construction.

Managed numerous industrial access roads. Roadways were designed for the private sector. Design was coordinated with and approved by the West Virginia Division of Highways and roadways were accepted into the state transportation system.

- ZMM Architects – Relocation of State Route 80 for construction of new elementary and high schools at Bradshaw in McDowell County, WV
- Jackson County Development Authority and Double C Enterprises – Industrial park access road and County Route upgrade in Kenna, WV
- Roane County Economic Development Authority – National Industrial Lumber access road in Amma, WV
- Tucker County Development Authority – Tucker County Industrial Park access road in Davis, WV
- Wood County Development Authority – Luigino's access road in Parkersburg, WV
- University of Charleston – Design of new entrance road to University of Charleston and redesign of

MacCorkle Avenue (State Route 61) intersection/turn lanes in Charleston, WV
- N-Visions Architects – Entrance road, bus loop, and emergency exit roadway for new Sissonville Middle School in Sissonville, WV
- Entrance road and bus loop for Trap Hill Middle School in Raleigh County, WV

WV Division of Highways – Managed environmental permitting, surveying, and design of four-lane 1.25-mile North Bridgeport Connector Road from Interstate 79 Jerry Dove Interchange to Benedum Airport in Bridgeport, West Virginia.

WV Division of Highways under open-end agreements for:

- Landslides and slope stability projects
- Surveying
- Asbestos services

WV Division of Highways – Managed geotechnical, environmental, right-of-way, and survey work performed as a subconsultant for various projects:

- King Coal Highway (section near Pineville, WV)
- Sharon Heights Connector
- Eldora and Enterprise Connector
- Dundon Bridge
- Martha Truss Bridge
- Martha Concrete Girder Bridge
- Upgrade of three bridges on Interstate 81
- Corridor H (section near Kerns, WV)
- Corridor D (section near Washington, WV)

Oil and Gas

Columbia Gas Transmission Corporation – Management of consulting services for environmental report preparation and FERC permit applications for various natural gas pipeline projects.

Principal-in-Charge of well pad design, access road layout, landslide remediation design, evaluation of water supply sources and distribution systems, design of water treatment systems, impoundment design, stormwater management plans, permitting, AST inspections, surveying, and SPCC Plans for various major gas clients in the Marcellus and Utica formations.

- Stone Energy
- EQT
- Chesapeake
- Gastar
- NiSource

Storage Tanks

Principal-in-Charge of the registration, preparation of spill prevention response plans, and inspection of aboveground storages tanks (ASTs) for over 500 ASTs for numerous clients, including:

- NiSource
- Rubberlite
- CI Thornburg
- Tetra Technologies
- CAMC
- Interstate Hardwood
- Central Supply

Closure of aboveground storage tanks, including preparation of documentation for regulatory agency and sample acquisition and analyses:

- Rhone-Poulenc Ag Company – Institute, WV
- American Cyanamid Company – Willow Island, WV

Investigation of contamination from underground storage tanks and hydrocarbon spills. Included preparation of necessary regulatory forms, sample acquisition and analyses, and meeting with regulatory agency.

- West Virginia Division of Natural Resources – various projects under Master Agreement
- Goldman Associates
- Vandalia Mining Company
- Marshall University

Mining

Peabody Coal Company – Evaluation of potential stream flow attributed to long-wall deep mining subsidence in minimal overburden areas in southern West Virginia. Responsibilities included the review of mine maps, stream reconnaissance studies, and the establishment of three in-stream V-notch weirs. The weirs were monitored and maintained during a seasonal study period to generate direct flow measurements. The WVDEP also prepared a study for the site that was reviewed, and comments prepared for the results.

Principal-in-Charge on numerous Independent Third-Party Audits at sites for various coal producers. Independent Third-Party Reviews of mines/complexes were undertaken with a thorough review to assess compliance of the operation to various federal statues and equivalent to state laws. Specific areas of review included are generally determined by the needs of the client or the requirements of governmental agencies and have included an assessment of the client's compliance with the following:

- Clean Air Act
- Clean Water Act
- Resource Conservation and Recovery Act
- Safe Drinking Water Act
- Toxic Substance Control Act
- Comprehensive Environmental Response, Compensation and Liability Act
- Emergency Planning and Community Right to Know Act
- Federal Insectide, Fungicide and Rodenticide Act
- Oil Pollution Act
- Mine Safety and Health Administration
- Surface Mining and Reclamation Act
- National Pollution Discharge Elimination System
- Others as required

Development of reclamation plans for over 70 projects including landslides, mine fires, acid mine drainage, mine subsidence, refuse piles, water supply systems, and asbestos abatement. Projects were completed for West Virginia Division of Energy, West Virginia Division of Environmental Protection, Virginia Abandoned Mine Lands, and Ohio Department of Natural Resources and include the following:

- Duncan Hill Subsidence
- Beckley Subsidence
- Jonben (Haga) Subsidence
- Holden (Padgett) Subsidence
- Gray and Iaquinta Subsidence
- St. John's Road Subsidence
- Route 19/28 Subsidence
- Mt. Hope Subsidence
- Huffman Street Subsidence
- Morgantown Airport Drainage/Subsidence
- Fairmont East Subsidence
- Fairmont IV Subsidence
- Cheyenne Sales Company Reclamation
- Little Whitestick Refuse
- Crany Mine Dump
- Morgan Mine Fire
- MacArthur Phase 2 Subsidence
- Lake Lynn Complex
- MacArthur Mine Subsidence
- East Lynn II
- Flipping Hollow Complex
- Sundial (Hatfield) Refuse Piles
- Mill Creek Refuse Pile
- John's Branch Coal Refuse Dam
- Jessop Highway #10
- Lando (Edwards) Drainage
- Taylorville (Cantrell) Drainage
- Borderland (Matney) Portals
- Peach Ridge Complex
- Measle Fork Refuse
- Georges Creek Portals
- Putney Impoundment
- Kopperston (John's Branch) Refuse Emergency
- Marmet (Wells Drive) Landslide Emergency
- Marmet (Clark) Drainage
- Pringle Run #2
- Mountain Run Refuse and Portals
- Fairmont East Mine Drainage
- May Portal (Virginia Abandoned Mine Lands)
- Williamson (Hatfield) Landslide
- Georges Creek (Lucas) Rockslide
- Rachel Refuse
- Grass Run Refuse
- Allen Sheridan Hazardous Facility (asbestos)
- Elk City- Century- Volga Phase I/II Water Study
- Camp Mohonegan Regrade
- Comfort Run Coal Company (asbestos)
- Allen AMD
- Cora Mine Drainage No. II
- Covey Creek Mine Fire
- Vivian Refuse Pile
- Summerlee Refuse Pile (won 1996 southern reclamation award)
- Kimball Refuse Pile (won 1995 southern reclamation award)
- Hampden (Smith) Landslide
- Bear Run Refuse (won 1994 Ducks Unlimited award)
- Charleston (Ratcliffe) Landslide
- Garrison Complex
- Mulberry Fork (Stover) Landslide
- Courtright Highwall
- Belle Landslide
- Minden Drilling
- Kitchen/Gibson Landslide
- High Coal Tipple

- Omar Refuse Pile (won reclamation of the year award)
- Logan Drainage
- Switzer Adams/Robinson Drainage
- Follansbee Drainage
- Hawkins AMD
- Vargo Drainage
- Duck Creek Landslide
- Kistler Mine Fire
- Turner Douglas Complex
- Buffalo Creek No. 5 Refuse
- Dawmont Mine Facility
- Helen (Lewis) Refuse
- Upshur 10/15 Drainage
- Webster County Water Studies
- Iaeger Water Feasibility Study
- Burnwell, Standard, and Collinsdale Water Line Extension
- Clay-Roane PSD Water Feasibility Study
- Burnsville PSD Water Feasibility Study
- Brandonville/Pisgah Water Feasibility Study
- Cuzzart/4-H Water Feasibility Study
- Hudson/Mt. Nebo Water Feasibility Study
- Phase I Water Studies Brooke and Fayette Counties
  - Gauley River PSD – Belva
  - Hammond PSD – Wellsburg
  - New Haven Chamber of Commerce – Hico
- Mill Creek Regional Water Project Phase II Water Study (Boone, Lincoln, and Logan Counties)
- Godby Branch Phase II Water Study
- Madison Street Portals/Fairview Route 218 Portals
- Putnam County Phase I Water Studies
  - Heizer Creek
  - Manila Creek
- Boone County Phase I Water Studies
  - Jeffrey Area – Jeffery, Hewett Creek, Seacoal
  - Ottawa Area – Ottawa, Greenview, Missouri Fork, Meadow Fork, Aleshire Branch, Dent Fork, Mike's Fork
- Phase II Water Feasibility Studies
  - Logan County – Cow Creek, Crooked Creek, Upper Rum Creek
- Phase I Water Studies for Logan County
  - Pecks Mill – Godby Heights Communities
  - Cow Creek – Sarah Ann – Crystal Blocks Communities
  - Upper Rum Creek Community
  - Clothier Community
  - Crooked Creek Community
  - Godby Branch
  - Whitman Creek – Holden Project
- Beaver Creek Waterline Extension: Phase II Water Project
- Cassity Fork Water Supply Extension: Phase II Water Project

Subsurface explorations, subsidence monitoring, review of a coal reserve analysis, site plans, preblast/presubsidence surveys, hydrologic analyses, preparation of mining permits, and design and permitting of coal slurry impoundments for coal mining companies in West Virginia, Virginia, Kentucky, Ohio, and Maryland.

- Peabody Coal Company
- Eastern Associated Coal Company
- Southern Ohio Coal Company
- Island Creek Corporation
- Massey Coal Services
- Appalachian Mining, Inc.
- Oneida Coal Company
- Old Ben Coal Company
- Mettiki Coal Company
- Shafer Brothers Coal Co.
- LP Minerals

Management of fly ash utilization permits for various coal companies:

- Rawl Sales, Inc.
- Elk Run Coal Company
- Appalachian Mining, Inc.
- Peerless Eagle Coal Company

Managed subsurface investigation, foundation design, and development of mine stabilization program for NASA's Independent Verification and Validation Center in Fairmont, West Virginia.

Monongahela Power Company – Development of fly ash flowable fill specification for submittal to WV Division of Highways in Fairmont, West Virginia.

Computer modeling of groundwater movement of contaminants resulting from underground coal gasification.

NPDES Industrial/Municipal Permitting

Completed National Pollutant Discharge Elimination System (NPDES) renewal permitting and associated agency negotiations for several facilities.

Plasma Processing Corporation – Management of numerous projects in Ravenswood, West Virginia including:

- Subsurface exploration and preparation of soils report
- NPDES Permit
- Development of sampling program for Plasma to follow in obtaining samples for NPDES Stormwater Analyses
- Development of hazardous waste operations manual
- Acquisition of WV Air Pollution Commission permits
- Environmental audit of facility operations

Hydrology and Hydraulics

City of Charleston – Hydrologic and hydraulic analyses of South Ruffner Watershed. Project analyzed various storm events and presented conceptual recommendations to reduce effects of these storms.

U.S. Army Corps of Engineers, Jacksonville District – Determination of watershed areas along the Suwannee River Basin.

Groundwater

Dilley's Mill – Principal-in-Charge for review of regional groundwater information for a summer Boy Scout camp facility to locate and construct a replacement drinking water well for the facility. Responsibilities included the development and review of existing facility usage, determination of the location and depth of the proposed water well and design of the well to meet with the requirements of the State of West Virginia Department of Health standards. Design of sewage collection system and synthetic lined sewage treatment lagoon including permitting.

Groundwater sampling programs:

- Herr's Island – Urban Redevelopment Authority of Pittsburgh
- Robertshaw Controls in New Stanton, PA
- New Castle Power Station
- Pennsylvania Power Company
- Portsmouth Power Station
- Virginia Electric and Power Company
- Rhone Poulenc Ag Company – Institute, WV

Management of pump tests:

- Peabody Coal Company – Bim, WV
- Southern Ohio Coal Company – Meigs County, OH
- Rhone-Poulenc Ag Company – Institute, WV

Rhone Poulenc Ag Company – Development of specification manual for conducting soil and groundwater sampling programs. Manual detailed decontamination methods and proper handling/disposal methods in Institute, West Virginia.

Air Pollution/Air Services

Principal-in-Charge for internal and external methane gas monitoring at nursing home facility in Boone County, West Virginia.

Urban Redevelopment Authority of Pittsburgh – Preliminary and detailed air pollution modeling for Pittsburgh's convention center complex and for the Washington Heights development.

Eastern Associated Coal Corporation – Management of certified emission statements for 11 coal preparation plants and air emission inventories for 8 coal preparation plants for submittal to the West Virginia Office of Air Quality.

Nicholson Construction Company – Operation permit from West Virginia Air Pollution Control Commission for cement/grout portable batch plant for mine subsidence control project in Follansbee, West Virginia.

Stream/Wetland Delineation, Permitting and Mitigation

Columbia Gas Transmission Corporation – Management of stream stabilization and restoration plan for segment of East Fork of Queer Creek in Hocking County, Ohio.

