



RFQ#: DNR209026

Expression of Interest
Engineering Services for Improvements to the
Wastewater Facilities at
Canaan Valley Resort

West Virginia Division of Natural Resources
Parks & Recreation Section
Charleston, West Virginia

Buyer:	Frank Whittaker—File 44
EOI No.:	DNR209026
EOI Opening Date:	October 9, 2008
EPI Opening Time:	1:30 PM

TRIAD
TRIAD ENGINEERING, Inc.

RECEIVED

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PLANNING DIVISION
STATE OF WV

October 9, 2008

October 9, 2008

Department of Administration
Purchasing Division
Building 15
2019 Washington Street, East
Charleston, WV 25305-0130

Subject:*WVDNR EXPRESSION OF INTEREST-DNR209036*
Engineering Services for Improvements to the Wastewater Facilities at
Canaan Valley Resort
TRIAD Proposal Number 04-08-8310

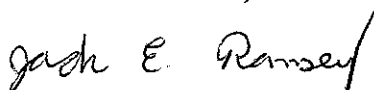
Dear Evaluation Committee:

Triad Engineering, Inc. (TRIAD) is pleased to present our response to your request for an Expression of Interest to the West Virginia Division of Natural Resources for Improvements to the Wastewater Facilities at Canaan Valley Resort. TRIAD is confident that the attached documentation will illustrate how we will work with you to develop the best solution to fit your project. The information will also allow you to understand our team's level of experience. To summarize, we feel that we would be the best choice because:

- TRIAD has outstanding technical qualifications including our experienced professional staff, modern equipment, and our knowledge of West Virginia
- TRIAD can begin immediately on your project and can call upon the resources of the largest engineering firm originating and operating in the state of West Virginia.
- TRIAD has specific experience in dealing with all the aspects of your project, including our team of water experts, our civil engineering design experts, and the field and lab staff to support all surveying, regulatory requirements, and data collection and assessments needed to support this work.
- TRIAD can provide value due to our locations, total in-house capabilities and our significant staff experience in similar projects.
- TRIAD will design an affordable, unique and solid project.

We appreciate the opportunity to respond your EOI, and look forward to the next phase of your selection process.

Sincerely,
TRIAD ENGINEERING, INC.



Jack E. Ramsey, P.E.
Utilities Group Manager

**GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)**

1. Awards will be made in the best interest of the State of West Virginia
2. The State may accept or reject in part, or in whole, any bid.
3. All quotations are governed by the *West Virginia Code* and the *Legislative Rules* of the Purchasing Division.
4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
5. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30
6. Payment may only be made after the delivery and acceptance of goods or services
7. Interest may be paid for late payment in accordance with the *West Virginia Code*.
8. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*
9. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller
11. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract
12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, this Contract may be deemed null and void, and terminated without further order
14. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (<http://www.state.wv.us/admin/purchase/vrc/hipaa.htm>) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
15. **WEST VIRGINIA ALCOHOL & DRUG-FREE WORKPLACE ACT:** If this Contract constitutes a public improvement construction contract as set forth in Article 1D, Chapter 21 of the West Virginia Code ("The West Virginia Alcohol and Drug-Free Workplace Act"), then the following language shall hereby become part of this Contract: "The contractor and its subcontractors shall implement and maintain a written drug-free workplace policy in compliance with the West Virginia Alcohol and Drug-Free Workplace Act, as set forth in Article 1D, Chapter 21 of the West Virginia Code. The contractor and its subcontractors shall provide a sworn statement in writing, under the penalties of perjury, that they maintain a valid drug-free work place policy in compliance with the West Virginia and Drug-Free Workplace Act. It is understood and agreed that this Contract shall be cancelled by the awarding authority if the Contractor: 1) Fails to implement its drug-free workplace policy; 2) Fails to provide information regarding implementation of the contractor's drug-free workplace policy at the request of the public authority; or 3) Provides to the public authority false information regarding the contractor's drug-free workplace policy."

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division
2. **SPECIFICATIONS:** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications
3. Complete all sections of the quotation form
4. Unit prices shall prevail in case of discrepancy.
5. All quotations are considered FOB destination unless alternate shipping terms are clearly identified in the quotation
6. **BID SUBMISSION:** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130

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INTRODUCTION

Triad Engineering, Inc. (TRIAD) proposes to perform professional engineering services to effectively plan for the most effective and economical treatment technology, design of the treatment plants and any other incidental and related improvements, procurement of necessary environmental permits, and production of plans and specifications required to produce bidding documents for the improvements to the wastewater facilities at Canaan Valley Resort.

TRIAD has the in-house personnel and equipment to perform the requirements stated in Section 3.2 of RFQ# DNR209026. Our depth of staff, 250+, and equipment will allow TRIAD to complete the work on the replacement of the main water line in a timely and cost effective manner.

- Outstanding technical qualifications.
- Extensive past experience with similar projects.
- In-house capabilities - no sub consultants will be needed.
- Experienced professional and support personnel.
- Totally employee owned and operated West Virginia firm
- Expeditious & economical mobilization of drilling rigs, equipment and personnel.
- Experience working with West Virginia state agencies - TRIAD currently maintains annual contracts and agreements with several West Virginia state agencies.
- Specific experience in dealing with all aspects of your project, including our team of water and sewer experts, our civil engineering design experts, and the field and lab staff to support all surveying, regulatory requirements, and data collection and assessments needed to support this work.

QUALIFICATIONS OF PERSONNEL

TRIAD maintains a staff of over 250. The professional staff includes individuals with college degrees in the scientific and technical area of civil/geotechnical engineering, mining engineering, environmental engineering, geology, hydrogeology, landscape architecture and soil science/agronomy. Many of the professional staff have advanced degrees and several of the staff are registered professional engineers, geologists, landscape architects, or surveyors. The technical support and administrative staff includes engineering technicians, draftspersons, surveyors, drillers, construction inspectors and clerical personnel. Most of our professional and technical staff have been with the company for many years. We take pride in the fact that we have a very low turnover rate adding to continuity and enhancing the level of productivity and experience afforded by our company. Resumes for key personnel are located in Attachment B.

GENERAL EXPERIENCE AND CAPABILITIES

TRIAD is an engineering firm providing professional services in the areas of civil, environmental and geotechnical engineering; site assessment; planning and landscape architecture; geology and hydrogeology; surveying and mapping; construction inspection, and materials testing; and, related earth science disciplines. Our firm has provided services on many thousands of projects of varying size and complexity since beginning operations in 1975. Clients include governmental agencies, industrial and mining companies, contractors, architects, engineers, developers, owners and commercial organizations.

TRIAD was founded in 1975 in Morgantown, West Virginia by three civil engineers from West Virginia University. A second office was opened in Charleston, West Virginia in 1979 and later relocated to our present Scott Depot, West Virginia location. TRIAD expanded into the northern Virginia area beginning in 1989 with offices in Winchester and Harrisonburg, Virginia, and began operations in Pennsylvania in 1990 with a full service office in Greensburg. Most recently, TRIAD has opened offices in Hagerstown, Maryland and Purcellville, Virginia.

Facilities and equipment available to support our staff have grown substantially during the past 33 years. Each of our offices contain computer facilities that are utilized for hydrogeologic evaluations, risk assessment, stability analysis, survey data reduction, mapping and site design. Our computer based drafting and reproduction facilities are used to develop detailed site plans (monochrome or color), construction details, and other graphic documentation as required for our projects. Our fleet of drilling rigs and support vehicles are based at West Virginia and Virginia offices and are maintained in-house to meet the needs of our engineering and site assessment projects. Well equipped, modern state-of-the-art materials testing laboratories are also maintained at our offices to support our engineering and construction related projects. Our offices also utilize both standard 35-mm photography and digital cameras to photo-document our projects.

POTABLE WATER SYSTEM ENGINEERING SERVICES

TRIAD provides planning, design and construction administration for wastewater systems ranging in size from county-wide utility programs to relatively small line extensions. TRIAD's staff members have designed numerous wastewater collection systems and wastewater treatment plants for a wide variety of clients. TRIAD can provide assistance ranging from capital improvement projects, funding assistance, environmental analysis, and ongoing technical/management consulting services, to planning and programming, design, and construction phase services for facilities and site infrastructures. TRIAD delivers assistance and guidance in resolving problems while providing high quality and innovative solutions through sustainable design. TRIAD can provide a turn-key project or take a limited role depending on the client's needs.