Environmental Assessments/Impact Statements

Management of numerous environmental assessments for property transactions:

- Arch Coal – Multiple WV Tracts ESA (60,500 acres)
- Massey Coal Services – Red Cedar Surface Mine (850 acres)
- Duke Energy – Chicopee Environmental Audit (6,000 acres)

- Pittston Coal Management Group – Phase I ESA (6,000 acres)
- Massey Coal Co. – Hampton Site, Spruce Laurel (130 acres)
- Eastern Associated/Peabody Coal – Phase I ESA (1,035 acres)
- Eastern Associated Coal – Environmental Due Diligence for Active and Closed Operations in KY and WV (100,000 acres)
- Peabody Coal – Multi-state Environmental Audit in WY, CO, NM, AZ, Western KY, IN, IL (250,000+ acres)
- Peabody Coal – Environmental Due Diligence for Properties in IL and IN (150,000+ acres)
- AMVEST Mineral Services – Phase I ESA (8,000 acres)
- Peabody Energy Corp. – Phase I ESA on Putnam Property (1,036 acres)
- Arch Coal – Environmental Compliance Audit in KY, WV, and VA (150,000+ acres)
- Massey – Consolidated Coal Co. Holden Complex (5,500 acres)
- Massey – Environmental/Reclamation Liability Assessment for Northland Resources (150 acres)
- Peabody Coal – Phase I ESA for Imperial Coal and Turner Properties (5,400 acres)
- Peabody Group – Environmental/Reclamation Liabilities for Kanawha Eagle, LLC Permits in Boone and Kanawha Counties, WV (350 acres)

Principal-in-charge for the Coalfields Industrial Site Survey performed for the West Virginia Development Office. Study identified and evaluated more than 1,000 former and current mining sites for use as industrial sites. McDowell County was one of six included in the study. The study considered accessibility, utility status and distance of required extensions, topography, site size, etc.

West Virginia Division of Highways – Coordination of Environmental Impact Statement for Route 19 upgrade from Summersville to Interstate 79 in Braxton County and New River Parkway from Sandstone Falls on I-64 to near Athens on I-77.

CHRISTOPHER A. GROSE, L.R.S.

Senior Engineering Associate

EDUCATION

M.S. Geological Engineering, 1990
University of Missouri-Rolla

B.S. Civil Engineering, 1988
West Virginia Institute of Technology

EMPLOYMENT HISTORY

1997-Present	Potesta & Associates, Inc.
1994-1997	Terradon Corporation
1990-1994	GAI Consultants, Inc.
1989-1990	University of Missouri-Rolla
1989	Triad Engineering Consultants (summer)
1988	West Virginia Institute of Technology
1983-1988	Clint Bryan & Associates Architects (summers)

PROFESSIONAL REGISTRATIONS

Licensed Remediation Specialist – West Virginia

PROFESSIONAL CERTIFICATIONS

- Hazardous Waste Site Operations and Superfund Worker Protection Training
- American Red Cross Standard First Aid and CPR
- Troxler Moisture-Density Gauge

PROFESSIONAL AFFILIATIONS

- American Society of Civil Engineers
- Association of Engineering Geologists
- Society of America Military Engineers

AREAS OF SPECIALIZATION

Geological/Geotechnical engineering related to subsurface exploration studies, soil and rock slope design, landslide causation studies, foundation system design, surface/subsurface hydrogeology, ground subsidence, contaminant transport and groundwater flow modeling. Planning, design, and permitting of natural gas production well pads and access roads. Geological study of hazardous waste remediation sites, CERCLA/SARA, RI, and FS report compilation, geological and geotechnical aspects of siting and design of municipal and industrial waste landfills.

PROFESSIONAL EXPERIENCE

Civil/Site Design

Civil/Site design included slope stability of both cut and fill slopes in soil and rock for various well production pads in northeastern West Virginia associated with natural gas production in the Marcellus well field. Work consisted of the management of a design engineering team including ground survey crews to development site topographic base mapping, coordination with client regarding land ownership, access roadway alignments, site drainage control, and number/location of production wells. Additional work also included gathering and midstream transmission pipeline locations. The scope of services for these projects also included the preparation of permit documents and attachments for submittal to the WV Department of Environmental Protection-Office of Oil and Gas.

- Stone Energy Corporation
  - Higgins East pad and road
  - Higgins West pad and road
  - Conley Well pad, road, and access bridge
  - Mills-Wetzel No. 3 pad and road
  - Hunter/Pethel well pad
  - Talkington-nice pad and road
  - Bowyers well pad and road
- Viking Oil & Gas
  - United Disciples of Christ well pad

Geotechnical

Completion of numerous subsurface exploration studies for active soil slope landslide failures associated with the development of natural gas production well pads and access roads. Work included the layout, surveying, and logging of subsurface borings to determine the depth and extent of the slope failures. Following collection of soil/rock samples, materials were tested for characteristic and strength properties. Following testing efforts, the failed slopes were modeled using computer-based slope stability deign models to determine a stabile configuration including the addition of rock buttresses, toe keys, underdrains, mid-slope keys, etc. Final stabilization plans were then prepared for the client allowing bidding and selection of a repair and stabilization contractor to perform the work.

- Stone Energy Corporation
  - Mills-Wetzel No. 2 well pad landslide repair
  - Potoczny well pad landslide repair
  - Mills-Wetzel access road landslide repair
  - Pribble Tank landslide repair
  - Haines Branch pipeline landslide repair
- Columbia Pipeline Group (TransCanada Pipeline)
  - SM8 pipeline landslide repair
  - SM80 Loop pipeline landslide repair
- Chesapeake Energy Corporation – R. Baker well pad landslide causation study
- TransEnergy Corporation – Dewhurst well pad landslide repair
- Reserve Oil & Gas – Reed No. 1 well pad access road landslide repair

West Virginia Division of Highways – Geotechnical engineer on geotechnical/landslide master services agreement for on-call services for a three-year period.

Forensic study, expert testimony, and legal support related to the failure of numerous soil/rock slopes throughout West Virginia. This work included extensive review of relevant project case documents, site reconnaissance visits, interviews with project personnel, and deposition testimony.

Lynn Elementary School – Technical insight and recommendations to attorneys representing an adjacent property owner related to the contributing factors related to the formation and continued failure of an excavated soil slope. The toe of the slope was excavated during the site development of the proposed elementary school site in Lynn, West Virginia.

Crichton & Crichton – Landslide formed along a wooded hillside below a residential driveway on Pleasant Lane in Wood County, West Virginia. The slope failure was noted during a substantial leak in an existing water main. The work included a review of case documents, interviews with various residents (plaintiffs in the case) and the development of supporting causation theory for the formation of the landslide. The work also includes the development of repair alternatives and associated construction estimates to be considered during the dispute hearing between the plaintiff and defendants.

Chesapeake Appalachia/Law Office of Jeffrey Mahal (R. Baker Natural Gas Production) – Provided technical study and file review of case documents related to the grading contractor's construction work efforts to prepare a well pad for the installation of a series of horizontal gas production wells in Marshall County, West Virginia. The work included the removal of soil and rock from and existing hilltop. The resulting material was placed or wasted in series of three side hill files along the edges of the resulting well pad. All three of these fills experienced progressive and ongoing failures following the construction effort. Reviewed design documents, construction records, and details related to several repair attempts to result in the development of a professional opinion related to the various factors contributing to the multiple slope failures.

Nationwide Trial Division/Khan & Wheeler (Ross v. WVAW Landslide Case) – Provided professional opinion related to the formation of a slope failure along the Elk River immediately behind several commercial and residential homes near the Town of Elkview, West Virginia. The initial landslide occurred immediately following a main waterline break along the front of the structures. The regressive and prolonged failure continued over several weeks and ultimately damaged a gravity sanitary line as well a several of the structures. Work included an extensive review of several years of case records provided for the case including a review of existing utility maintenance records, historic climatologic data, river stage information and depositional testimony from many of the affected parties. A summary of profession opinion report was prepared describing a number of factors including lack of maintenance storm culverts in the area as well as an increase of saturation along the slope from the failed water main as the cause of the slide. It was determined that several of the structures were supported on previously placed fill material which was placed along the river bank in the early 1900's in

conjunction with the initial roadway construction. This coupled with the lack of maintenance and presence of deteriorated drainage culverts likely contributed to the slope failure. The initial installation of this fill material was determined through an extensive study of the historic topographic mapping of the area.

Responsible for development of geotechnical and geological recommendations as well as development of stabilization designs for many failed soil/rock slopes in West Virginia. This work included initial site reconnaissance visits, development of a subsurface exploration study and materials testing program, evaluation of stabilization alternatives, and construction plan preparation.

Travelers Insurance/City of Charleston – Project included a subsurface exploration study, engineering design, and global stability evaluation of a failed soil slope in a residential neighborhood on Bona Vista Drive for the City of Charleston, West Virginia. The slide was caused by a water main break along an existing residential neighborhood paved roadway. The recommended slope stabilization method was to install a soldier beam and lagging retaining wall along an existing paved roadway (supporting the buried utilities) with the remainder of the failed slope below being removed and replaced with compacted soil backfill.

Stone Energy Pribble Tank – Work included the exploration and study of a failed soil/weathered rock slope which was loaded through the placement of fill near the top of the slope to provide adequate area for the construction of 2- 2,400,000-gallon water storage tanks in New Martinsville, West Virginia. Shortly following the installation of the tanks, a large section of the hillside failed leaving one of the tank foundation partially unsupported. Following the subsurface exploration and drilling work, a stabilization plan was developed which included the removal of the failed soil mass (>50,000 CY) followed by the replacement of compacted soil material behind a large toe key and buttress. The repair also included surface diversion drainage ditches and numerous bond benches along the underlying rock line which were fitted with under drains to collected subsurface seepage.

NiSource/Columbia Gas Pipeline Group SM-80 Loop Gas Transmission Line – Development of a subsurface exploration and drilling plan to determine the extent and depth of a soil and weathered rock slope failure which threatened the performance and stability of a 30-inch high pressure natural gas transmission line in Kanawha County, West Virginia. The slide location was remote and situated along a steep hillside. The stabilization plan recommended the use of soil nail technology due to the remote location and rather inaccessible nature of the location. This repair and stabilization technique allowed for the in-situ repair of the failed slope without extensive excavation and backfill which was deemed difficult and would have required more land disturbance resulting in additional slope stability concerns.

EQT Rockport #7244 Natural Gas Storage Well Pad – Project involved the assessment and repair recommendations for a section of failed fill slope immediately below existing and active natural gas storage well near the community of Rockport in Jackson County, West Virginia. The failed slope was caused by improper surface drainage control along the pad and access road. The stabilization plan included the excavation and removal of the failed slope following "shut-in" of the storage well. The upper failure scarp was situated immediately adjacent the well head which was protected during the stabilization work. Following installation of a rock toe buttress and key way, the failed soil material was amended using lime to reduce the moisture content which was required to achieve the recommended in place density during placement and compaction. Following the regrading effort, the slope was trimmed and seeded followed by the grading a several diversion and collection ditched to control runoff from the upper portion of the hillside below the well pad.

City of Charleston – Geotechnical assessment and development of regrading construction plans for the repair of a failed soil slope below Grandview Drive for the City of Charleston, West Virginia. The slope failure occurred between two adjacent residential structures and encompassed a sanitary sewer main as well as a storm drainage pipe receiving storm drainage from Grandview Drive. The stabilization plan involved the removal of the failed mass beginning at the toe of the slope and then working progressively upslope to result in a stabilized and regraded slope surface. The work required the removal of all failed material to the underlying rock surface and included the installation of a shot rock toe buttress which was installed along a natural topographic bench near the toe. Following completion of the work the affected utilities were installed either below the fill material or outside the regraded slide area.

Greer Industries Cheat River Quarry Haulroad – Project included the development of stabilization and repair recommendations for a failed soil slope which impacted a critical haulroad utilized by the quarry operator to move raw shot rock material from the quarry to the crusher at the aggregate plant in Rowlesburg, West Virginia. The landslide occurred because of the failure of a cross drainage culvert in the haulroad. The failed soil mass was removed to the underlying bedrock and following installation of a stone toe buttress and toe key, the material was blended with aggregate material from the plant and placed in compacted lifts. The underlying rock surface was excavated to result in a series of "bond benches" allowing for the installation of underdrains below the compacted fill to collect groundwater and seepage from the underlying rock. This prevented saturation of the fill material.

Responsible for the design, management, and inspection of a geotechnical investigation of a proposed five-mile rail extension located in Nicholas County, West Virginia. Investigation included study and design of planned rock cuts, and track foundation materials.

General Services Administration – Site evaluation, including continuous HNU scanning of collected soil samples and installation of piezometers for two proposed sites near Charleston, West Virginia.

West Virginia Department of Environmental Protection – Foundation design for a proposed 1,000,000-gallon potable water storage tank and valve pit near Cassidy, West Virginia.

Rhone Poulenc Ag Company – Subsurface sample collection, resistivity measurements, explosivity measurements, and decontamination procedures for an organic contamination study at Institute, West Virginia.

Preparation of foundation investigations for several large structures including a parking garage and student housing complex at Marshall University in Huntington, West Virginia. Tasks included development of subsurface exploration program, soils/rock sampling, testing program, and preparation of a final geotechnical report.

Roadway Design

Geotechnical engineer for various bridge and highway projects including:

- North Bridgeport Bypass
- McDowell County Schools
- Corridor H
- Dundon Bridge
- Sulphur Springs Bridge Replacement
- Smith Creek Bridge
- Martha Truss Bridge
- Martha Concrete Girder Bridge Replacement
- Dry Run Interchange
- I-81 Upgrade
- Platinum Drive
- Kenna Ridge Business Industrial Park/Access Road

Hardy County Rural Development Authority – Engineering services for the study, design, and preparation of construction contract plans, related documents, and construction oversight services for an industrial access road for the Baker Business Park District.

Roane County Development Authority – Site development construction documents for National Industrial Wholesale Lumber located in Roane County's industrial park.

ZMM – Site design and engineering for a new elementary school and new high school in Bradshaw, West Virginia on the site of an existing elementary school.

West Virginia Department of Highways – Evaluation of subsurface conditions including both soil and rock to provide geotechnical recommendations related to potential bridge abutment foundation systems near Martinsburg, West Virginia. Alternatives included both shallow and deep foundations. Deep foundations were required at several abutments due to voids encountered in limestone bedrock.