TRIAD's dedicated staff of professional engineers and designers provide personal attention and put our client's interests first. They are well versed with the Federal and State regulations that relate to wastewater systems as well as all of the ins and outs of the funding agencies.

Our background includes new facilities of varying magnitude, as well as system expansion and cost-effective rehabilitation of existing systems. TRIAD can provide operation and maintenance assistance as well as troubleshooting systems.

GEOTECHNICAL ENGINEERING SERVICES

TRIAD has conducted a wide variety of geotechnical engineering services for thousands of projects since the inception of the firm. Our clients include industrial and mining companies, governmental agencies, contractors, architect, engineers, developers, owners, and commercial organizations. Many of TRIAD's engineers have advanced degrees with the major emphasis on geotechnical engineering. The combined education and professional experience of the staff provide our clients with cost effective and practical solutions for the most difficult soil and groundwater problems.

Geotechnical projects have included investigations for shopping centers, communication towers, water and petroleum product storage tanks, coal and mineral processing facilities, waste management facilities, bridges and highways, hospitals, churches, schools, and impoundments of all types.

SURVEYING AND MAPPING

TRIAD has completed numerous mapping projects since our inception in 1975. These projects have included performing ground control for aerial mapping, field mapping of specific sites and/or obscured areas, and field mapping of in-stream topography. TRIAD has performed topographic surveying and mapping and construction layout for large retail shopping outlets, as well as construction layout for major bridge/roadway projects under construction for the West Virginia Department of Transportation. TRIAD utilizes state of the art tools and equipment including Global Positioning system base station and portable GPS HF radio receivers, as well as total station theodolites with electronic data collectors. Maps and plats are developed in either AutoCADD or Microstation format.

TRIAD maintains quality control by adherence to our standard Operating Procedures Manual for Surveying. This document is continuously updated to stay abreast of new survey innovations and accuracy standards. All topographic map development is completed to the standards set forth by the National Map Accuracy Standards or other appropriate quality standards. MSHA and OSHA Hazwoper trained survey crews are available for hazardous work environments.

TRIAD currently can field up to 15 experienced 2 and 3 man survey parties. Personnel making up these parties consist of licensed land surveyors, experienced instrument and rodmen. TRIAD possesses the most modern equipment available to perform a boundary survey, monumentation, and the lay-out of this project.

SIMILAR PROJECTS

TRIAD has successfully completed numerous projects in similar size and nature of the Wasterwater Facilities Improvements at Canaan Valley Resort. This and the following four (4) pages demonstrate Triad's knowledge and experience of successfully completing these similar projects.

Nitro Regional Wastewater Utility

Construction of the Poca River Road wastewater collection system extension that served 350 customers and included five (5) pump stations. Total project cost \$2,700,000.

Nitro Regional Wastewater Utility

NPDES Permit Renewal/ Negotiations. Preparation of preliminary estimates/ documents to outline the long term control plan for combined sewer overflows.

South Putnam PSD

Wrote a preliminary engineering study for the Vintroux Road wastewater collection system extension. Total estimated project cost \$1,750,000.

South Putnam PSD

Designed the Vintroux Road/ U.S. Route 35 wastewater collection system that served 67 residential and commercial customers. Project included three (3) submersible pump stations and seven individual grinder pump stations.

Nitro Regional Wastewater Utility

Design and construction management of a sanitary/ storm sewer separation project. Total project cost \$1,700,000.

Nitro Regional Wastewater Utility

Design and construction management of a wastewater treatment plant upgrade. The project consisted of a 0.65 MGD packaged treatment unit, a 1.2 meter belt filter press with building, a 150,000 gallon aerobic digester, and headworks upgrade. Total project cost \$2,700,000.

City of Glenville, WV

Wrote the facilities planning report for a wastewater treatment plant upgrade, which included a sequencing batch reactor (SBR), belt filter press, additional clarification, and headworks as well as the collection system extension to various areas of the City and to the proposed \$100 million Federal Prison. Total estimated project cost \$7,500,000.

SIMILAR PROJECTS

City of Huntington, WV

Construction management of the Orchard Avenue wastewater collection system extension. Permitting and consulting for the Hal Greer Boulevard wastewater collection system extension project.

City of Paden City, WV

Performed a Sanitary Sewer Evaluation Study (SSES) on the entire wastewater treatment and collection system. Study included system mapping, Closed Circuit Television (CCTV) of over 15 miles of collection line, evaluation of problem areas and corrective measures, cost estimates, and report preparation.

Buffalo Creek PSD

Wrote the preliminary report for a \$6.6 million dollar sanitary sewer project. The project included new sanitary sewer lines along WV Route 10 and the Greenville and Taplin areas of Logan County, WV. Also included is an upgrade to the main lift station and conversion of the chlorine contact chamber into ultra-violet disinfection. The new system will serve over 500 customers.

Buffalo Creek PSD

Design of a 1.2 meter belt filter press and accessories for the wastewater treatment plant. Preparation of a Preliminary Engineering Report to extend sanitary sewer service to over 350 customers, upgrade to the existing pump station, and installing a UV Disinfection Unit. General consulting work for the wastewater system.

Central WV Regional Airport Authority (CWVRAA)

Design and construction management of a grinder pump station and force main for the civil air patrol facility, site and utility design for the terminal expansion project, and preparation of an environmental audit for the rent-a-car facility.

Town of Cairo, WV

Design and construction management of a wastewater collection system extension for the Overton Heights, Route 31 North, and Route 31 South areas. Total project cost \$1,000,000.

Town of Camden on Gauley, WV

Design and construction management of the wastewater collection system. Total project cost \$2,300,000.

Town of Cedar Grove, WV

Wrote the combined sewer overflow report for compliance with WVDEP regulations. Report included system evaluation, identification of problem areas, solutions and costs to comply with regulations.

SIMILAR PROJECTS

Salt Rock Sewer PSD, WV

Wrote the facilities planning report for a wastewater collection system extension to serve 700 customers and a treatment plant upgrade (Phase 1). Total estimated project \$10,000,000.

Camp Virgil Tate, WV

Designed bio-filter system to serve complex which has year round usage.

Town of Eleanor, WV

Designed the renovations to the existing wastewater treatment plant pump station converting it from a wet pit/ dry pit station to a triplex submersible station.

City of St. Albans, WV

Design of the collection system pump stations for the Strawberry Road wastewater collection system extension and the headworks for the new SBR wastewater treatment plant.

Craigsville PSD, WV

Wrote the facilities planning report for a wastewater collection system extension to three (3) separate areas and the wastewater treatment plant upgrade which included a belt filter press and piping modifications. Total estimated project cost \$3,500,000.

Crab Orchard-MacArthur PSD, WV

Performed the line layout, hydraulic calculations, and pump station designs for the Community of Midway wastewater collection system extension. Project provided sewer service to approximately 350 families. Project was funded through USDA Rural Utility Service.

Town of New Haven, Wastewater Treatment Plant and Collection System Improvements, New Haven, WV

Improvements to the Treatment Plant include adding air to the existing sludge holding tank converting it into a Digester, Installing Ultra-Violet (UV) disinfection in order to abandon the Chlorine Contact structure. After conducting smoke testing and some camera work in the existing collection system, the project includes replacement of a few hundred feet of 8" gravity lines. Project includes upgrading three major pump stations from Wet-Well/Dry-Well to Submersible pump stations.

Town of Pratt, Wastewater Treatment Plant and Collection System Improvements, Pratt, WV

The Town of Pratt recently hired Triad to design improvements to the Wastewater Treatment Plant and their Existing Collection System. Mr. Ramsey was instrumental in Triad being hired for this project and will function as Project Manager. Scope of Project is currently being developed.

SIMILAR PROJECTS

Town of Mason, Wastewater Treatment Plant and Collection System Improvements, Mason, WV

The Town hired Triad Engineering as their Engineer of record for the sewer system late 2006 to address issues as they may happen. Most recently Triad has been hired to design some upgrades at the Wastewater Treatment Plant, which include enclosing and repairing the Bar Screen, Installation of Anti-Roll Baffles in both Clarifiers, Replacement of UV Intensity Meter, Repair of Effluent Line to Ohio River and Generator for the Park Pump Station. Tasks have included renewal of NPDES permit and assistance with Compliance Order from DEP. Triad also designed a small extension to the collection system that serves a portion of the Lyons Addition Subdivision.