Abandoned Mine Lands

WVDEP Abandoned Mine Lands and Reclamation – Preparation of Phase I and II water studies throughout the state of West Virginia. Work items included interview of area residents to determine major quality and quantity problems, field and records research to determine the location of known pre-law mining activity (which could potentially affect groundwater quality), collection of groundwater samples, and design of water distribution facilities.

WVDEP Abandoned Mine Lands and Reclamation – Subsurface investigation to determine the extent of a landslide for Courtright Highwall AML Project in Bridgeport, West Virginia. Field surveying was completed to establish topographic mapping and control, and subsequent design of landslide repair alternatives. Design ultimately selected included a reinforced slope using stabilizing grid. Landslide contained 400,000 cubic yards of material.

WVDEP Abandoned Mine Lands and Reclamation – Subsurface investigation, surveying, and design for reclamation of a large coal refuse pile and two mine entries for Vivian Refuse Pile AML Project in Vivian, West Virginia. Plans, specifications, cost estimate, coal refuse reprocessing evaluation, and supporting documents for regrading over 150,000 cubic yards of refuse, surface water control, mine seals, and riprap toe protection were completed.

WVDEP Abandoned Mine Lands and Reclamation – Subsurface investigation, surveying, and design for reclamation of three coal refuse piles and six mine entries for Kimball Refuse Pile AML Project in Kimball, West Virginia. Design included replacement of a water well and related supply piping for the Town of Kimball. Completed preparation of plans, specifications, cost estimate, coal refuse reprocessing report, permit for new well, and other supporting documents for reclaiming this large site with over ½ million cubic yards of regarding.

WVDEP Abandoned Mine Lands and Reclamation – Project Engineer for the Mulberry (Stover) AML Landslide Project in Fayette County, West Virginia. Work included a difficult subsurface investigation, design of a remediation of landslide associated with abandoned mines, and preparation of plans and specifications for a reclamation project.

WVDEP Abandoned Mine Lands and Reclamation – Project Engineer for assessment of the Covey Creek Mine Fire AML Project Boone County, West Virginia. Work included subsurface investigation and temperature assessments inside an abandoned burning deep mine.

Oil and Gas

Columbia Gas Transmission Corporation – Design of stream relocation plans including preparation and coordination of applicable environmental permits. The relocation was required due to an adjacent gas pipeline near the stream.

Columbia Gas Transmission Corporation – Preparation of several spill prevention control and countermeasure plans for gas storage well sites in Pennsylvania and West Virginia.

Mining

West Virginia Division of Environmental Protection – Engineering evaluations, including collection and analysis of core samples, for possible subsidence-related fracturing of several areas potentially affected by mining subsidence.

Peabody Coal Company – Subsidence evaluation and slope monitoring, using extensometers and tilt plates located on the slope face, of a 60-foot road cut experiencing subsidence-induced fracturing near Kopperston, West Virginia.

Mingo Logan Coal Company – Completion of formal subsidence control plan for a proposed 14,000-acre long-wall mining operation at the Mountaineer Mine in Wharncliff, West Virginia.

Peabody Coal Company – Evaluation of potential stream flow attributed to long-wall deep mining subsidence in minimal overburden areas in southern West Virginia. Responsibilities included the review of mine maps, stream reconnaissance studies, and the establishment of three in-stream V-notch weirs. The weirs were monitored and maintained during a seasonal study period to generate direct flow measurements. The WVDEP also prepared a study for the site that was reviewed, and comments prepared for the results.

Evaluation of numerous failed soil fill slopes to determine probable failure mechanisms in order to develop remediation alternatives. Responsible for the development of regrading plans which included subsurface drains, benching schemes, and toe buttresses.

Completion of several environmental assessments for coal properties. Work included emphasis on both environmental and reclamation liabilities associated with pre-and post SMCRA sites on the properties.

- Massey Coal Services, Inc.
- Eastern Associated Coal Corporation

West Virginia Department of Environmental Protection – Engineering design of several wetland habitat areas relating to the effective remediation of a coal refuse disposal site in Glenville, West Virginia.

Preparation of several Article 3 surface mining permit applications for various West Virginia coal companies:

- Eastern Associated Coal Corporation – Proposed deep mine using longwall mining techniques in Boone County, WV, located in the Eagle coal seam.
- Hobet Mining, Inc. – Deep mine using conventional mining techniques near Madison in Boone County, WV. Located in the No. 2 Gas (Campbell's Creek) coal seam.
- Rum Creek Coal Sales – Deep mine using conventional mining techniques near Logan in Logan County, WV. Located in the Alma coal seam.
- Eastern Associated Coal Corporation – Surface mine mountain top removal techniques near Twilight in Boone County, WV. Located in the Coalburg and Lower Kittanning seams.

Landfills/Solid Waste/Waste Disposal

WVDEP Closure Assistance Program – Design of final landfill closure for abandoned solid waste facility. Design included diversion and collection channels, cap design, leachate collection system, and 150,000-gallon leachate storage tank in Montgomery, West Virginia.

American Cyanamid – Engineering design for the closure of a chemical waste landfill in Parkersburg, West Virginia. Completion of a settlement analysis to determine the expected consolidation of waste during dewatering. Cover design incorporated a composite liner system with synthetic drains. The cap utilized synthetic reinforcement to minimize consolidation-induced stresses on the synthetic liner.

West Virginia Department of Environmental Protection – Responsible for the development and design of several interim or maintenance related items associated with drainage at the Monongalia County Landfill in Morgantown, West Virginia. Included the design and upgrade of both new and existing channels, diversions to berms to minimize surface water infiltration and minimizing the amount of leachate generation.

American Cyanamid – Permit completion for closure of a chemical sludge impoundment near Parkersburg, West Virginia. Analysis of existing monitoring well configuration.

Design, management, and project oversight during construction for the closure of a 7-acre biological sludge pond in Nitro, West Virginia. Preliminary design studies included the completion of batch tests to evaluate stabilization materials. Also handled the development and submittal of several permits associated with the project including erosion and sediment control plan, Army Corps of Engineers permit, and a wetlands investigation and nationwide 404 permit.

Development of closure design for a 14-acre inactive waste water treatment pond in Nitro, West Virginia. Responsibilities included evaluation of sludge stabilization technologies, types of reagent and mixing ratios to achieve the required in-place strengths. Conducted contractor interviews with the owner, as well as providing assistance to the owner during preparation of the construction contract. During construction, conducted weekly safety meetings on-site with the contractor. This project was also expanded to provide stabilization of a 1.5-acre digester basin adjacent to 14-acre pond. The original contract was extended to cover stabilization of this pond. Stabilization efforts included submittal of an Army Corps of Engineers' nationwide permit to stabilize the bank of the Kanawha River and application of a West Virginia NPDES General Stormwater Construction Permit.

North Fork Landfill – Permit completion for a new municipal landfill, including design and construction of monitoring wells to monitor several aquifers in Wheeling, West Virginia.

Sycamore Landfill – Part I permit completion, design, and implementation of a drilling program, including evaluation of an existing monitoring well configuration. Testing of existing site soils for sources of suitable liner material.

Rhone Poulenc Ag Company – Completion of several Part I Solid Waste Facility permits including the design and implementation of drilling programs, formal geological studies, hydrogeological analysis of proposed sites, and locations and development of upgradient and downgradient groundwater monitoring wells. Design, construction, and development of seven monitoring wells for a proposed 13-acre industrial waste disposal facility near Institute, West Virginia.

Storage Tanks

West Virginia Division of Natural Resources – Underground storage tank contamination study in Jesse, West Virginia. Delineation of a subsurface hydrocarbon contamination plume as well as possible flow direction to determine potential receptors.

Groundwater

Operation and maintenance of several groundwater remediation systems including pump and treat and sparge systems for a large chemical manufacturer in Nitro, West Virginia. The pump and treat technology is designed to recover kerosene in one instance and TCE in another. Both systems are safety oriented and are fully automatic. The sparge system is a study/field test to determine the impact that oxygen injection will have on the degradation of phenolic compounds existing in the groundwater.

Columbia Gas Transmission Corporation – Evaluation of numerous groundwater monitoring wells to determine the direction of migration and the feasibility of utilizing them in a planned pump and treat recovery system. The site was an active compressor facility located in Eastern Kentucky.

Design and completion of several geological and hydrologic investigations to determine nature and direction of groundwater flow associated with proposed limestone quarry sites in Nitro, West Virginia. The sites were all associated with Karst terrain and dual permeability systems and primarily fractured flow regimes. Studies included the deployment of drilling equipment to install groundwater monitoring wells.

Measurement of stratified in-site permeability of rock strata in NX boreholes in Hurricane, West Virginia. The permeability measurements were reviewed and evaluated to develop groundwater monitoring systems associated with both existing and proposed municipal landfill disposal facilities.

Rhone Poulenc Ag Company – Analysis and study of elevated levels or organic constituents and elevated pH values in existing monitoring wells. Study to determine if well construction techniques or development procedures contributed to the presence of these constituents.

Dilley's Mill – Review of regional groundwater information for a summer Boy Scout camp facility to locate and construct a replacement drinking water well for the facility. Responsibilities included the development and review of existing facility usage, determination of the location and depth of the proposed water well and design of the well to meet with the requirements of the State of West Virginia Department of Health standards.

Union Carbide Corporation – Design and completion of several monitoring wells to monitor an abandoned fly ash disposal area. Included hydrologic analysis of site geology to determine major aquifers present in the area.

Completion of several groundwater contamination studies in West Virginia. Contaminants included diesel fuel, gasoline, chlorobenzene and benzene. Studies included field exploration utilizing various methods including air and mud rotary drilling. Responsible for the setup, calibration, and analysis of groundwater computer models to lend insight into the flow regimes and dispersion characteristics of the potentially affected areas.

Preparation of Phase I, II, and III water studies throughout the state of West Virginia for the West Virginia Division of Environmental Protection, AML section. Work items included interview of area residents to determine major quality and quantity problems, field and records research to determine the location of known pre-law mining activity, which could potentially affect groundwater quality, collection of groundwater samples, and design of water distribution facilities.

ESAs (Phase I and II)

Responsible for the design and implementation of drilling and sampling programs for several Phase I and Phase II environmental assessments.

TERENCE C. MORAN, P.E.

Senior Engineer

EDUCATION

M.S. Civil Engineering, 1989
West Virginia University

B.S. Civil Engineering, 1987
West Virginia University

EMPLOYMENT HISTORY

1999-Present	Potesta & Associates, Inc.
1989-1999	GAI Consultants
1987-1989	West Virginia University
1985-1987	West Virginia Division of Highways (summers)

PROFESSIONAL REGISTRATION

Professional Engineer – West Virginia, Virginia

PROFESSIONAL CERTIFICATION

- Troxler Moisture-Density Gauge
- American Red Cross Standard First Aid and CPR
- OSHA 40-Hour Hazardous Waste Worker Training

AREAS OF SPECIALIZATION

Water and wastewater engineering and permitting; preparation of studies, design calculations, drawings, technical specifications, and cost estimates; bidding phase services; and construction phase services, including construction administration.

PROFESSIONAL EXPERIENCE

Water Lines, Water Storage Tanks, and Water Treatment Plants

Project Manager/Project Engineer for more than 70 water supply projects involving design and, permitting of water treatment facilities, water line extensions, water storage tanks, booster stations, chlorine boosters, pressure reducing valve stations, service connections and providing fire flow demands. Tasks include client/contract management; mapping development; hydraulic design; geotechnical investigations; preparation of drawings, specifications, and cost estimates; and preparation of Bureau of Public Health, Public Lands Corporation, United States Army Corps of Engineers, West Virginia Division of Highways, and NPDES permit applications.

- Projects funded by federal, state and private funding including small cities block grant, United States Department of Agriculture, Rural Economic Development Agency, Drinking Water Treatment Revolving Fund (DWTRF), West Virginia Infrastructure and Job Development Council, Congressional Supplemental Appropriations (SAP), Abandoned Mine lands, United States Army Corps of Engineers, Governor's office funding, county commissions and private funding.

West Virginia Bureau for Public Health (Region III and Region VI Planning and Redevelopment Councils) – Project Manager for 5 contracts for source water protection:

- Source water reports for 133 public water systems
- Preparation and presentation of state-wide source water awareness symposiums
- Source water assessment and protection plan reports for 68 public water systems
- Engineering study for contingency planning for public water systems

Town of Ceredo – Project Manager for 20,000 feet of water line replacement, water tanks, telemetry, and booster stations.

Boone County Public Service District – Project Manager for 15+ water supply extension projects in Boone County District from 2004 to present. Included were Preliminary

Engineering Reports (PER), and design bidding and construction phase tasks.

Project Manager for Mill Creek Regional Water Supply Extension Project. Design included 34 miles of waterline, booster stations, tanks, and a water treatment plant. Included design of storm water ditches and culverts, and crossings of a railroad. Approval was obtained from CSX Transportation, WVDOH, PLC, USCOE, and West Virginia Bureau for Public Health. Deliverables included drawings, specifications, and cost estimates.

- West Virginia Division of Environmental Protection
- Logan County Public Service District

West Virginal American Water – Project Manager for construction administration/monitoring for the Poca River Road Waterline Extension Project; Cabell County Waterline Extension Project, Contract No. 7; Spite Road Waterline Extension Project; and Fisher Ridge Waterline Extension Project. Work included construction monitoring, preparation of weekly reports, review of contractor submittals, review of contractor invoices, and preparation of record drawings for 100,000+ linear feet of waterline extensions.

City of Philippi – Project Manager for municipal water system upgrade project. Work included design of two replacement booster stations, two new water storage tanks, new pumps for an existing booster station, a 1,500-foot waterline extension, and telemetry systems. Drawings, specifications, and a cost estimate were prepared.

West Virginia American Water – Design of main line pressure reducing valve and vault for the Glenwood Avenue Extension of the Cabell County Waterline Extension Project, Contract No. 6. Work included hydraulic sizing and preparation of drawing.

West Virginia American Water – Design, permitting, bidding and contract documents, and construction phase services for residuals handling facility at largest water treatment plant in West Virginia, including 1,000,000-gallon gravity thickener, sludge pumping stations, two belt filter presses, and a plate settler.

West Virginia Department of Environmental Protection – Project Manager/Project Engineer for design of multiple waterline extension in West Virginia. Included was design of six water storage tanks, five booster stations, pressure reducing valves, master meters, and telemetry systems. Work included surveying, subsurface explorations, hydraulic design, preparation of drawings, specifications, cost estimates, and permit applications, and assistance with bidding. Representative projects included:

- 10-Mile-South Putnam Water Supply Extension Project in Lincoln and Putnam Counties;
- 5-Mile-Cline Hollow, Younger Drive, Left Hand Fork of Lens Creek, and Emmons-Grippe Water Supply Extension project in Kanawha County;
- 2.5-Mile Godby Branch Water Supply Extension Project in Logan County;
- 20-Mile Cow Creek-Sarah Ann Water Supply Extension project in Logan County;
- 8-Mile Cassity Fork Water Supply Extension project in Randolph County; and
- 10-Mile Olive/Marshville/Catfish Hollow Water Supply Extension project in Harrison County

Tucker County Development Authority – Project Engineer for design of approximately 10,000 feet of water line and sewer line to serve an industrial park, including a lift station. Drawings, specifications, and a cost estimate were prepared. Also performed construction administration services.

West Virginia Davison of Environmental Protection - Project Engineer for preparation of conceptual design and cost estimate for the Mill Creek – Isom Community (Logan County Public Service District) Water Supply Extension Project.

West Virginia American Water – Evaluation of water treatment plant and water distribution system, including observation of system during site visit, records review, discussions with regulatory officials, and issuance of findings in a report for the Town of Pineville.

West Virginia Division of Environmental Protection – Project Manager for technical review of the Gauley River Area Waterline Extension proposed by the Gauley River Public Service District and the Heizer/Manilla Creek Waterline Extension proposed by West Virginia American Water. Included hydraulic analysis, evaluation of line size, review of drawings and specifications, and reporting on the evaluation in letter format.

City of Philippi – Relocation of waterlines due to proposed roadway. Relocation included approximately

4,000 feet of 1-inch to 12-inch diameter pipe, fire hydrants, meters, and valves. Prepared construction drawings, specifications, and quantities.

Short Line Public Service District/Harrison County Planning Commission – Project Manager for feasibility/rates analysis study for the proposed Reynoldsville, Wallace, and Clarksburg Water Supply Extension Project. Included evaluation of six options at multiple loan/grant funding scenarios.

West Virginia American Water – Hydraulic analysis for water supply extensions (total of 23 miles) in Cabell County, West Virginia, including line sizing and design of booster station and PRVs.

West Virginia Division of Environmental Protection – Project Manager/Project Engineer for numerous conceptual waterline designs for 20 unserviced areas (between 1991 and 2007) in coal mining areas in West Virginia. Included hydraulic evaluation, booster station, and water storage tanks sizing, waterline sizing, and estimation of construction cost. Work completed in Barbour, Boone, Brooke, Fayette, Harrison, Lincoln, Logan, McDowell, Putnam, and Randolph Counties.

West Virginia Division of Environmental Protection – Project Manager for design of booster station upgrade for the Clinton Water Association's Ringgold pump station, including preparation of drawings, specifications, and cost estimate.

West Virginia Department of Energy – Groundwater contamination study for drinking water wells near Cassity, Randolph County, West Virginia, including water supply inventory of over 50 residents, collecting and analyzing well and surface water samples, and researching records to determine the percentage of homes whose water supply had been degraded by acid mine drainage.

Public Utility General – Project Manager for construction administration including preconstruction meetings, shop drawing review, coordination with construction technician team(s), contractor pay application review, public record drawings, and public interface for 15+ water and wastewater utility and/or infrastructure projects including utility line extension and upgrades, construction and modifications of treatment facilities. Clients include municipalities, public service districts, industry, county development authorities and private utilities. Construction included water and sewer lines, booster stations, tanks, lift stations, vacuum sewer stations, treatment basins, dewatering equipment, clarifiers, chemical fee systems, buildings associated with treatment systems, outfall modifications, and diffusers.

Mingo Logan Coal Company – Project Manager for design, building, and permitting services for potable water system at the new Mountain Laurel Mine in Logan County, West Virginia. Project includes booster station, water storage tank, and 10,000 feet of HDPE pipe.

Sewer Lines and WWTPs

Project Manager for more than 30 wastewater projects, including municipal sanitary sewer treatment systems, industrial pretreatment systems, modification of sewer treatment plants, outfall modifications including diffuser installation, and upgrades to municipal collection systems. Also included were completions of studies mandated by the West Virginia Public Service Commission.

- Projects funded by State Revolving Fund (SRF), West Virginia Infrastructure and Jobs Development Council, United States Economic Development Agency and Private Funding sources.

Boone County Public Service District – Preliminary engineering, funding application, and final design for WWTP upgrade. Funding proposed through the Clean Water State Revolving Fund (SRF).

- Mechanical bar screen replacement
- Grit removal system replacement
- Mechanical aerator replacement
- Addition of third clarifier
- RAS pump addition
- UV unit replacement
- Belt filter press replacement
- Wash water system upgrade
- Other upgrades

Town of Ceredo – Perform design, bidding, and construction phase services for upgrade of existing sanitary sewer collection system, including upgrades to gravity and force main lines, and a lift station. Funding was thru the Clean Water State Revolving Fund (SRF).

Town of Ceredo – Evaluation of remaining capacity of grinder pump system.

Salt Rock Sewer Public Service District Master Service Agreement:

- Specification for WWTP wash line
- Preparation of NPDES modification for sludge disposal from a publicly owned treatment works
- Preparation of odor control study mandated by the West Virginia Public Service Commission (WVPSC)
- Preparation of cost estimates for requests for service
- Evaluation of lift station overflows

Town of Moorefield – Study on costs of $30,000,000 sanitary sewer system (plant and collection system).

South Putnam Public Service District – Project Engineer for review of sewage disposal options for large county-wide sanitary sewer provider. Work included interviews with various publicly-owned treatment works (POTWs), interviews with regulatory agencies, review of regulatory agency files, development of costs, and preparation of a report summarizing findings, including recommendations for future treatment of sewage in West Virginia.

West Virginia American Water – Assessment of City of Oak Hill and City of White Sulphur Springs publicly owned treatment works (POTW) to recommend improvements in operation and maintenance.

Town of Bradshaw – Design of collection system for two new schools, and design, permitting, bidding, and certain construction phase services for equalization basin/lift station, and upgrades to vacuum station and buffer tanks.

Tucker County Development Authority – Design, permitting, bidding, and construction phase services for gravity collection system, force main, and lift station for industrial park.

Boone County Public Service District – Preliminary engineering report for collection system and sequencing bench reactor (SBR) wastewater treatment plant for the Town of Nellus.

MDG Homes – Preparation of hydraulic calculations and record drawings for variable grade effluent sewer system at large development in eastern panhandle.

Client Confidential – Coordination of treatability study for industrial treatment plant.

Design of numerous sanitary sewer extensions associated with private developers, including design of gravity and force main lines and lift stations, including approvals by local public utilities such as Jefferson Utilities, and approvals by West Virginia Department of Environmental Protection.

Pocahontas County Public Service District/Wastewater Management – Study on replacement of Hawthorn Loop Sanitary Sewer System.

Steptoe & Johnson/York Bronze Company – Design of batch chemical pretreatment system for bronze facility in northern West Virginia. Included were sizing of units and building to house treatment system, and preparation of drawings, specifications, and cost estimate.

Columbia Gas Transmission Corporation:

- Design of sump/pump and storage tank to allow treatment and storing of waste water; and negotiation with hauler and POTW to allow disposal of waste water at Files Creek Compressor Station.
- Design of an oil/water separator, sump/pump, and storage tank to allow treatment and storing of waste water; and negotiation with hauler and POTW to allow disposal of waste water at Cleveland Compressor Station.
- Design of a waste water treatment plant for compliance with a compressor station's NPDES permit. Included was preparation of facilities preliminary and final engineering plans, selection of treatment (chemical precipitation, activated carbon and filtration), and detailed drawings and specifications.
- Evaluation of effectiveness of existing ozonator/activated carbon wastewater treatment system at a natural gas compressor station. Evaluation included 30-day composite sampling plan of wastewater, compilation of results, comparison with treatment system capacity, and issuance of findings in a report. Also included was issuance of a report summarizing technical feasibility and costs for alternate treatment options.
- Project Manager for conceptual design of oil/water separator at the Crawford Compressor Station in Ohio.

Tetra Technology – Preparation of operation and maintenance manual for a waste water treatment plant at the Yak Tunnel Superfund site in Leadville, Colorado.

Project Engineer for design and permitting of sanitary waste water treatment system for coal mines in Logan and Raleigh Counties, West Virginia. Included was preparation of drawings and specifications.

- Eastern Associated Coal Corp.
- Rum Creek Coal Sales

West Virginia Department of Environmental Protection, LCAP – Design of 1.2 miles of pressure and gravity sewer line at the Jackson County Landfill to convey landfill leachate to an existing sanitary collection system. Included were provisions for servicing residences along the pathway, hydraulic sizing, and preparation of drawings, specifications and a cost estimate.

West Virginia University – Research assistant for developing an interactive optimal sewer design program SODES.

Evaluation of options for future treatment of wastewater at a chemical industrial facility along the Ohio River in West Virginia. Included were evaluation of options, estimation of capital and O&M costs, and preparation of a report to a law firm in West Virginia.

Mining

Estimation of AMD treatability and treatment costs at multiple mining sites in West Virginia as part of preacquisition site assessments, including records review of 303(d) TMDL list.

Eastern Associated Coal Corporation – Project Manager for oversight of water supply inventory of structures over a 3200-acre SMCRA permit expansion (during 1994-1995) of the Federal No. 2 longwall deep mine in Monongalia County, West Virginia. Included were negotiations with the West Virginia Division of Environmental Protection (WVDEP) of the locations of permanent surface and groundwater monitoring points.

Eastern Associated Coal Corporation – Project Manager for design of Guyses Run AMD facility. Design included a 3,000,000-gallon pond, 180 feet of relocated stream, and stream crossings. Included was regulatory approval from USCOE, PLC, and WVDEP. Deliverables included drawings, specifications, and a cost estimate.

Old Ben Coal Company – Project Engineer for preparation of PHC statement for SMCRA permit application for the Nile Stone Slurry Impoundment in Mingo County, West Virginia.

Pre-mining, pre-blast surveys, including field investigations and report preparation, for various coal companies in Ohio, Virginia and West Virginia.

- Elk Run Coal Company
- Island Creek Coal Corporation
- Oneida Coal Company
- Southern Ohio Coal Company

Eastern Associated Coal Corporation – Project Manager for preparation for SMCRA Incidental Boundary Revision and NPDES permit modification applications for addition of 3.7-million-gallon mine drainage treatment pond at Martinka Coal Company's Guyses Run AMD facility.

Southern Ohio Coal Company – Project Manager for water supply interviews with occupants of 70 structures in Gallia, Meigs, and Vinton Counties, Ohio.

Project Engineer for grouting project to abate acid mine drainage at the Omega Mine Complex project in Monongalia County, West Virginia. Project involved collaboration of private/public agencies to provide resources for approximate $2,500,000 project.

Meadow River Coal Company – Project Manager for water supply inventory of 37 structures over a deep mine in Fayette County, West Virginia, and preparation of subsequent SMCRA permit revision to incorporate water supply inventory to existing permit.

Eastern Associated Coal Corporation – Project Engineer for identification of permanent groundwater and surface water monitoring points including negotiation of locations with the West Virginia Division of Environmental Protection (WVDEP) for 1,750-acre and 3,200-acre SMCRA permit expansions of the Federal No. 2 longwall deep mine in Monongalia County, West Virginia.

Rum Creek Coal Sales, Inc. – Project Engineer for preparation of probable hydrologic consequences (PHC) statement for SMCRA permit application for below drainage deep mine in Logan County, West Virginia.

Eastern Associated Coal Corporation – Project Engineer for preparation of probable hydrologic consequences (PHC) statement for SMCRA permit application for 5000+ acre Montcoal Eagle longwall deep mine,

including establishment of permanent surface and ground water monitoring points.

Ranger Fuel Corporation – Project Manager for SMCRA Incidental Boundary Revision (IBR) for new face-up and portal at the Clinton No. 4 mine in Boone County, West Virginia.

Southern Ohio Coal Company – Completion of drawdown field tests and estimation of well yields for over 12 wells.

West Virginia Division of Environmental Protection – Project Manager for evaluation and design of passive AMD treatment system at the Owings Mine Complex site in Harrison County, West Virginia. Included were detailed sampling plan, issuance of pre-construction water quality report, and preparation of construction drawings, specifications, and cost estimate.

West Virginia Division of Environmental Protection – Project Manager for Harris AMD reclamation project. Design included 400 feet of ditch, one culvert, manholes, 500 feet of subsurface drains, and sealing of mine portals. Deliverables included drawings, specifications, and a cost estimate.

Southern Ohio Coal Company – Project Manager for preparation of SMCRA permit application for the remaining life of the Meigs No. 2 and No. 31 mines in Ohio, including inventory of water supplies of over 200 residents.