Regional Jail Authority, State of West Virginia, Various Locations

Triad provided design and construction inspection for onsite and offsite utilities for nine (9) Regional Jails Throughout West Virginia. Every facility required a grinder pump station with a Muffin Monster Grinder in addition to the gravity service lines.

Town of Belle Sanitary Board, Wastewater Treatment plant and Collection System, Belle, WV

The project has been broken into two phases.

Phase I consists of designing a collection system upgrade which includes replacement of approximately 10,000 LF of 6-inch to 12-inch gravity sewer line, relining of 3,500 LF of 15-inch and 18-inch gravity sewer line, rehabilitation of 75 manholes, upgrades to two (2) Lift Stations and separation of 1,500 LF of Storm and Sanitary lines.

Phase II consists of an upgrade to the existing 0.3 MGD Wastewater Treatment Facility. The upgrade includes converting the existing Aeration Basins to Sequencing Batch Reactors (SBR), converting the existing Clarifiers to a Sludge Digester, abandoning the existing Chlorine Contact Tank and installing Ultra-Violet (UV) Disinfection unit, abandoning the existing Sludge Bagging System and installing a Belt Filter Press, new Master Meter, an Emergency Generator, and other Miscellaneous Improvements.

Town of Grantsville, Grantsville, WV

Wastewater Treatment Plant Upgrade which included replacement of equipment in the Oxidation Ditches, upgrades to Electrical Controls, Replacement of Sand Drying Beds with Belt Press, Telemetry at the plant and all pump stations. Upgrades on all five Pump Stations, and Force Main upgrades. Project was funded with a Small Cities Block Grant.

SIMILAR PROJECTS

Charleston Sanitary Board, Ruthtdale Wastewater Collection System, City of Charleston, WV

Project provided sewer service to approximately 600 families and to Southridge Industrial Park along Corridor G. Project consisted of 17,000 LF 12-inch, 37,000 LF 8-inch and 24,000 LF of gravity sewer lines, over 10,000 LF of 11/2-inch to 6-inch force main lines, approximately 275 manholes, 21 Grinder Pump Stations, 2 large Submersible Pump Stations and one large Triplex Pump Station.

Flatwoods-Canoe Run PSD, WV

Performed the line layout, hydraulic calculations, and pump station designs for the Town of Flatwoods and Weyhauser wastewater collection system extension.

The Meadows of Hawthorne, WV

Layout and design of lots, roads, wastewater collection system and water distribution system for the Pocahontas County subdivision.

Town of Winfield, WV

General services for both the Town and Sanitary Board. Services included planning, design, and construction management of various storm water and development projects.

Ellenboro Lamberton PSD, WV

Designed 100,000 GPD wastewater treatment plant including tertiary sand filters and UV Disinfection to serve rural community with manufacturing facility and school complex.

Middleborne, West Virginia

DEP project for renovation of 100,000 GPD oxidation ditch. Work included rotor replacement, aerobic digester, new headworks, UV disinfection, and garage.

Point Pleasant, West Virginia

Designed and managed pump station and forcemain crossing the Kanawha River

Charleston Sanitary Board, Trojan Steel Extension, Charleston, WV

Project consisted of 8-inch gravity service line to Trojan Steel, Sport Mart and Marina and a duplex pump station, master meter and 2-inch force main. The force main was connected to a gravity line outside of the City of South Charleston's Wastewater Treatment Plant.

Manchester Local School District, Manchester, Ohio

Designed and secured the necessary permits for site work, utilities, pump station and force main to serve the new elementary school.

REFERENCES

Mrs. Mindy Kearns, Mayor
Town of Mason
1601 Second Street
Mason, WV 25260
304-773-5200

Mr. Stephen Smith, Mayor
Town of New Haven
P.O. Box 217
New Haven, WV 25562
304-882-3203

Mr. Larry Conley, Mayor
Town of Belle
1100 East Dupont Avenue
Belle, WV 25015
304-949-3841

Mr. Alfred Abshire, Board Member
Branchland-Midkiff PSD
Route 2, Box 496
Branchland, WV 25506-9756
304-778-7006

Mr. Marty Mariotti, General Manager
Green Valley-Glenwood PSD
P.O. Box 6099
Bluefield, WV 24701
304-325-6832

Ms. Ann Neese, Mayor
Town of Pratt
203 Center Street
Pratt, WV 25102
304-442-5316

Mr. Jerry Dotson
General Manager
Union Williams PSD
P.O. Box 243
Waverly, WV 26184
304-464-5121

WV DIVISION OF NATURAL RESOURCES
CANAAN VALLEY RESORT STATE PARK
WASTEWATER TREATMENT AND COLLECTION SYSTEM IMPROVEMENTS

PROJECT DETAILS

The WV Division of Natural Resources (DNR) is planning to make improvements to the existing wastewater treatment and collection systems within Canaan Valley Resort State Park. The work includes performing Sanitary Sewer Evaluation Studies (SSES) on three (3) specific areas; Cabin area, Ski area, and Campground Area. The remaining work includes rehabilitation of the five (5) existing wastewater treatment systems.

The SSES is needed to determine the location of problem areas within the collection system. We believe this study should consist of the following:

- System mapping (if not already available)
- Manhole inspections
- Flow monitor portions of the system
- Smoke test all or portions of the system
- Perform internal pipe inspections by use of Closed Circuit Television (CCTV)
- Evaluation of corrective measures
- Determination of costs associated with the corrective measures
- Evaluation of the collection system's capacity
- Recommendations for improvements that will increase the system's capacity and provide associated costs

TRIAD's team of employees has substantial experience with sewer rehabilitation projects of this type. TRIAD has a vast amount of experiencing in the planning, design and construction administration of wastewater collection and treatment facilities, specifically decentralized systems.

TRIAD is one (1) of only a handful of engineering firms that can provide you with a true turn key project. Most other firms require sub-consultants for surveying, geotechnical, and/or construction inspection services. Keeping all services under one consultant eliminates costly overruns and delays as well as provides for 100% accountability during the entire project.

APPROACH

PHASE 1 – INITIAL INVESTIGATION AND PRELIMINARY APPROVAL

Task 1 – Review Existing Information

TRIAD will perform a thorough review of all existing information available pertaining to the Canaan Valley Resort State Park's existing wastewater treatment and collection systems. TRIAD will supply the WV DNR with an assessment of the information and propose alternatives for improvements.

Task 2 – Project Planning Meetings

We will schedule a meeting(s) with the WV DNR to discuss the needs and possible solutions. We will also schedule a meeting(s) with the WV Division of Environmental Protection (DEP) and WV Department of Health to present the preliminary ideas and receive their input.

PHASE 2 – PRELIMINARY AND FINAL DESIGN

The following tasks will be accomplished as part of the preliminary and final design of the Canaan Valley Resort State Park's Wastewater Treatment and Collection System Improvements project.

Task 1 – Selection of Alternative

TRIAD will recommend specific alternatives for making improvements to the wastewater treatment and collection systems. The decision will be based on cost, feasibility of construction, operation and maintenance issues, and input from the WV DNR, WV DEP, and WV Health Department.

Task 2 – System Mapping

If system mapping is not already available, TRIAD will obtain aerial mapping and perform the necessary survey work to provide accurate and up-to-date mapping of the area.

Task 3 – Preliminary Design

TRIAD will perform preliminary design of the proposed improvements, including geotechnical investigations, line layout, and hydraulic analysis. We will then review the design with the WV DNR.

APPROACH

Task 4 – Final Design

TRIAD will incorporate any comments offered by the WV DNR as well as the WV DEP and WV Health Department into the final design. We will then proceed with detailing the preliminary design which will include:

- System Profiles
- Design of System Components
- Selection of Equipment
- Preparation of Details
- Preparation of Specifications
- Preparation of Contract Documents
- Preparation of a Final Cost Estimate
- Preparation of Design Report

We will then review the final design with the WV DNR and make any necessary changes.

Task 5 – Final Approval

TRIAD will be responsible for completing all permit applications, conducting meetings with various regulatory agencies, and making final revisions to the plans and specifications.

PHASE 3 – BIDDING PHASE

TRIAD will assist the WV DNR in preparing and placing the advertisement for construction of the proposed project. We will conduct a pre-bid meeting, address all contractor questions, issue addendum, if any, conduct the bid opening, certify the bids, and make a recommendation to the WV DNR.