Abandoned Mine Lands

Project Manager/Project Engineer for the design and development of reclamation plans and feasibility studies for more than 60 abandoned mine land projects for the WVDEP, Office of Abandoned Mine Lands and Reclamation, and the Commonwealth of Virginia, Abandoned Mine Lands Program. Tasks included:

- Client/contract management
- Mapping development
- Hydrologic evaluations
- Reclamation design
- Subsidence evaluation and abatement
- AMD evaluation and abatement
- Hydraulic design
- Geotechnical investigations
- Preparation of drawings, specifications, and cost estimates
- Preparation of Public Lands Corporation, U.S. Army Corps of Engineers, West Virginia Division of Highways, and NPDES permit applications.

West Virginia Division of Environmental Protection – Project Manager for Left Hand Fork reclamation project. Design included 1,600 feet of storm water ditch, 1,900 feet of riprap toe protection, culverts, relocation of a road, and regrading of refuse. Regulatory approval was obtained. Deliverables included drawings, specifications, and a cost estimate

West Virginia Division of Environmental Protection – Project Manager for reclamation design for the Owings Mine Complex site in Harrison County, West Virginia. Design included 8,300 feet of storm water ditch (including relocation of stream), 1,000 feet of culvert/subsurface drains, manholes, and a box culvert in addition to reclamation of refuse piles and sealing of mine portals. Deliverables included drawings, specifications, and a cost estimate. Included was interaction with the WVDOH, and obtainment of USCOE approval for relocation of a stream.

West Virginia Division of Environmental Protection – Project Manager for the Majesty Mine Complex project. Design included storm water ditches, stream relocations, culverts, and regrading of refuse piles and sealing of mine portals. Regulatory approval from the WVDOH and USCOE were obtained. Deliverables included drawings, specifications, and a cost estimate.

West Virginia Department of Energy, Abandoned Mine Lands – Stabilization program for mine subsidence at the Doug Gray Site in Fairmont, West Virginia, including a subsurface investigation, development of an injection plan, preparation of construction quantities, and a pre-bid meeting.

West Virginia Division of Environmental Protection – Project Manager for stabilization program for mine subsidence at the Glen Morgan (Lilly) site in Raleigh County, West Virginia, and the Mainella Site in Marion County, West Virginia. Included were development o injection plan, construction drawings and specifications, and cost estimate.

Assisted on St. John's Road Subsidence Project, Brooke County, West Virginia. Subsurface investigation and

development of specifications and construction drawings for remedial work on mine subsidence affecting 30 acres and 50 homes were conducted.

Project Engineer for Holden (Padgett) Subsidence Project, Whitman Junction, West Virginia. The project included subsurface investigation to determine extent of mine workings, development of stabilization plan, including drainage channels/pipes and mine seals. Construction documents were prepared, and participation in pre-bid and pre-construction meetings was completed.

Assisted on Jonben (Haga) Subsidence Project, Jonben, West Virginia. Subsidence control on an emergency basis including sinkhole backfilling and drainage control. Project included drilling to determine the extent of mining and subsidence, field surveying to develop topographic mapping and development of a backfilling and drainage plan.

West Virginia Division of Environmental Protection – Project Manager for 380 residence water supply inventory (including sampling) as part of the Phase II Water feasibility study for the New Haven Study Area in Fayette County, West Virginia.

West Virginia Division of Environmental Protection – Project Manager for 600 resident water supply inventory (including sampling) as part of the Phase II Water feasibility study for the Mill Creek Study Area in Boone, Lincoln, and Logan Counties, West Virginia.

West Virginia Division of Environmental Protection – Project Manager for 200+ residence water supply inventory as part of the Phase II water feasibility study for the Gauley River Study Area in Fayette and Nicholas Counties, West Virginia.

West Virginia Department of Energy – Abandoned Mine Lands – Project Manager for Phase II groundwater contamination study for drinking water wells in the Crooked Creek, Cow Creek, and Upper Rum Creek communities in Logan County, West Virginia. Work included water supply inventories of 250+ residences, collection and analyzing surface and well water samples, researching water quality records, designing and costing remedial measures, and calculating the percent of wells that had been degraded by mining activity.

Environmental Assessments/Impact Statements

Environmental site assessments, including record searches and field investigations, for numerous sites in West Virginia, Virginia, Ohio, and North Carolina. Specialization in large acre tracts, typically ranging from 1,000 acres to 65,000 acres, including coal properties:

- Dominion Resources
- Goldman Associates
- DiMucci Development
- FDIC
- Rhone-Poulenc Ag Company
- GSA
- General Electric
- West Virginia University
- Peabody Coal Company
- Massey Coal Services
- Kanawha County Solid Waste Authority
- Capel, Incorporated
- Plasma Processing Corporation
- Sun Bank South Florida
- Vaughan Railroad Company
- Foodland
- Jackson & Kelly
- Spilman, Thomas and Battle

University of North Carolina – Preparation of an Environmental Assessment showing no significant environmental impact for a proposed 1,400-foot television tower near Chapel Hill, North Carolina.

West Virginia Division of Highways – Project Engineer for completion of hazardous waste portion of environmental assessment for 22 miles of proposed upgrade to US 19, north of Summersville, West Virginia. Included site reconnaissance, interviews, and records search to identify potential hazardous waste sites along path of proposed upgrade.

Storage Tanks

Marshall University – Project Engineer for closure, sampling, and remediation activities associated with an UST closure at a new football stadium.

Project Engineer for sampling associated with an underground storage tank removal at a site in Harrison County, West Virginia.

West Virginia Division of Environmental Protection – Project Engineer for sampling associated with two abandoned underground storage tanks at a former mine site in Harrison County, West Virginia.

Goldman Associates – Project Engineer for closure, sampling, and remediation activities associated with an UST closure at a commercial establishment.

Contamination assessment for a national coal company for leaking UST at a coal facility in southern West Virginia, including multiple aquifer well installations, preparation of corrective action plan, and subsequent installation of air sparging system and oil/water separator.

West Virginia Department of Natural Resources – Contamination assessment for leaking underground storage tanks at the Rite Way Packette site in Jesse, West Virginia.

Project Engineer for excavation and off-site disposal of contaminated soil associated with a UST gasoline leak at a coal preparation facility in Kentucky.

Plasma Processing Corporation – Preparation of an underground injection control (UIC) permit application for a secondary aluminum facility.

Hazardous Waste/RCRA/Corrective Action

Project Engineer for PCB sampling at numerous mine sites in McDowell, Nicholas, Raleigh, and Wyoming Counties, West Virginia.

Project Engineer for excavation and off-site disposal of a diesel fuel spill on a slurry impoundment in Kentucky.

Regional Solid Waste Disposal Company – Project Engineer for guidance of contamination assessment and remediation activities with a fuel spill at a waste transfer facility in South Carolina.

Island Creek Corporation – Contamination assessment for petroleum products, battery acid, and PCBs at a coal preparation plant in Kentucky.

Feasibility study for future disposal options of residual wet waste from steam plants at a chemical plant in West Virginia.

Remediation

Project Engineer for remediation activities for a diesel fuel spill at a tank farm at a coal preparation plant in Kentucky.

Project Engineer for three PCB site remediations for a national coal company by excavation and off-site disposal at a coal preparation plant in Kentucky.

Vandalia Mining Corporation – Project Engineer for a contamination assessment and remedial activities a hydraulic fuel spill in Clay County, West Virginia.

Landfills/Solid Waste/Waste Disposal

Project Manager/Engineer for more than 60 private and public solid waste disposal facility projects involving evaluation, design, permitting and construction of disposal cells, closures, and leachate management facilities. Tasks included:

- Client/contract management
- Mapping and development
- Hydrology evaluation and hydraulic design of stormwater structures
- Geotechnical investigations
- Preparation of drawings, specifications, and cost estimates
- Preparation of solid waste and NPDES permit applications
- Construction observation/administration tasks such as full-time observation of construction, review of contractor submittals, review of contractor pay requests, and preparation of record drawings

Project Manager/Project Engineer for study, design, bidding, and construction phase services for 10+ solid waste disposal projects, including lined cell development and closures.

S&S Grading, Inc.:

- Renegotiation of a municipal waste water treatment plant NPDES permit at Grant Union Public Service District, including preparation of corrective action plan for facility, to allow for acceptance of more landfill leachate.
- Project Engineer for preparation of revised Part 2 permit application for S&S Landfill in Harrison County, West Virginia. Work included design of

landfill facilities including storm water structures, drawings, permit application text, NPDES permit application, and negotiations with the WVDEP until permit issuance.

- Project Manager for preparation of construction documents for Phase 1, 2, 2B and 3 expansions of the S&S Landfill in Harrison County, West Virginia. Work included design of liner system and storm water drainage structures, drawings, specifications, quantities, assistance in bidding and contractor selection.
- Project Manager for construction monitoring of the Phase 1, 2, 2B and 3 expansions of S&S Landfill in Harrison County, West Virginia. Work included regular meetings with contractor, preparation of weekly progress reports, preparation of liner system certifications, and submittal to the WVDEP of final certification. Included was construction monitoring of storm water drainage structures.
- Project Manager for preparation of drawings and specification for closure of the old S&S Landfill in Harrison County, West Virginia. Work also included designing proposed grade, storm water structures, landfill cap features, and preparation of quantities.
- Design of a landfill leachate pump station, force main, and primary and secondary containment tanks, including preparation of drawings, technical specifications, quantities, and a cost estimate.
- Renegotiation of a municipal waste water treatment plant NPDES permit, including preparation of corrective action plan for facility, to allow for acceptance of more landfill leachate.
- Project manager for design of valve vault for leachate handling facilities at the S&S Landfill in Harrison County, West Virginia.
- Project manager for construction of additional sedimentation pond at the S&S Landfill in Harrison County, West Virginia.
- Project engineer for permit modifications to allow alternate landfill liner systems at the S&S Landfill in Harrison County, West Virginia.

West Virginia Solid Waste Management Board – Technical review of proposed batch treatment plant/sludge handling equipment for treating landfill leachate.

Feasibility study for future disposal options of residual wet waste from steam plants at a chemical plant in West Virginia.

West Virginia Division of Environmental Protection, LCAP – Assistance with QA/QC review for construction drawings and specifications for the Central Landfill project in Braxton County, West Virginia and the Mingo County Landfill project in Mingo County, West Virginia.

West Virginia Division of Environmental Protection, LCAP – Preparation of construction drawings and specifications for the leachate collection and storage facilities for the closure of the Fleming Landfill in Kanawha County, West Virginia.

West Virginia Solid Waste Management Board – Preparation of an NPDES permit application for a municipal solid waste landfill near Morgantown, West Virginia.

Project manager for preparation of annual cross sections depicting liner elevations, existing elevations, and cap elevations for S&S Landfill in Harrison County, West Virginia and the Carolina Grading, Inc. landfill in South Carolina from 1995 to 1999. Work also included estimating volume of waste disposed, and volume of air space remaining.

- S&S Grading, Inc.
- Carolina Grading, Inc.

Carolina Grading, Inc. – Project manager for redesign of landfill subbase elevations to allow increased airspace at Carolina Grading landfill in South Carolina.

Eastern Environmental Services, Inc. – Project manager for estimation of remaining airspace volume at the Bayside of Marion Landfill in Florida and at a landfill in Maryland.

West Virginia Solid Waste Management Board – Project engineer for study evaluating seven alternatives for future operation of the Monongalia County Landfill.

Air Pollution/Air Services

Plasma Processing Corporation – Preparation of air pollution control permit applications, permit modifications, and compliance testing for secondary aluminum facilities in West Virginia and Tennessee.

Preparation of an air pollution control permit (construction and operating) applications for loadouts, coal preparation plants, and associated areas of coal

preparation plants including coal handling equipment, refuse conveyor, stockpiles, rotary breaker and silos.

- Peabody Coal Company
- Meadow River Coal Company

NPDES Industrial/Municipal Permitting

Project Manager for the acquisition of NPDES permits for construction activities for multiple civil engineering projects, including sanitary sewer collection systems and water supply extensions.

Project Manager for compilation of storm water sampling plans/kits for NPDES permit applications:

- Columbia Gas Transmission Corporation
- Plasma Processing Corporation

Preparation of Stormwater Pollution Prevention Plans (SWPPs) required by NPDES permits for natural gas compressor stations and secondary aluminum facilities:

- Columbia Gas Transmission Corporation
- Plasma Processing Corporation

Preparations of NPDES permit applications for industrial sites, and regulatory liaison associated with the applications:

- Municipal and industrial waste landfills – West Virginia Solid Waste Management Board, S & S Grading, Inc., and Rhone Poulenc, AG
- Water treatment plant – West Virginia Department of Environmental Protection/Logan County Public Service District, and West Virginia-American Water Company
- Secondary aluminum facility – Plasma Processing Corporation

Design of outfall modifications, including diffuser systems on outfalls. Included were hydraulic sizing and preparation of drawings, specifications and cost estimates. Some projects included bidding and construction phase services.

- City of South Charleston WWTP
- Allegheny Energy Services
- Cytec Industries Inc.
- Consol Energy, Inc.
- Akzo Nobel Chemicals
- Kureha, Inc.
- CNX Gas
- Patriot Coal
- Bayer Crop Science
- Momentive, LLC
- First Energy, Inc.

Served on West Virginia Manufacturer's Association Committee to prepare guidance document for preparing Groundwater Protection Plans (GPP's) for facilities regulated by NPDES permits.

Columbia Gas Transmission Corporation:

- Project Manager for preparation of template Groundwater Protection Plan to cover 50+ natural gas industry facilities in West Virginia. Included was preparation of hard copy and digital format version for use by facility personnel.
- Preparation of comments on draft NPDES permits including negotiations on revising permit conditions for multiple natural gas compressor stations in West Virginia.
- Preparation of report evaluating and recommending disposal options for water at Crawford Compressor Station in Ohio, including subsequent negotiations for direct discharge of water without NPDES permit.
- Project Manager for preparation of State of New York SPDES permit application for the Greenwood Storage Field.
- Preparation of default mixing zone model to allow for proposed increase in iron NPDES limits at the Cobb Compressor Station in Kanawha County, West Virginia.