APPROACH

PHASE 4 – CONSTRUCTION ADMINISTRATION AND INSPECTION

TRIAD can provide construction administration and inspections services for the duration of the project. Triad will provide the following services during construction:

- Conduct a Pre-Construction Meeting
- Process Monthly Pay Requests
- Review Shop Drawings
- Attend Monthly Meetings
- Conduct a Semi-Final and Final Inspection
- Preparation of As-Built Drawings
- Preparation of O&M Manuals
- Assist the WV DNR in Start up and Training

In addition, TRIAD can provide a full time construction inspector to monitor the progress of the contractor. This inspector can be on site any time the contractor is working.

WHY SELECT TRIAD AS THE CONSULTANT FOR THE IMPROVEMENTS TO THE WASTEWATER FACILITIES AT CANAAN VALLEY RESORT?

Vast Experience in the planning, design, and construction management of wastewater systems.

Experienced and highly qualified personnel handling your project.

Good understanding of the DNR's goals.

Substantial resources dedicated to completing the project quickly.

Experienced in dealing with the regulatory agencies.

The "Know How" to keep your project moving forward.

Innovative ideas that translate to cost savings.

The client's interests are the NUMBER ONE priority.

Familiarity with project area.

Excellent performance record.

Attachment A

Affidavit



STATE OF WEST VIRGINIA
Purchasing Division**PURCHASING AFFIDAVIT**

West Virginia Code §5A-3-10a states: 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 the debt owed is an amount greater than one thousand dollars in the aggregate

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.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law, or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "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 exceeds five percent of the total contract amount.

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this 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.

LICENSING: Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

CONFIDENTIALITY: The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendors should visit www.state.wv.us/admin/purchase/privacy for the Notice of Agency Confidentiality Policies.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), it is hereby certified that the vendor acknowledges the information in this said affidavit and are in compliance with the requirements as stated.

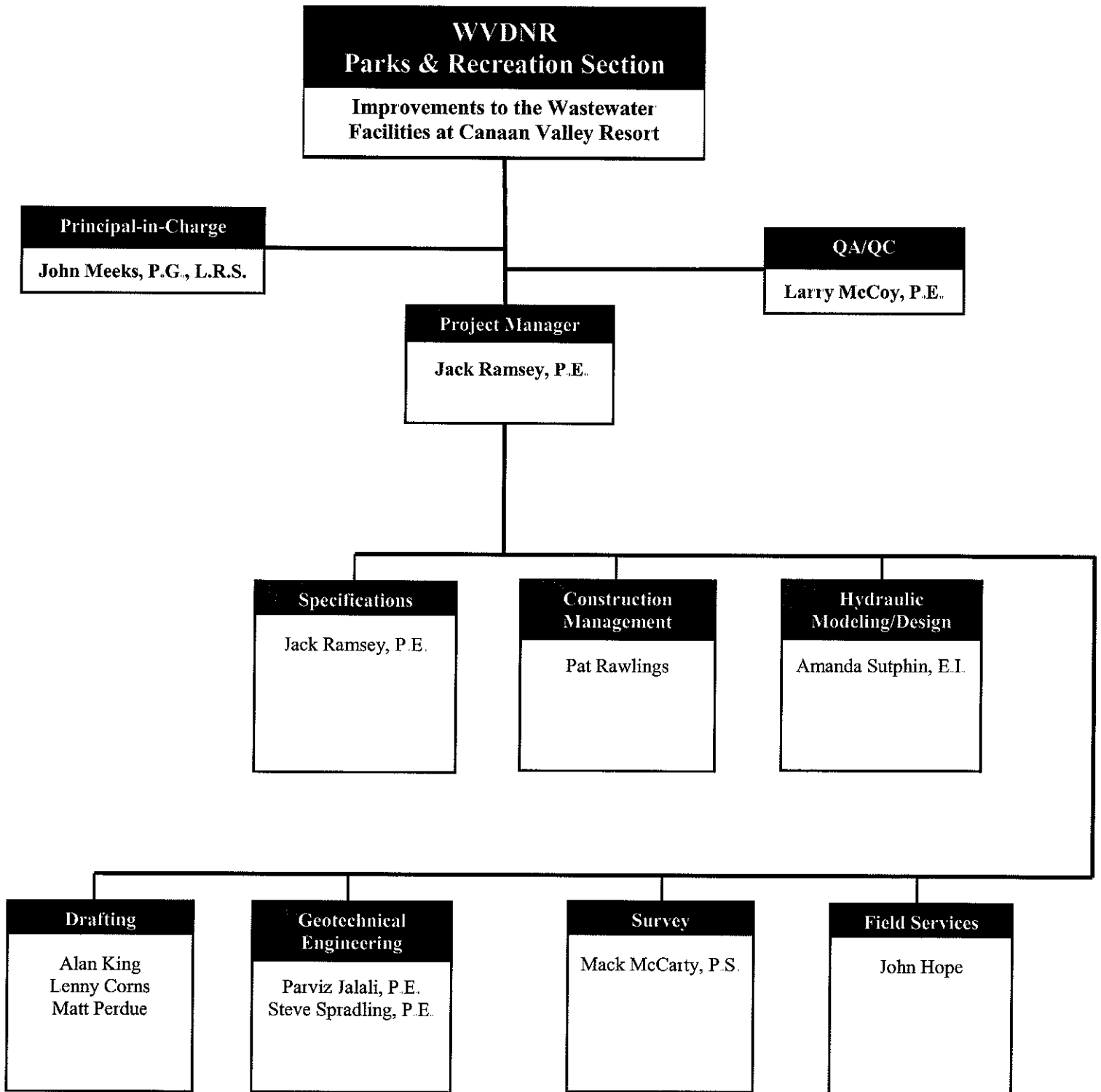
Vendor's Name: Triad Engineering, Inc.

Authorized Signature: Jack E. Ramsey Date: 10/07/08

Attachment B

Resumes of Key Personnel





John M. Meeks, PG, LRS
Branch Manager/Senior Geologist

EDUCATION

BS, Geology
Graduate Studies

West Virginia University, Morgantown, WV, 1980
Marshall University Graduate College

REGISTRATIONS AND LICENSES

Professional Geologist
Licensed Remediation Specialist

Kentucky (No. 556)
West Virginia (No. 008)

DIRECT WORK EXPERIENCE AND PRIMARY RESPONSIBILITIES

Triad Engineering, Inc.,
St. Albans, WV

Branch Manager/Senior Geologist
2001 - Present

Triad Engineering, Inc.,
St. Albans, WV

Environmental Services Manager/Senior Geologist
1990 - 2001

WV Office of Waste Management,
Charleston, WV

Assistant Chief
1985 - 1990

UTD Corp.,
Elkins, WV

Staff Geologist
1982 - 1985

GSI, Inc.,
Huntington, WV

Staff Geologist
1980 - 1982

PROFESSIONAL ORGANIZATION/ASSOCIATIONS

Air & Waste Management Association, WV Chapter

WV Chamber of Commerce, Environmental Committee – Former Waste Team Chair

WVDEP Waste Roundtable – Founding Member

Putnam County Chamber of Commerce – Education Committee

CURRENT POSITION RESPONSIBILITIES

Mr. Meeks is currently Vice President and Branch Manager of the St. Albans office of Triad. In this capacity, Mr. Meeks is responsible for technical quality and management control of all projects in the region. His technical work includes environmental assessment of groundwater, surface water, and soil; brownfield redevelopment projects; wetland mitigation design and permitting; waste management facility design and permitting; and remediation system design and implementation. Mr. Meeks also gained a thorough knowledge of environmental regulatory requirements through his experience with WV Division of Environmental Protection, where he supervised statewide enforcement of waste management regulations; including hazardous waste and solid waste regulatory programs, as well as underground storage tank regulations. Prior to his tenure at WV Division of Environmental Protection, Mr. Meeks managed environmental assessment projects throughout West Virginia and the central Appalachian region. Mr. Meeks is an occasional guest lecturer and educator regarding brownfield redevelopment, wetland treatment systems, groundwater assessment and remediation, and other environmental topics at community and business associations, technical conferences, and college courses.

TRIAD
Triad Engineering, Inc.

PROJECT EXPERIENCE SUMMARY

Union Carbide Corporation (DOW Chemical), South Charleston, WV

Provided technical and project management services to plant personnel and the Remediation Technologies Group from 1990 through present:

- As a Project Manager, leading a team of engineers and scientists evaluating and preparing remedial design drawings and construction documents for closure of a Superfund landfill unit located at the former Marietta, OH plant. Project scope included evaluation of alternative cover designs and design of a specialized leachate collection and pumping system. Subsequent work included onsite inspection and certification of the construction.
- As Project Manager, currently responsible for budget and schedule in the oversight of closure of three Superfund units at the former Marietta, OH facility. Our firm's responsibilities include Assistant Site Superintendent and Quality Assurance Officer, providing liaison with representatives of surrounding manufacturing facilities as well as state and federal regulatory officials, interpretation of plans and specifications prepared by others, redesign of certain elements to optimize cost and performance, and preparation of certification documents for US EPA and state regulatory representatives.
- As Senior Geologist, upgrading and redesigning a groundwater extraction system at a former RCRA unit where disposal of wastes had impacted groundwater quality. Project included removal, redesign, and replacement of seven existing recovery wells; evaluation and selection of compressed air actuated product and groundwater pumps, design of compressed air distribution and waste removal system piping; design and retrofit of oil/water separator; evaluation and selection of electrical systems and controls.

Bayer Crop Science, USA, Institute, WV

- As Senior Geologist, responsible for annual re-evaluation of groundwater conditions at a wastewater treatment facility and hazardous waste landfill, including evaluation, interpretation, and presentation of quarterly groundwater quality data; evaluation of an existing corrective action system through groundwater flow modeling; and statistical analysis of data for evidence of groundwater impacts.
- As Project Manager and Senior Geologist, responsible for preparation of groundwater and landfill portions of the facility RCRA hazardous waste management permit.
- As Project Manager and Senior Geologist, preparing Alternate Concentration Limits (ACLs) based on risk assessment of potential human health and ecological impacts to surface waters hydraulically connected to groundwater flowing beneath a wastewater treatment unit.
- As Senior Geologist, planned and oversaw implementation of approximately forty site assessments within a major chemical manufacturing facility with the purpose of evaluating sites for the presence of soil and groundwater contamination which could impact construction of pipelines and other utilities.
- As Project Manager, prepared closure plans, including detailed engineering design and specification, for three hazardous waste impoundments former used as part of the facility waste water treatment system. Project included demolition of existing aerators and mixers, bench scale sludge stabilization studies and stabilization mix design, installation of leachate collection system, and closure cap design and installation.
- As Project Manager, provided engineering design and permitting services for expansion of an existing on-site hazardous waste landfill. A preliminary design concept was prepared for review and approval by facility representatives, followed by preparation of final preliminary design. After acceptance of the preliminary design by facility representatives, Triad prepared a final design package for submission to WVDEP. Finally, an engineering design report, drawings and specifications were prepared for construction of the facility.

Project Experience

OSi Specialties, Sistersville, WV

- As Senior Geologist, performed a facility-wide groundwater evaluation to review the effectiveness of an existing groundwater collection system (designed by TRIAD ENGINEERING) in the capture of organic contaminants (primarily chlorobenzene) and inorganic contaminants (primarily copper) released from onsite solid waste management units. This project included the collection of surface water and groundwater elevation data and water quality data over the course of a year from approximately fifty monitoring wells and piezometers, and preparation of contaminant concentration maps and groundwater flow maps representing seasonal variation within the groundwater regime.
- As Project Manager, oversaw remedial design of a formerly closed hazardous waste landfill where waste dewatering has resulted in excessive closure cap settlement. Project included evaluation of the use of alternate fill, including Styrofoam, ash, and other lightweight materials, and the preparation of construction drawings and specifications.

West Virginia Department of Transportation, Charleston, WV

As Project Manager oversaw implementation of annual contract for investigation of hazardous materials and petroleum release sites for WV DOT. Projects have included evaluation of maintenance facilities for releases of organic and inorganic contaminants to soils, groundwater and surface water; investigation of suspect properties slated for right of way acquisition; installation of borings, direct push soil sample locations, and monitoring wells; preparation of cost estimates and specifications for remediation of sites impacted by releases of hazardous materials.

West Virginia Department of Environmental Protection, Charleston, WV

- As Program Manager overseeing implementation of contract services for performing site assessments at potential Superfund sites across West Virginia. Performing various services under CERCLA, including preliminary human health and ecological risk assessments following USEPA and the WV Voluntary Remediation program guidelines.
- As Program Manager, overseeing contract services to conduct remedial evaluations and remedial design services at abandoned landfills across West Virginia, including soil, geologic, and groundwater investigations, closure cap evaluation and design, and leachate collection and treatment system design.

Structures Resources, Inc., Huntington, WV

As Project Manager and Senior Geologist, completed an extensive site assessment of all environmental media and evaluated human and ecological risk for purposes of completing a voluntary remediation project under the WV Brownfields Program. Project included sampling of soils, sediment, groundwater and surface water; preparation of contaminant distribution maps; fate and transport modeling of volatile organic vapors from groundwater and soils to surface structures; fate and transport modeling of groundwater contaminant discharge to an adjacent surface water body; risk assessment calculations for residential and non-residential future land use scenarios using Superfund RAGS methodologies; and design of a natural attenuation groundwater remediation plan.

Structures Resources, Inc., Huntington, WV

As Licensed Remediation Specialist, obtained Certificates of Completion for three separate parcels under the West Virginia Voluntary Remediation Program at a former heavy manufacturing site slated for commercial redevelopment as an office complex with a day care center. Contaminants of concern included TCE in groundwater and soil, and heavy metals contamination in soil. An extensive site assessment of all environmental media was required as well as both human and ecological risk assessment. Project included sampling of soils, sediment, groundwater and surface water; preparation of contaminant distribution maps; fate and transport modeling of volatile organic vapors from groundwater and soils to surface structures; fate and transport modeling of groundwater contaminant discharge to an adjacent surface water body; risk assessment calculations for residential and non-residential future land use scenarios using Superfund RAGS methodologies; and design of a natural attenuation groundwater remediation plan.

Project Experience

ECR Investment Group, Morgantown, WV

As Licensed Remediation Specialist, obtained Certificates of Completion for four separate parcels under the WV Voluntary Remediation Program. Contaminants included LNAPLs and DNAPLs, as well as foundry and plating-related heavy metals contamination in groundwater and soil. Project included sampling of soils, sediment, groundwater and surface water; fate and transport modeling of volatile organic vapors to on-site structures, and groundwater contaminant discharge to an adjacent surface water body; risk assessment calculations for residential and non-residential future land use scenarios; and design of a natural attenuation groundwater remediation plan.

Dominion Resources, Inc., Pittsburgh, PA

As Licensed Remediation Specialist, Senior Geologist, and Project Manager, currently directing the assessment and remediation of free phase petroleum release to groundwater and surface water at the Hastings, WV natural gas extraction plant. Contaminants of concern at this WV Voluntary Remediation Program site include VOCs, SVOCs, and heavy metals. The undetected subsurface release of several hundred gallons of natural gas liquids from an oil/water separator to groundwater has resulted in seepage of free phase petroleum to the adjacent stream. Project responsibilities include liaison with state voluntary remediation program representatives, design and oversight of sampling and analysis, preparation of site assessment documents, design of remedial action, and preparation of final report.

West Virginia Parkways Economic Development Authority, Charleston, WV

As Licensed Remediation Specialist, utilized previously collected environmental data to obtain a certificate of completion under state Voluntary Remediation Program for former heavy equipment maintenance facility. Contaminants of concern included BTEX constituents and SVOCs.

Putnam County Development Authority, Winfield, WV

As Project Manager and Senior Scientist, oversaw the delineation and mitigation of more than 20 acres of jurisdictional wetland area for a proposed business park. Prepared design drawings and technical specifications for construction of replacement wetlands. This replacement wetland enhanced the existing wetland by enlarging its contiguous size, introducing varied hydroperiods, and introducing richer, more varied plant species. The wetland was integrated into the business park development to provide "green space", and provides a separation between warehouse-style land use and professional-style land use within the property. This project won Gold Award from WV Chapter of American Council of Engineering Companies.