Roadway Design

WVDEP and Logan County Public Service District – Project Manager for the design and layout of the relocated West Virginia County Route 12 (including approval from WVDOH) as part of the water treatment plant site of the Mill Creek Regional Water Supply Extension in Logan County, West Virginia. The design included roadway alignment (including vertical and horizontal curvature, right-of-way, and horizontal clearance with respect to structures), surface and subsurface drainage (including hydraulic calculations and channel and culvert sizing), fill embankment design, cut slope layout, and specifications for pavement, gravel, guardrail, drop inlets, and drainage structures. In addition, the project included compiling

technical specifications including WVDOH standard specifications.

Martinka Coal Company – Project Manager for design of an access road associated with a new 3,700,000-gallon pond at a deep mine in northern West Virginia. Project included subsurface investigation, hydrology calculations, channel and culvert design, cut/fill balance, low water crossing design, embankment design, and selection of road surfacing material. Deliverables included specifications, including references to WVDOH specifications. USCOE and Public Lands Corporation permits were obtained.

S&S Grading, Inc. – Project Manager for design of an access road associated with a closure cap on an old landfill in Harrison County, West Virginia. Project included site grading, hydrology calculations, channel and culvert design, design of subsurface drains under the road, cut/fill balance, embankment design, and selection of road surfacing material. Deliverables included drawings and technical specifications, including references to WVDOH specifications. Roadway quantities were estimated.

Ranger Fuel Corporation – Design of an access road for a new deep mine portal at the Clinton No. 4 Mine in Boone County, West Virginia. Project included site grading, hydrology calculations, channel and culvert design, cut/fill balance, and selection of road surfacing material. Deliverables included drawings and specifications. Regulatory approval was obtained.

West Virginia Division of Environmental Protection – Project Manager for the design of site drainage along WV Route 16/2 (including channels and culverts), reclamation of two landslide areas along WV Route 16/2, and a soldier (pile and lagging) wall to support a slip in WV Route 16/2. In addition, responsibilities including compiling technical specifications, including WVDOH standard specifications and communications with WVDOH for design approval.

D. MARK KISER, P.E., L.R.S.

Chief Engineer, Licensed Remediation Specialist

EDUCATION

B.S. Civil Engineering, 1984
West Virginia University

EMPLOYMENT HISTORY

1997-Present	Potesta & Associates, Inc.
1995-1997	Terradon Corporation
1984-1995	GAI Consultants

PROFESSIONAL REGISTRATION

- Professional Engineer – West Virginia
- Licensed Remediation Specialist – West Virginia

PROFESSIONAL CERTIFICATION

- Hazardous Waste Site Operations and Superfund
- Worker Protection Training, 40-Hour Training
- Supervisory Training and Annual Refreshers
- Troxler Nuclear Densometer Certification

SERVICE ON BOARDS AND COMMISSIONS

Commissioner – Sissonville Public Service District

AREAS OF SPECIALIZATION

Environmental assessments, environmental sampling and remedial programs, conceptual and final designs for chemical, utility, and municipal solid waste disposal sites, including liner systems, leachate management systems, stormwater management systems, operational plans and capping/closure systems, abandoned mine land reclamation projects, sludge stabilization and basin/pond closure projects, environmental permitting, hydrologic and hydraulic analyses, quality assurance/quality control monitoring.

PROFESSIONAL EXPERIENCE

Civil/ Site Design

Ridgeline, Inc./Cabela's – Retained by developer and Cabela's to provide civil engineering design services for a new Cabela's store in Charleston, West Virginia.

- ALTA survey
- Subsurface exploration
- Grading plan including balanced cut and fill for the building pad, parking fields, and access roads.
- Stormwater collection system design including curb inlets, catch basins, and culverts.
- Pavement design.
- Utility extension designs including sanitary sewer, potable water, fire service, natural gas, underground electric, underground telephone, and underground cable television.
- Permitting services
- Support for local approvals including approval from Charleston Municipal Planning Commission as a Development of Significant Impact and building permit to allow construction to begin.
- MM-109 permit to allow for connection of the store's new roadway with the existing public roadway.

Fieldcrest Subdivision – Project manager/engineer for development of a nine-lot subdivision in Charleston, West Virginia. Design and permitting/regulatory approvals for infrastructure, including new street, sanitary sewer main, water main, stormwater, electric, telephone, cable, and natural gas. Preparation of drawings/specifications for necessary governmental agency approvals and for solicitation of bids. Inspection and certification of completed sanitary sewer system.

Connell Pointe Subdivision – Project manager/engineer for development of an eleven-lot subdivision in Charleston, West Virginia. Design and permitting/regulatory approvals for infrastructure, including new street, sanitary sewer main, water main, natural gas service, stormwater, electric, telephone, and

cable. Preparation of drawings/specifications for governmental agency approvals and for solicitation of bids. Inspection and certification for completed sanitary sewer systems.

Conner Drive Townhouses – Project manager/engineer for development of 13 townhouse lots just outside of Charleston, West Virginia. Planning, surveying, design, and regulatory approvals for infrastructure, including new street, stormwater management system, sanitary sewer main, water main, electric, natural gas, telephone, and cable.

Gettysburg Subdivision – Project manager/engineer for an 18-lot subdivision located in Kanawha County, West Virginia. Design, surveying, and regulatory approvals for infrastructure, including new street, sanitary sewer main, water main, stormwater management system, electric, natural gas, telephone, and cable. Preparation of drawings/specifications for solicitation of bids. Inspection and certification of the sanitary sewer collection system and pump station.

Yorktowne Subdivision – Project engineer for development and construction phase services for a 50-lot subdivision in Charleston, West Virginia. Design of streets, lots, stormwater management systems, sanitary sewer mains and pump stations, water mains, underground electric, natural gas, telephone, and cable.

City of Charleston – Feasibility study for the replacement of the CSX Ramp in Charleston, West Virginia.

Villages at Coolfont – Project manager for project in Morgan County, West Virginia, which included planning, engineering, and permitting associated with developing a second home community on 1.000 acres near Berkeley Springs, West Virginia. Project included:

- Potable water supply source (wells), treatment plant, storage and distribution system
- 0.44 MGD MBR wastewater treatment plant and sanitary sewer collection system
- Community roadways and storm sewer systems
- Detailed plans for the water and wastewater treatment plants and the distribution allocation system serving the first 124 homes
- Permits were obtained for the water and wastewater plants

Project engineer for development of Suncrest Subdivision in Charleston, West Virginia. Project included engineering and permitting for a new residential subdivision including roadway, underground electric, telephone, cable, water, sanitary sewer and storm water. Sanitary sewer system was designed, constructed, and monitored under the terms of an alternate mainline extension agreement with the Charleston Sanitary Board.

Business and Industrial Development Corporation – Preparation of Utility Extension and Roadway Paving Plans for Southridge Centre - Phase 2 area. Project included preparation of bidding/construction drawings to provide natural gas, water, sanitary sewer, telephone, and cable television serving four commercial lots and a 50-lot proposed subdivision. All utilities were underground. The length of the project was approximately ½ mile. The project also included roadway paving and stormwater drainage.

Development of a conceptual development plan for a mixed use industrial park. The evaluation included developing preliminary alignments for two access roadways including earthwork requirements, drainage, subbase, and paving with preliminary cost estimates. Total length of road was over 5 miles. The evaluation also included preliminary layout of water and sewer service for a proposed 400-acre development.

Plasma Processing Corporation – Preparation of permit to construct and site development plan for a secondary aluminum processing facility startup in Jackson County, West Virginia.

Utility relocation plans required for site development, waterline, and sewer construction projects. Projects included determination of utility locations by records review, utility contacts, and surveying. Designs were prepared including locations, details, and pavement replacement. Design also included obtaining approvals from West Virginia Division of Highways and the owners of the utilities.

Abandoned Mine Lands

West Virginia Division of Environmental Protection Abandoned Mine Lands (WVDEP AML) Reclamation – Project engineer/project manager for open-end contract from 1988 through 1995. Continued after 1995 with AML projects for WVDEP AML including reclamation

designs, preparation of plans, specifications, bid documents, and permitting. Projects included:

- Duncan Hill No. 1 and No. 2 Subsidence
- Urso Subsidence
- Jonben Subsidence
- Doug Gray Subsidence
- Turner Douglas Complex
- Omar Refuse Piles (project won reclamation of the year award)
- Bear Run Refuse (project won 1994 Ducks Unlimited award)
- Kimble Refuse Pile (project won 1995 southern reclamation award)
- Vivian Refuse Pile
- Summerlee Refuse Pile
- Godby Branch Water Extension
- Williamson (Elias) Landslide
- Lefthand Fork Burning Refuse
- Belle Landslide
- Harris Acid Mine Drainage
- Numerous Phase I and Phase II Water Quality Studies/Survey
- Williamson (Hatfield) Landslide
- Taylorville (Cantrell) Drainage
- Sundial Refuse
- Sundial (Hatfield) Refuse Piles
- St. John's Road Subsidence
- Rachel Refuse
- Putney Impoundment
- Pringle Run No. 2
- Peach Ridge Complex
- Mountain Run Refuse and Portals
- Mill Creek Refuse Pile
- Measle Fork Refuse
- Marmet (Wells Drive) Landslide
- Marmet (Clark) Drainage
- MacArthur Mine Subsidence
- MacArthur Phase 2 Subsidence
- Little Whitestick Refuse
- Lando (Edwards) Drainage
- Kopperston (John's Branch) Refuse
- John's Branch Coal Refuse Dam (Kopperston)
- Jessop Highway #10
- High Coal Tipple
- Harris AMD
- Gray and Iaquinta Subsidence
- Grass Run Refuse
- Godby Branch Waterline Extension
- Georges Creek Portals
- Georges Creek (Lucas) Rockslide
- Garrison Complex
- Flipping Hollow Complex
- Fairmont East Mine Drainage
- East Lynn II
- Crany Mine Dump
- Courtright Highwall
- Cora Mine Drainage No. II
- Charleston (Ratcliffe) Landslide
- Cassity Fork Waterline Extension
- Camp Mohonegan Regrade
- Buffalo Creek No. 5 Refuse
- Borderland (Matney) Portals
- Beckley Subsidence
- Allen AMD

WVDEP-AML – Detailed design and preparation of construction drawings, specifications, contractor's bid sheet, and engineer's cost estimate for a half-mile water line extension to serve Beaver Creek near Junior in Randolph County.

WVDEP-AML – Management of four Phase II water studies and five Phase I water studies to determine if water supplies had been affected by coal mining. Work included resident interviews, mine map searches, area reconnaissance, obtaining water samples, reviewing water analysis data, preparing conceptual designs and associated costs and preparation of summary report.

Subsurface investigation, surveying coal refuse reprocessing evaluation and report, and design of reclamation plan to stabilize and approximately 15-acre refuse pile at Buffalo Creek No. 5 in Marion County, West Virginia. Developed plans, specifications, cost estimate, and calculations brief for drainage control and regrading plan.

Subsurface investigation, surveying and design for reclamation of three coal refuse piles and six mine entries. Design included replacement of a water well and related supply piping for the Town of Kimball. Completed preparation of plans, specifications, cost estimate, coal refuse report, West Virginia Department of Health permit for new well, and other supporting documents for reclaiming this large site with over ½ million cubic yards of regrading.

Subsurface investigation, surveying, coal refuse reprocessing evaluation, water quality monitoring, and design of a reclamation plan for a coal refuse pile, unreclaimed highwalls, and slurry and water treatment

ponds in Lewis County, West Virginia. Plans, specifications, cost estimates, and calculations brief were completed for the project.

Environmental Assessments/Impact Statements

Rhone-Poulenc AG Company – Management and oversight of environmental assessment to identify any liabilities or soil/water degradation for a proposed industrial solid waste landfill. Investigation included drilling, sampling, monitoring well sampling, site reconnaissance, and historic records research to establish baseline soils and groundwater conditions. Results presented in a report.

West Virginia Division of Highways – Environmental Assessment for a 1.25-mile proposed four-lane divided highway in Bridgeport, West Virginia.

West Virginia Division of Highways – Environmental Impact Statement (EIS) for proposed Route 19 upgrade from Summersville, West Virginia to Interstate 79 in Braxton County, West Virginia. Project included evaluation of three alternatives over approximately 25-mile length. Responsibilities included hazardous waste section collection of general data used by other scientists, field reviews, and public meeting participation.

Assessment of environmental and reclamation liabilities associated with over 40 surface mine permits in western Virginia. Evaluation included PCB concerns, reclamation costs, underground and aboveground storage tanks, and acid mine drainage.

Massey Coal Service, Inc. – Assessment of environmental liabilities associated with a large tract of property including over 25 permitted mines and a coal preparation plant. Investigation included a review of permits and requirements, past environmental compliance record, walkover of each site, and development of estimated reclamation costs for each site. Report prepared to document results of the liability assessment.

Completion of environmental assessments and a preliminary design report for two inactive commercial solid waste disposal landfills located in Kanawha and Wyoming County, West Virginia. The environmental assessment included completion of a groundwater user's survey for residents located within ½ mile of each facility, drilling shallow groundwater monitoring wells to monitor flow along the soil/bedrock interface downgradient of each landfill, an extensive geotechnical soils/rock investigation, assessment of each facilities compliance with the solid waste management rules, and developing recommendations for a preliminary closure plan.