Natural Wetland Treatment System for Landfill Leachate, Mason County, WV

As Designer and Project Manager, designed an innovative wetland-based treatment system to address an abandoned landfill leachate discharge. This included design of several seep collection systems and associated sewer lines, as well as two independent wetland treatment systems. The treatment systems included an alternating aerobic/anaerobic approach to facilitate removal of organic (primarily ammonia nitrogen) and inorganic (primarily iron and manganese) contaminants. This design featured the use of dosing siphons to allow for spray aeration of leachate in two separate phases, each followed by a separate anaerobic treatment step.

Natural Wetland Treatment System for Mine Water, Kayford, Kanawha County, WV

As Project Manager, oversaw and assisted in design of a wetland-based treatment system to address the release of mine water to a tributary to Ten-mile Fork of Cabin Creek, near Kayford, WV. In this design, our firm provided characterization of the mine discharge quality and quantity, evaluated alternative treatment methods, performed treatment unit sizing calculations, and completed engineering plans and specifications for a sawdust/peat surface-flow wetland system coupled with limestone cascade aerators and metal sludge settling basins.

Project Experience

Natural Wetland Treatment System for Surface Water, Taplin, Logan County, WV

As Technical Advisor to the design team, assisted in the design of a surface flow wetland system to address sediment laden storm water run-off from a portion of a surface mine operation. This design allowed for the settling and treatment of the majority of storm events (<5 yr/24 hr), but included a hydraulically controlled bypass system which routed excessive flows from larger, less frequent storm events (>5 yr/24hr) to bypass the wetland system, thereby preventing damage to the system through high velocity erosion.

Environmental Impact Study, Kanawha County, WV

As Project Manager and Senior Scientist, managed and assisted in the preparation of portions of the EIS for a highway widening project for WV DOT. Sections of the EIS prepared by Triad included Noise Impacts, Surface water Impacts, Groundwater Impacts, Wetland Impacts, Threatened or Endangered Species Impacts, Mineral Resources, and Hazardous Waste.

Environmental Impact Study, Marion County, WV

As Project Manager and Senior Scientist, managed and assisted in the preparation of several sections of the EIS for a new access road between I-79 and Rivesville, WV. Sections of the EIS prepared by Triad included Noise Impacts, Surface water Impacts, Groundwater Impacts, Wetland Impacts, Threatened or Endangered Species Impacts, Mineral Resources, and Hazardous Waste.

Landfill Expansion, Ashland, KY

As Project Manager and Senior Geologist, managed and assisted in the preparation of permitting and design of a vertical expansion (VEX) of an existing landfill facility. This included construction of rock/earthen berms along the margins of the existing facility. The VEX application consisted of engineering plans, cross sections, details, and supporting calculations. Two important elements of the application included a demonstration that adequate soils were available, and that the presence of previous underground mining did not compromise the structural soundness of the berms.

Larry L. McCoy, P.E.
Senior Engineer

EDUCATION

B.S. Civil Engineering West Virginia Institute of Technology, 1969
M.S. Engineering Management West Virginia University College of Graduate Studies, 1992

REGISTRATIONS AND LICENSES

Registered Professional Engineer WV
Registered Professional Engineer PA

DIRECT WORK EXPERIENCE AND PRIMARY RESPONSIBILITIES

Triad Engineering, Inc., Senior Engineer
St. Albans, WV 2006—present

Pittsburgh Water and Sewer Authority Director of Engineering and
Pittsburgh, PA Construction
2002—2004

U.S. Army Corps of Engineers Chief, Civil Design Section
Huntington, WV 1990-2002

U.S. Army Corps of Engineers Civil Engineer
Huntington, WV 1969-1990

CURRENT POSITION RESPONSIBILITIES

Mr. McCoy brings over 35 years of design and project management experience to Triad Engineering. He has been involved in numerous aspects of civil site design, as well as water and wastewater engineering. Mr. McCoy joined Triad in 2006 to provide technical assistance regarding quality control/quality assurance as well as management of civil design projects. Before coming to Triad, Mr. McCoy served as the Director of Engineering and Construction for Pittsburgh Water and Sewer Authority. In this role he was responsible for all engineering and design work done by the Authority and City Agencies as well as private consultants and construction firms. During his tenure with the U. S. Army Corps of Engineers, he planned the work and organized and directed teams in the preparation of reports, construction contract drawings and specifications and review of shop drawings for the civil engineering features of new and rehabilitation of existing water resources projects.



Project Experience

Pittsburgh Water and Sewer Authority

Mr. McCoy was responsible for developing contracts and monitoring contract performance. He coordinated work with other City departments as well as the Port Authority of Pittsburgh, the Urban Redevelopment Authority, and the Sports and Exhibition Authority to provide the citizens of Pittsburgh and surrounding areas with a quality product for their fees and tax monies.

US Army Corps of Engineers

As the Chief, Civil Design Section, Design Branch, Mr. McCoy planned the work and organized and directed teams in the preparation of reports, construction contract drawings and specifications and review of shop drawings for the civil engineering features of new and rehabilitation of existing water resources projects including:

- flood control multipurpose dams
- water and sanitary systems
- navigation locks and dams
- nonstructural floodproofing
- redevelopment sites
- recreational facilities
- environmental restoration and mitigation
- streambank stabilization
- floodwalls and levees
- channel improvements
- highway, and railroad and utility relocations

US Army Corps of Engineers

Mr. McCoy was the lead project design engineer for RC Byrd (\$250 M) and Winfield (\$150 M) lock replacement projects. Products included design memoranda, contract drawings, technical specifications, technical briefings and briefings to the general public. In addition, Mr. McCoy actively participated in the work and technically supervised a team of 5-9 engineers and technicians in the preparation of the civil site portion as well as coordinated other disciplines in other sections, branches and divisions in the production of the plans and specifications for the lock replacement projects.

Jack E. Ramsey, P.E.
Utilities Group Manager

EDUCATION

B.S. Civil Engineering West Virginia Institute of Technology, 1994

CERTIFICATIONS, REGISTRATIONS AND LICENSES

Registered Professional Engineer West Virginia
Registered Professional Engineer Ohio

America's Registry of Outstanding Professionals 2002 / 2003
Cambridge Who's Who 2007 / 2008

DIRECT WORK EXPERIENCE AND PRIMARY RESPONSIBILITIES

Triad Engineering, Inc., Utilities Group Manager
St. Albans, WV 2006-present

QK4 Senior Project Manager
Charleston, WV 2003-2006

S&S Engineers, Inc., Project Manager
Charleston, WV 1999-2003

Dunn Engineers, Inc., Project Manager
Charleston, WV 1995-1999

Dunn Engineers, Inc., Staff Engineer
Charleston, WV 1994-1995

PROFESSIONAL ORGANIZATION/ASSOCIATIONS

American Society of Civil Engineers (ASCE)
American Planning Association

CURRENT POSITION RESPONSIBILITIES

Mr. Ramsey brings 13 years of design and project management experience to Triad Engineering. He has been involved in all aspects of water and wastewater engineering as well as general civil engineering. Mr. Ramsey came to Triad in 2006 to provide technical assistance on complex and sensitive wastewater and potable water projects and project management assistance on various wastewater and potable water projects and general civil engineering projects. In his current capacity Mr. Ramsey works on the planning, coordination, design, and construction of civil engineering projects to meet the expectations and needs of the client. Mr. Ramsey has experience in environmental engineering, civil engineering, wastewater collection, storm water conveyance, and water distribution systems, as well as wastewater and water treatment plants and storm water pollution control. Duties have included line layout, hydraulic analysis, pump and booster station designs, water storage tank design, pressure reducing station design, and plant layout and design. Mr. Ramsey has vast experience in dealing with funding and regulatory agencies. He has been instrumental in helping clients obtain loans and grants for their projects.



Project Experience

Wastewater Projects

Town of New Haven, Wastewater Treatment Plant and Collection System Improvements,
Improvements to the Treatment Plant include adding air to the existing sludge holding tank converting it into a Digester, installing Ultra-Violet (UV) disinfection in order to abandon the Chlorine Contact structure. After conducting smoke testing and some camera work in the existing collection system, the project includes replacement of a few hundred feet of 8" gravity lines. Project includes upgrading three major pump stations from Wet-Well/Dry-Well to Submersible pump stations.