Mining

Eastern Associated Coal Corporation – Coal ash utilization study including five mining operations and four coal ash sources in Virginia and West Virginia. Study evaluated both surface and underground beneficial uses of ash to neutralize acidic drainage.

Project manager/engineer for the preparation of coal ash utilization permits for West Virginia mining operations. Permits included placing ash in the embankment of refuse disposal sites and placing ash with spoil backfill.

- Elk Run Coal Company
- Appalachian Mining, Inc.
- Peerless Eagle Coal Company
- Rawl Sales and Processing Company

Pace Carbon Fuels, LLC. – Consulting and permitting for the development of seven coal-based synthetic fuel manufacturing plants in West Virginia, Indiana, Kentucky, and Illinois. Project included obtaining pre-construction and operating permits for air, water and mining for the manufacturing plants and the feedstock coal recovery operations. Assignments included permit application preparation, assistance in locating and evaluating coal feedstock sites, construction monitoring, Phase 1 environmental site assessments, and other miscellaneous engineering consulting functions.

Pennsylvania Electric Company – Yearly construction designs for lined coal ash and coal refuse disposal sites at the Keystone and Conemaugh power stations, including a synthetic liner system, groundwater and surface-water control, leachate collection, landfill development, and haul road design. Construction quantity and cost estimates and development of IBM-PC software for evaluating the storage capacity of the disposal sites.

Landfills/Solid Waste/Waste Disposal

DuPont Washington Works – Project Manager responsible for design, preparation of construction documents, and construction documents, and construction

quality assurance monitoring for a 6.2-acre expansion of a piggyback of a leachate collection system at an industrial waste landfill.

Eastern Environmental Services, Inc. – Project engineer/project manager for finalizing a permit application for the S&S Landfill near Clarksburg, West Virginia. Components of the plan included a detailed staging and closure plan to comply with sediment control and leachate storage requirements. Successfully represented the landfill in a permit appeal hearing before the Water Resources Board. Prepared two construction/bid packages for constructing the initial 10 acres of the landfill.

Cytec Industries – Quality assurance/quality control monitoring for closure of a 10-acre SWMU containing biological treatment sludge. The contents of the basin were stabilized by mechanical mixing. Activities included supervision of testing, data evaluation, and a revised interim grading and drainage plan. Report and certification provided for WVDEP-OWM.

Cytec Industries – Closure plan and permit application for closure of a 5-acre industrial waste landfill. Steep slopes over a portion of the landfill necessitated the design of an innovative cap system and leachate collection system. Project also included closure and capping of a small pit containing tar residue.

Responsible for detailed hydrogeologic investigation and preparation of a major portion of the WVDEP Part A Solid Waste Disposal Permit Application for the Northfork Landfill near Wheeling, West Virginia. Project included field reconnaissance and mapping of existing site conditions, rock corings, test pits, laboratory analysis of soils for potential construction materials, installation of four monitoring wells, and the corresponding analysis and evaluation of data for completing the Part A Application.

Responsible for hydrogeologic investigation and preparation of the WVDEP Part A Solid Waste Disposal Permit Application for the Sycamore Scenic Landfill in Putnam County, West Virginia. Work included coring, test pit, and laboratory analysis of soils; review of existing groundwater data; and analysis and evaluation of data for completing the Part A Application.

Project Manager responsible for construction quality assurance monitoring for three landfill expansions at Brooke County Sanitary Landfill, including 6.5 acres of composite liner.

Project Manager responsible for construction quality assurance monitoring for 0.8-acre composite liner expansion at Wetzel County Landfill.

Project Manager/Project Engineer for design of composite liner system expansion, design and construction quality assurance for a 2-acre final landfill cap, and design of a new access road serving Pocahontas County Landfill.

Chambers Development Company – Preparation of solid waste disposal permit applications for the Monroeville Landfill, Monroeville, Pennsylvania, and the Southern Alleghenies Landfill, Cambria County, Pennsylvania, both of which include a double synthetic liner system combined with a drainage net leak detection system to conform to Pennsylvania DER regulations.

Project manager/engineer for the West Virginia Division of Environmental Protection's landfill closure assistance program for 1997 through 2002. Responsible for conceptual design, field investigation, construction drawings, specifications, permit applications, etc., for the following projects:

- Wyoming County Landfill
- Jackson County Landfill
- Kanawha Western Landfill
- Monongalia County Sanitary Landfill
- Fayette County Landfill
- Fleming Sanitary Landfill

QA/QC monitoring oversight for a municipal waste landfill in Tazwell County, Virginia.

Design; preparation of drawings, technical specifications, and contract/bid documents; construction monitoring; air monitoring; sludge sampling and analysis; review and approval of a detailed health and safety plan; permitting; and other miscellaneous engineering services for the stabilization and closure of a 3-acre sludge basin and a 1-acre sludge pond. The project included management of a pilot-scale demonstration, procurement of stabilization reagents from multiple providers, and development of an adjacent soil borrow area.

Design; preparation of drawings, technical specifications, contractor's bid sheet, engineer's cost estimate, contract, and cap acceptability evaluation; evaluation of contractor

bids, and construction monitoring associated with the capping and closure of a 2.5-acre cell of an industrial waste landfill facility. Cap included a multi-layer geocomposite system to minimize infiltration and the production and leachate to improve the areas groundwater quality.

Final design and preparation of construction drawings, detailed technical specifications, and engineer's construction cost estimate for the construction of a 1.9-million-gallon double-lined pond and 5 acres of a landfill liner system. This project included development of an ultimate facility layout plan, a two-year detailed development plan, and construction monitoring. Project also included negotiations with regulatory agency to obtain approval of the permit.

Response to regulatory agency review comments and redesign of a pond liner system and piggyback landfill liner system for a 20-acre landfill in West Virginia.

DuPont Environmental Remediation Services – Consulting regarding the design of a final cover/cap for an industrial waste landfill located in West Virginia.

West Virginia Public Service Commission – Site reconnaissance, development of alternative capping/closure systems, and preparation of engineer's cost estimates for the closure of two West Virginia municipal waste landfills in support of rate making testimony and hearings.

American Cyanamid Company – Project manager/engineer for independent quality assurance/quality control monitoring associated with closure of a three-acre SWMU consisting of a waste impoundment. Project included construction of an earthen buttress to improve slope stability, in-place waste stabilization using fly ash and kiln dust, and construction of a RCRA cap. Responsible for field design revisions to overcome problems, conformance testing, and preparation of certifications and a summary report. Project included sampling and analysis of raw and stabilized sludge.

American Cyanamid Company – Coordination of field activities associated with construction monitoring and laboratory testing for RCRA hazardous waste impoundment (the first permitted and constructed in EPA Region III) in Willow Island, West Virginia, including earth moving, construction of a soil-bentonite liner, monitoring of three, sealed double-ring infiltrometers, and construction of an HDPE double-lined impoundment.

Pennsylvania Electric Company – Field (construction) monitoring for development of a residual waste landfill including compaction testing for heavy earth moving, synthetic (PVC) liner installation, concrete testing, and other miscellaneous testing.

Virginia Power Company – Consultant for site development and construction of a fly ash disposal facility including a review of site operations, developing a maintenance program, compaction testing and review, and problem shooting.

Rhone-Poulenc Ag Company – Design and permitting for a proposed industrial solid waste landfill. Project included complete hydrogeologic evaluation including several borings and installation of seven monitoring wells; documentation of soils, geology, water quality and hydrogeology; detailed site design of leachate ponds, liner system, storm water collection system, access road, and capping/closure system. Multi-volume permit application prepared including Operations Manual, Quality Assurance/Quality Control Plan, Technical Specifications, Permit Application, and Design Drawings.

Rhone-Poulenc Ag Company – Leachate Minimization Study for a RCRA Hazardous Waste Landfill. Project included assessment of existing landfill operation and recommendations to reduce quantity of contaminated runoff from over 8 million gallons per year (MGY) to between 2 and 3 MGY. Detailed staging and operating plan, storm water management plan, and cost estimates prepared.

American Cyanamid Company – Closure plan and permit application for closure of a three-acre surface impoundment containing sludge and tar. Stability concerns for an existing embankment containing the waste lead to the development of a lightweight cap. Subsurface investigation and field surveying completed. Closure application as required by the West Virginia Division of Environmental Protection provided.

Soundings and sampling of three basins containing sludge. Two basins contained sludge from secondary biological treatment of industrial wastewater. One basin contained petroleum product sludges. Sludge quantities determined from soundings and cross sections prepared.

Samples obtained for laboratory analysis to characterize wastes.

- Rhone-Poulenc Ag Company
- Ashland Petroleum Company

Monongalia County Sanitary Landfill – Engineer responsible for expansions, planning, and upgrades for the Monongalia County Sanitary Landfill from 1990 through 1992. Activities included:

- Three expansions (seven acres total) of the landfill liner and leachate collection system, including grading, groundwater collection drains, landfill liner system and leachate drains, protective cover, and surface drainage control
- Construction monitoring
- Certification of landfill expansions
- Construction of a 1.6-million-gallon leachate storage basin, including clay liner, double synthetic liner, synthetic drainage layer, protective cover, and drainage control devices
- Annual landfill volume reports, including surveyed cross sections
- Two borrow area investigations to identify clay liner sources
- Feasibility study for expansion and continued operation of the facility
- Final closure plan for the facility including a multi-layered cap and drainage control plan

Rhone-Poulenc AG Company – Evaluation of an emergency fly ash pond for a chemical plant in Institute, West Virginia. Recommendations, including conceptual design drawings and an engineer's cost estimate, to increase the settling efficiency of the pond. Special design elements, including a polymer feed system, submerged manifold pipe, splitter dike, and an overflow weir.

Hampton-Clarke, Inc. – Project Manager for Independent Quality Assurance Testing (IQAT) services for removal of contaminated soils and placing clean soil backfill at the site of a former cullet pile disposal area.

Stormwater

Expert witness for plaintiff damaged as a result of flooding caused by lack of maintenance at a culvert system in Westoreland, Wayne County, West Virginia.

Stormwater drainage plans for site development projects including pre- and post- development discharges, design of sediment control devices, preparation of stormwater general permit application, and consulting for numerous construction projects in West Virginia.

Evaluation of stormwater drainage system (culverts and channels) to alleviate flooding problems for a church in Kanawha County, West Virginia. Project included computer modeling to identify culvert capacities and to identify repair options.

Expert retained to support a property owner damaged as a result of flooding caused by downstream obstructions. Reviewed regulatory agency files, conducted site inspections, evaluated possible remedial measures, and provided support in anticipation of litigation.

Expert witness for plaintiff damaged as a result of flooding from upstream construction. Visited site to observe problem areas, reviewed construction practices/procedures, reviewed regulatory permits, and provided testimony as to the cause of flooding.

Developed stormwater management plans, including calculation of peak runoff rates, storm volumes, and design of stormwater management devices including culverts, ditches, sumps, ponds, principal pipe spillways, and emergency spillways for the following projects:

- Site development projects including commercial, retail, and industrial sites ranging from ¼ acre to more than 100 acres.
- Abandoned mine lands reclamation projects, including landslides, refuse piles, slurry ponds, and subsidence control projects.
- Commercial and industrial waste landfill projects.
- Roadway design projects.
- Other projects involving the disturbance of the ground surface.

Water Lines, Water Storage Tanks, and Water Treatment Plants

WVDEP-AML – Detailed design and preparation of construction drawings, specifications, contractor's bid sheet, and engineer's cost estimate for six-mile water line extension including fire protection. Included in project were 90,000-gallon water tank, booster station, and pressure relief valves. Extension tied into Norton Harding Jimtown PSD System and served town of Cassity in Randolph County.

Design for waterline extension projects including preparation of construction drawings, specifications, and engineer's cost estimates for the West Virginia Division of Environmental Protection, Office of Abandoned Mine Lands and Reclamation.

- Cassity Fork Waterline
- Beaver Creek Waterline Extension
- Godby Branch Waterline Extension

Design, preparation of construction drawings, preparation of permit applications, and other related activities for the construction of waterline projects. Line sizes ranged from 16 inches to 2 inches. Materials of construction included polyvinyl chloride and ductile iron pipe. Drawings included planimetric maps, topographic maps, and aerial photograph formats to depict proposed construction. Permit applications included Bureau of Public Health, Public lands Corporation Stream Activity Permits, Division of Highways Occupancy Permits, and General Storm Water NPDES Construction.

- Cabell County 2000 Project, 23 miles of new waterline construction, West Virginia American Water Company (WVAWC)
- Poca River Road Waterline Extension, 13 miles of new waterline construction, WVAWC
- Route 60 Contract 3 Waterline Extension, 3 miles of new waterline construction, WVAWC
- Buff Creek/Trace Fork Waterline Extension, 6 miles of new waterline construction, WVAWC
- Route 60 Contract 4 Waterline Extension, 2 miles of new waterline construction, WVAWC
- Yorktowne Subdivision, 3,000 linear feet of waterline serving a 50-lot subdivision.

ESAs (Phase I and II)

Numerous Phase I Environmental Site Assessments including reclamation liability assessments for mining and industrial properties in West Virginia and Kentucky. Projects typically focused on solid waste disposal practices, potential acid mine drainage discharges, underground storage tank status, areas of hydrocarbon soil contamination, PCB transformer concerns, and other environmental liabilities.

Phase II environmental site assessment for an abandoned mining complex located in Fayette County, West Virginia. The new owners wished to identify any liabilities and determine approximate clean-up costs for negotiations with the previous owners. The areas evaluated included two aerial tram head houses, a drum storage area, truck maintenance garage, mine machinery repair shop, two commercial properties, a lamp house, and other storage areas. Numerous areas of petroleum hydrocarbon contamination were identified, and the extent of contamination documented. An on-site laboratory was used to expedite testing and establishing the boundary of areas requiring remediation. The results of the investigation were summarized in a report, including a detailed description of sampling and laboratory analysis methods, drawings showing sample locations, laboratory results, estimated volumes of contaminated soils, and recommendations for cleanup.