Town of Mason, Wastewater Treatment Plant and Collection System Improvements,
The Town hired Triad Engineering as their Engineer of record for the sewer system late 2006 to address issues as they may happen. Most recently Triad has been hired to design some upgrades at the Wastewater Treatment Plant, which include enclosing and repairing the Bar Screen, installation of Anti-Roll Baffles in both Clarifiers, Replacement of UV Intensity Meter, Repair of Effluent Line to Ohio River and Generator for the Park Pump Station. Tasks have included renewal of NPDES permit and assistance with Compliance Order from DEP. Triad also designed a small extension to the collection system that serves a portion of the Lyons Addition Subdivision.

Town of Belle Sanitary Board, Wastewater Treatment plant and Collection System,
The project has been broken into two phases.

Phase I consists of designing a collection system upgrade which includes replacement of approximately 10,000 LF of 6-inch to 12-inch gravity sewer line, relining of 3,500 LF of 15-inch and 18-inch gravity sewer line, rehabilitation of 75 manholes, upgrades to two (2) Lift Stations and separation of 1,500 LF of Storm and Sanitary lines.

Phase II consists of an upgrade to the existing 0.3 MGD Wastewater Treatment Facility. The upgrade includes converting the existing Aeration Basins to Sequencing Batch Reactors (SBR), converting the existing Clarifiers to a Sludge Digester, abandoning the existing Chlorine Contact Tank and installing Ultra-Violet (UV) Disinfection unit, abandoning the existing Sludge Bagging System and installing a Belt Filter Press, new Master Meter, an Emergency Generator, and other Miscellaneous Improvements.

Town of Pratt, Wastewater Treatment Plant and Collection System Improvements,
The Town of Pratt recently hired Triad to design improvements to the Wastewater Treatment Plant and their Existing Collection System. Mr. Ramsey was instrumental in Triad being hired for this project and will function as Project Manager. Scope of Project is currently being developed.

Alcon Laboratories
Design of a 30,000 gpd extended aeration wastewater treatment plant which included UV disinfection and post aeration.

Buffalo Creek PSD
Wrote the preliminary report for a \$6.6 million dollar sanitary sewer project. The project included new sanitary sewer lines along WV Route 10 and the Greenville and Taplin areas of Logan County. Also included is an upgrade to the main lift station and conversion of the chlorine contact chamber into ultra-violet disinfection. The new system will serve over 500 customers.

Buffalo Creek PSD
Design of a 1.2 meter belt filter press and accessories for the wastewater treatment plant. Preparation of a Preliminary Engineering Report to extend sanitary sewer service to over 350 customers, upgrade to the existing pump station, and installing a UV Disinfection Unit. General consulting work for the wastewater system.

Project Experience

Wastewater Projects continued

Central WV Regional Airport Authority (CWVRAA)

Design and construction management of a grinder pump station and force main for the civil air patrol facility, site and utility design for the terminal expansion project, and preparation of an environmental audit for the rent-a-car facility.

City of Glenville

Wrote the facilities planning report for a wastewater treatment plant upgrade, which included a sequencing batch reactor (SBR), belt filter press, additional clarification, and headworks as well as the collection system extension to various areas of the City and to the proposed \$100 million Federal Prison. Total estimated project cost \$7,500,000.

City of Huntington

Construction management of the Orchard Avenue wastewater collection system extension. Permitting and consulting for the Hal Greer Boulevard wastewater collection system extension project.

City of Paden City

Performed a Sanitary Sewer Evaluation Study (SSES) on the entire wastewater treatment and collection system. Study included system mapping, Closed Circuit Television (CCTV) of over 15 miles of collection line, evaluation of problem areas and corrective measures, cost estimates, and report preparation.

City of St. Albans

Design of the collection system pump stations for the Strawberry Road wastewater collection system extension and the headworks for the new SBR wastewater treatment plant.

Craigsville PSD

Wrote the facilities planning report for a wastewater collection system extension to three (3) separate areas and the wastewater treatment plant upgrade which included a belt filter press and piping modifications. Total estimated project cost \$3,500,000.

Crab Orchard-MacArthur PSD

Performed the line layout, hydraulic calculations, and pump station designs for the Community of Midway wastewater collection system extension.

Flatwoods-Canoe Run PSD

Performed the line layout, hydraulic calculations, and pump station designs for the Town of Flatwoods and Weyhauser wastewater collection system extension.

Nitro Regional Wastewater Utility

Construction of the Poca River Road wastewater collection system extension that served 350 customers and included five (5) pump stations. Total project cost \$2,700,000.

Nitro Regional Wastewater Utility

NPDES Permit Renewal/ Negotiations. Preparation of preliminary estimates/ documents to outline the long term control plan for combined sewer overflows.

Nitro Regional Wastewater Utility

Design and construction management of a sanitary/ storm sewer separation project. Total project cost \$1,700,000.

Nitro Regional Wastewater Utility

Design and construction management of a wastewater treatment plant upgrade. The project consisted of a 0.65 MGD packaged treatment unit, a 1.2 meter belt filter press with building, a 150,000 gallon aerobic digester, and headworks upgrade. Total project cost \$2,700,000.

Project Experience

Water Projects

City of Glenville

Wrote the preliminary engineering report for a water line extension and treatment plant upgrade to serve the proposed \$100 million federal prison. Total estimated project cost \$3,500,000.

City of Paden City

Design and construction management of a 500 GPM air stripping water treatment plant and water system rehabilitation. Total project cost \$2,500,000.

Craigsville PSD

Construction management of a water treatment plant upgrade which included replacement of the raw water pumps, filter media and under drains, construction of a 150,000 gallon clearwell, and repainting of the existing presedimentation tank which had lead-based paint. Total project cost \$1,000,000.

Craigsville PSD

Planning, design, and construction management of a water line extension, pressure reducing station, and 150,000 gallon water storage tank that also provided service for approximately 180 customers with the City of Summersville.

Craigsville PSD

Design and construction management of a 300,000 gallon elevated water storage tank.

Silverton PSD

Design of 18 miles of water line, two (2) water storage tanks, two (2) booster stations, and one (1) pressure reducing station to serve 300+ customers throughout the district. Total estimated project cost \$4,500,000.

South Putnam PSD

Wrote preliminary engineering study for the Vintroux Road water distribution system upgrade. Total estimated project cost \$400,000.

South Putnam PSD

Design of a water system upgrade to improve water service to 57 customers along Vintroux Road.

Town of Fort Gay

Construction management of a water treatment plant upgrade that included a new raw water pump station, settling tank, pumps, and piping. Total project cost \$400,000.

Union Williams PSD

Design of over 25,000 LF of water line and a 50,000 gallon ground level water storage tank.

Project Experience

Stormwater Projects

South Putnam PSD

Wrote the Storm Water Management Plan that encompasses 3/4 of the Putnam County. Report focused on water quality as it relates to NPDES MS4 as well as water quantity.

Huntington Alloys

Preparation of a preliminary engineering report that outlined various alternatives for dealing with contaminated runoff into Pat's Branch.

Town of Belle

Preparation of the NPDES MS4 plan and application.

Town of Eleanor

Preparation of the stormwater master plan. Sized over 600 pipes throughout the Town.

WV Division of Highways

Design of drainage systems for multiple WV DOH projects.

Other Civil Engineering Projects

Fruth Pharmacy (Cross Lanes)

Performed the site layout (grading and drainage), utility design, and permitting.

Habitat for Humanity (City of Charleston)

Design of the streets, wastewater collection, water distribution, and storm water collection systems for a 50 lot subdivision located within the City of Charleston.

International Coal Group (ICG) Site

Preparation of construction plans for the ICG Corporate Headquarters (Total \$6.4 million). Plans included grading, drainage, utilities, lighting, landscaping, and erosion control in compliance with Putnam County Regulations.

Nitro Regional Wastewater Utility

Design and construction management of a retaining wall for an earth slide along 21st Street.

Teays Valley Cinemas

Performed the site grading, drainage design, and permitting.

Town of Winfield Planning Commission

Serves as the Planning Director for the Commission. Responsibilities include subdivision and building permit review to insure compliance with regulations,

PUBLICATIONS

Ramsey, J.E., 2003. "Stormwater Quantity and Quality Issues" WV Rural Water Association Fall Quarterly

Ramsey, J.E., 2006. "Rehabilitating Existing Sewer Systems" WV Rural Water Association Summer Quarterly

Patrick M. Rawlings
Senior Designer

EDUCATION

B.S. Industrial Technology

West Virginia State College, Institute, WV, 1976

Continuing Education

Public Utility Law, New Technologies in water/
wastewater filtration, pumping systems, wastewater
system evaluation and energy conservation in pump-
ing systems.