West Virginia Regional Jail and Correctional Facility Authority – Phase I Environmental Site Assessment to document potential liability for a tract being considered for a regional jail site in Kanawha County, West Virginia. Activities included historic records search, interviews, site reconnaissance and preparation of a report documenting the findings.

DiMucci Development – Phase I Environmental Site Assessment for property proposed for development as a strip mall.

The Multicare Companies, Inc. – Completion of eight Phase I Environmental Site Assessments for nursing and rehabilitation care facilities in West Virginia.

Virginia Electric Power Company – Assistance with site design and engineer's construction cost estimate for the remedial design of a CERCLIS waste disposal facility.

Phase I environmental site assessments for feedstock recovery sites associated with three coal-based synthetic fuel manufacturing plants. The feedstock recovery sites included numerous coal waste slurry impoundments, dry refuse piles, and mixed refuse disposal areas. Assessments focused on potential acid mine drainage problems, former waste disposal areas, and other mining-related environmental liabilities. A report was prepared detailing the findings for each site.

Storage Tanks

Columbia Gas Transmission – Project manager for completion of over 350 AST Registrations, Inspections/Certifications, and site-specific Spill Prevention Response Plans for 40 facilities.

- Followed the Aboveground Storage Tank Act §22-30 Title 47 Interpretive Rule Series 62 and the Draft Emergency Rule additionally conferring with the West Virginia Department of Environmental Protection (WVDEP) to establish accurate classification and compliance.
- Met all regulatory deadlines.
- Reviewed comprehensive electronic documentation comprising of completed inspection sheets, photographs, detailed deficiencies.
- Provided recommendations and schedule for abatement for deficient secondary containment structures.

Rhone-Poulenc AG Company – Geotechnical and environmental investigation for two proposed above-ground reinforced concrete tanks to serve as secondary wastewater treatment unit. Investigation included soil drilling, sampling, laboratory analysis for engineering properties, and analysis for contamination. Field survey completed to locate existing structures. Report prepared outlining soils/geology, environmental concerns and foundation recommendations.

Closure of 13 aboveground RCRA storage tanks. Closure services included review of agency approved closure plan to determine compliance items, visual inspection of tank interiors and earthen containment berm areas, review of rinsate analyses, review of soils testing analysis from berm areas, and preparation of closure documentation and certification.

- Rhone-Poulenc AG Company
- American Cyanamid Company

Cannelton, Inc. – Abandoned underground storage tank investigation including sampling of tank contents, geoprobe investigation, and field and laboratory analysis of soil samples.

Sewer Lines and WWTPs

Project manager/project engineer for the Fleming Landfill Sanitary Sewer Extension project in Kanawha County, West Virginia. Project included design, permitting, construction monitoring, and certification of 9,900 linear feet of gravity and force main sanitary sewer, a new duplex pump station, and rehabilitation/upgrade of an existing pump station. The construction contract was over $1 million. The completed sewer extension was turned over from the West Virginia Department of Environmental Protection to the Sissonville Public Service District for ownership and operations.
Project engineer for sanitary sewer system including 8-inch gravity sewer, pump station, and force main sewer serving the Gettysburg Subdivision in Charleston, West Virginia. Project included an alternate mainline extension agreement with Charleston Sanitary Board, construction monitoring, surveying, road design and subdivision plans.

Project manager/engineer for an industrial wastewater sewer extension. Project included design engineering, permitting, and construction monitoring associated with a 5 million gallon, double-lined storage impoundment, duplex pump station with 70 horsepower pumps, and 5,200 linear feet of force main sewer in Monongalia County, West Virginia.

Design, permitting and construction monitoring associated with a 138,000-gallon double containment storage tank, duplex pump station, and force main piping associated with closure of the Jackson County Sanitary Landfill near Ripley, West Virginia.

Oil and Gas

Columbia Gas Transmission Corp – Project Manager for in-house consulting services provided for environmental reports and permit applications for natural gas pipeline transmission projects.

Columbia Gas Transmission – Field reconnaissance of approximately 16 miles of pipeline route, preparation of erosion and sediment control measures, and preparation of stream crossing permits for the NJET project.

Spill Prevention, Control & Countermeasure Plans

Union Carbide Corporation, South Charleston Plant – Audit of chemical manufacturing plant to determine compliance with the facility Spill Prevention Control and Countermeasures (SPCC) plan. Project included review of SPCC plan prepared by facility staff, on-site inspection of over 50 storage areas to ascertain compliance with the SPCC plan and pertinent regulations, preparation of a list of observed deficiencies, and certification of the SPCC plan by a professional engineer.

Stream/Wetland Delineation, Permitting, and Mitigation

Columbia Gas Transmission Corp – Design of stream stabilization and restoration plan for a section of East Fork of Queer Creek in Hocking County, Ohio. Project included obtaining 401/404 certification and preparation of a detailed construction plan.

PETER S. POTESTA
Senior Engineer

EDUCATION

B.S. Civil Engineering, 2011
West Virginia University

B.A. Environmental Geosciences, 2007
West Virginia University

EMPLOYMENT HISTORY

2011-Present Potesta & Associates, Inc.
1999-2011 Potesta & Associates, Inc. (summers)

PROFESSIONAL CERTIFICATION

Troxler Moisture Density Gauge

AREAS OF SPECIALIZATION

Geotechnical engineering with an emphasis in natural gas production well pads and access roads, retaining wall design and analysis, landslide repair design, foundation recommendations, slope stability analysis, civil/site design, and landslide causation investigation.

PROFESSIONAL EXPERIENCE

Civil Site Design

Numerous projects involving site grading, utility layout, permitting and infiltration design.

Stonerise Healthcare Eastbrook Facility – Project involved design of two segmental retaining walls, two parking lot designs, sanitary line, culvert design to cover 250 plus feet of stream and the coordination with local utility providers.

University of Charleston Innovation Center – Existing utility location, infiltration design, site grading, and new utility layout. Civil site design for new Welch Athletic Complex and Eddie King Gymnasium Addition.

Geotechnical

Huntington Development Authority – Repair large landslide and install stormwater controls at Kinetic Park in Huntington, West Virginia.

TransCanada – Project Manager of construction monitors for the monitoring the landslide remediation efforts along an approximate 1,400-foot section of gas line right-of-way and prepared a steep slope safety work plan for the equipment used on the Nixon Ridge site in Marshall County, West Virginia.

Travelers Insurance/West Virginia American Water – Prepared plans to repair landslides caused primarily by waterline breaks. Also evaluated causation of waterline breaks to determine causation and if client was at fault.

- George Washington High School Slip – retaining wall with stone backfill
- Haden Residential Landslide – reinforced soil slope
- Gibson Residential Landslide
- Reynolds Residential Landslide
- Higginbotham Residential Landslide
- Villalobos Residential Landslide
- Bona Vista Landslide – retaining wall design
- Odell Claim – determined to be not at fault
- Roberts Claim - determined to be not at fault
- Vansickle Claim - determined to be not at fault
- Smith Landslide – retaining wall

Mountaineer Gas Company – Evaluation of gas line Right of Way stability for projects in Kanawha and Cabell Counties in West Virginia.

Responsible for subsurface exploration, slope stability design, landslide repair and remediation, soil/rock laboratory analysis, foundation recommendations, soil

and rock visual classification, and soil slope reviews and recommendations.

- Pribble Tank Landslide Repair
- Potts Pad Landslide
- Huntington Giger Street Slip
- Potoczny Landslide Repair
- Pleasant Lane Landslide
- MW3 Intersection Landslide
- Vickie Moreland Retaining Wall
- Greer Rowlesburg Site

AECOM – Subsurface exploration that resulted in geotechnical engineering design recommendations for the planned Marshall University (Marshall) Soccer Complex Facility in Huntington, West Virginia. This indoor practice facility in located on a 4.3-acre tract of land which is situated between 4th and 5th Avenue. This project consisted of a new outdoor soccer field, 1,000 plus stadium seating, parking lot and associated building with locker rooms, coach's offices, concession area and ticket office.

AECOM – Subsurface exploration to result in geotechnical engineering design recommendations for the planned Marshall University (Marshall) Indoor Athletic Facility at Marshall University in Huntington, West Virginia. This indoor practice facility is located to the east of the existing Marshall stadium on a 6-acre tract of land which is situated near 3rd Avenue. This project consisted of a new indoor practice facility and integrated masonry office and classroom structure which will house the sports medicine department.

Huntington Sanitary Board, North Edgemont Road Landslide – Completed subsurface exploration, installation of six inclinometers to monitor the slope stability and overall movement of the slope, laboratory test/inclinometer data evaluation, as well as worked with the Huntington Sanitary Board and community to evaluate possible stabilization options.

Basic Systems- Numerous geotechnical evaluations on Columbia Gas and TransCanada compressor stations related to station upgrades in West Virginia, Ohio, Pennsylvania, and Virginia:

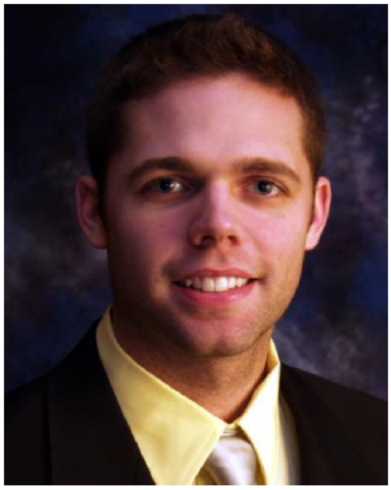
- Files Creek Compressor Station
- Crawford Compressor Station
- Loudoun Compressor Station
- Lost River Compressor Station
- Cleveland Compressor Station
- Elk River Compressor Station
- Nineveh Compressor Station
- Strasburg Compressor Station
- Waynesburg Compressor Station
- Seneca Rocks Compressor Station
- Chantilly Compressor Station
- Smithfield Compressor Station
- Greencastle Compressor Station
- Gettysburg Compressor Station

Cross Development- Over 15 geotechnical foundation design reports for Dollar General Stores throughout West Virginia:

Kanawha County School Board – Geotechnical evaluation of the proposed Hoover High School and Clendenin Elementary School. Advanced over 60 borings with in the two sites to evaluation the underlying soils and rock to aid in design and construction phases.

TIMOTHY R. FERGUSON

Senior Scientist



EDUCATION

M.S. Environmental Science, 2010
Marshall University

B.S. Environmental Biology, 2006
Marshall University

EMPLOYMENT HISTORY

2006-Present	Potesta & Associates, Inc.
2013	In-House Consultant EQT
2014	In-House Consultant Columbia Gas

PROFESSIONAL CERTIFICATIONS

- 3.3 Continuing Education Units for Wetland Delineation – Olentangy Wetland Research Park at Ohio State University
- April 2012 – Applied Fluvial Geomorphology NCTC (Rosgen)
- April 2012 – River Morphology and Applications NCTC (Rosgen)

AREAS OF SPECIALIZATION

Permitting, compliance, collection, identification and analysis of biological data for research via habitat, electrofishing surveys, water sampling, and chemistry analysis. Environmental reporting and permitting. Wetland and stream identification and delineation.

PROFESSIONAL EXPERIENCE

Stream/Wetland Delineation, Permitting, and Mitigation

Served as project manager for environmental permitting for large scale oil and gas projects including roadway improvements, pipeline maintenance and construction, well pad development and other associated projects for the industry. Leads and trains staffing in field work and preparing environmental applications.

Supervised and conducted numerous wetland identifications and delineations for private companies throughout West Virginia, Virginia, Ohio, and Pennsylvania. Work included identification, delineations, and verification process with the United States Army Corps of Engineers (USACE), wetland reporting, permitting, and mitigation.

Met on-site with USACE, West Virginia Department of Environmental Protection for wetland verifications with governmental agencies.

Completed stream and wetland delineations for the construction of Highline Transmission Projects in Pennsylvania, West Virginia, Maryland, and Virginia. Worked with contractors to limit stream and wetland impacts as much as possible.

Supervised and completed stream and wetland delineations for oil and gas companies, including pipeline right-of-way and well layout locations.

Supervised and prepared and submitted numerous USACE Section 404 Applications and WVDEP 401 Applications. Obtained numerous 401 and 404 Permits for various types of projects.

Prepared numerous and stream and wetland reports pertaining to oil and gas industry.

Prepared and analyzed field data for state and federal permit applications.

Responsible for Section 7 Consultation of Endangered Species Act, Section 106 Consultation of the National Historic Preservation Act and Section 404 of the Federal Clean Water Act for numerous projects throughout West Virginia. Work includes field reconnaissance and assessment and report writing.

Experienced in consulting with USACE on Nationwide Permits and Individual Permits.

Experienced in completing the West Virginia Stream and Wetland Valuation Metric calculator for mitigation projects.

Conducted after-the-fact delineations with the U.S. Environmental Protection Agency.

Mining

Authored sections of mining permit applications and environmental information documents.

Surface Water Sampling

Conducted surface and groundwater sampling.

GIS

Analyzed longitudinal and cross-sectional data associated with stream profiles.

Acquired skills in operation of GPS equipment.

Oil and Gas

Managed environmental permitting for large scale roadway improvement project across 10 counties throughout West Virginia.

Permitted hundreds of natural gas well pads, pipelines and access road upgrades.

Biological and Sampling

Conducted electrofishing surveys with species identification.

Collected water samples and performed chemical analysis with various instruments.

Conducted benthic macroinvertebrate surveys utilizing procedures described in the USEPA's Rapid Bioassessment Protocol (RBP).

Performed habitat and stream assessments utilizing the standard EPA RBP in freshwater ecosystems.