DIRECT WORK EXPERIENCE AND PRIMARY RESPONSIBILITIES

Triad Engineering, Inc.,
St. Albans, WV

Senior Designer
41 Years Experience

CURRENT POSITION RESPONSIBILITIES

Mr. Rawlings brings 41 years of design and project management experience to Triad Engineering. His current duties include responsibility for planning and conducting complete water and sewer projects with diverse designs. This work may involve areas lacking precedent. His completed work needs overview only. He works with clients, regulatory agencies, and engineering staff to verify objectives, requirements and design approaches. He mentors less experienced personnel. He plans, coordinates and directs larger and more important design projects or projects with many complex features. He administers contracts and serves as technical specialist and staff advisor. He carries out complex or unique assignments requiring the development of new or improved techniques or procedures. He is responsible for client/business development and recognizes, initiates and advances business development opportunities.

Project Experience

Wastewater Projects

Putnam PSD, Putnam County, West Virginia

Community of Midway Wastewater Collection System. Overall Project Management. The project was designed in two phases, consisting of Phase 1: 4,175 LF of 8-inch Sewer, 8,055 LF of 10-inch Sewer, 41 Manholes. Project Cost: \$930,000. Phase 2: 4,350 LF of 8-inch Sewer, 4,660 LF of 15-inch and 16-inch Sewer, 42 Manholes. Project Cost: \$650,000.

Town of Eleanor, Putnam County, West Virginia

East Fir Street Sewer Line Replacement. Overall Project Management. The project consisted of the replacement of 1,250 LF of deteriorated 8-inch clay sewer and five substandard manholes. Project cost: \$75,500.

Kapok Street Sewer Line Replacement. Overall Project Management. The project consists of the replacement of 940 LF of deteriorated 8-inch clay sewers, 650 LF of service lines and three substandard manholes. Project cost: \$110,000.

WWTP Pump Station Upgrading. Participated in the design and construction administration of the installation of a new pumping station at the WWTP for the purpose of managing wet weather flows and the prevention of back-ups in the system. Pumping capacity was increased from 500 GPM to 1,200 GPM. Project cost: \$155,000.

Union Williams PSD, Wood County, West Virginia

Waverly Wastewater System Upgrade. Overall Project Management. The project consists of a new conventional 200 GPM pumping station and force main by-passing an overloaded vacuum sewer system and manifold into the existing primary force main to the WWTP, allowing additional growth and expansion beyond the capabilities of the vacuum system. The project includes the new pumping station, as well as the analysis of 7,600 LF of new 6-inch force main combined with 7,770 LF of existing 6-inch force main. Project cost: \$805,000 (est.)

Putnam PSD, Putnam County, West Virginia

Responsible for the design and permitting, and assisted in the preparation of Contract Documents and Construction Specifications for the Fraziers Bottom wastewater collection and pumping system. The project provides service to the Fraziers Bottom area including the Putnam Business Park, and was designed to accommodate future expansion in accordance with 20-year growth projections. The project design and permitting included a dual force main crossing of the Kanawha River (a 6-inch main for current needs and a 12-inch main for ultimate capacity). Project cost: \$2,500,000.

Participated in the preparation of a Facilities Planning Report for the unsewered portions of Putnam County, including an I/I study of existing facilities and the development of collection and pumping facilities needs for the 20-year planning period. The completed report formed the basis for the development of a priority list and capital improvements program schedule for the growth and expansion of wastewater service in the Putnam PSD service area. Project cost: \$15,000,000 (est.)

Guthrie PSD, Kanawha County, West Virginia

Wastewater collection and pumping facilities. Overall Project Management. Development of a new system to serve the PSD area, lying north of the Charleston city limits. The system included two pumping stations (35 GPM and 325 GPM) and serves 400+ customers with Charleston providing treatment. Project cost: \$3,500,000.

Project Experience

Wastewater Projects continued

Flatwoods-Canoe Run PSD, Braxton County, West Virginia

Water distribution and storage and wastewater collection and pumping. Overall Project Management. The need for these two projects was created by the development of the Weyerhaeuser Strandboard facility at Heaters, West Virginia. The expansion of infrastructure was needed in order for the facility to be located in this area. The wastewater system also provides service to the Town of Flatwoods and includes four (4) pumping stations. The delivery capability of the water had to be increased by improvements at the WTP and the installation of 8-inch and 12-inch water line, much of which was used to create a by-pass of the high usage Flatwoods interchange area on I-79. Project cost (both): \$3,600,000.

Trimble Township, Athens County, Ohio

Wastewater collection, pumping and treatment. Overall Project Management for the design phase for a unique small diameter gravity collection system, including 300 GPM, 400 GPM and 550 GPM pumping stations. Construction details for aerated lagoon treatment system (5,600,000 gallon capacity) included extensive groundwater testing program, site planning and surface water control for the protection and preservation of a large wetland area adjoining the treatment facility site. Project cost: \$11,600,000. (Commendation from Ohio EPA)

Crab Orchard – MacArthur PSD, Raleigh County, West Virginia

Wastewater collection and pumping. Overall Project Management. Extension of an existing system to serve 320 new customers. The project included two pumping stations (50 GPM and 175 GPM), and was completed sufficiently under budget to allow a contract extension and add a sludge belt press and lime post treatment unit by change order. Project cost: \$3,050,000.

Project Experience

Water Projects continued

Nolan P.S.D., Mingo County, West Virginia

Water distribution, pumping and storage facilities. Overall Project Management. New water system to serve 250 users, including two 80,000 gallon storage tanks, one 30,000 gallon storage tank and two booster pumping stations (50 GPM and 175 GPM). Special design features included accommodation for planned construction of Appalachian Corridor Highway (U.S. Route 52) Project cost: \$1,850,000.

Town of Piedmont, Mineral County, West Virginia

Renovation of water treatment facilities. Overall Project Management. Renovation of rapid sand filters, building addition for separate housing of chlorination equipment and chemical storage, repair of existing rectangular concrete clarifier using Hypalon liner system and wooden truss covering, and restoration of two rectangular concrete reservoirs with Hypalon liner system and truss-joist/metal roofing system. Project cost: \$500,000.

Town of Rupert, Greenbrier County, West Virginia

Renovation/expansion of water treatment facilities. Overall Project Management. Expansion/enlargement of treatment plant buildings to house larger pressure filters (increase from 300 GPM to 500 GPM) and provide office and storage areas. Increase of clearwell capacity by 100%, isolation of chlorination equipment, increase of high service pumping capacity and complete reconstruction of the plant electrical system. Project cost: \$500,000.

Town of Anawalt, McDowell County, West Virginia

Renovation of water treatment facilities. Overall Project Management. Repair/upgrade of two 100 GPM packaged rapid sand filter units, including reconstruction of filter media, replacement of tube settlers, and upgrading of flocculation and backwash units. Renovation of treatment building to isolate chlorination equipment. Addition of aeration tower with prechlorination for sulfur control. Upgrading of high service pumps and blast cleaning and re-painting of 100,000 gallon welded steel storage tank. Project cost: \$500,000.

Town of Keystone, McDowell County, West Virginia

Renovation of water treatment facilities. Overall Project Management. Reconstruction of 100 GPM filter unit, upgrading of high service pumps and complete replacement of plant electrical system. Addition of pre-fabricated housing for chlorination equipment and installation of a 35,000 gallon welded steel contact tank. Replacement of badly deteriorated distribution mains in the town. Project cost: \$500,000.

Amanda M. Sutphin
Staff Engineer

EDUCATION

Bachelor of Science Degree in Civil Engineering, 2004
West Virginia Institute of Technology
Montgomery, West Virginia 25136

CERTIFICATIONS AND REGISTRATIONS

Engineering Intern Registration, 2004
Certificate Number: 8378

Water Distribution Design and Modeling with WaterCad, February 9, 2006
Certificate of Accomplishment, The Bentley Institute

DIRECT WORK EXPERIENCE AND PRIMARY RESPONSIBILITIES

Triad Engineering, Inc.,	Staff Engineer	
St. Albans, WV		2004 - Present
West Virginia Dept. of Highways,	Inspector	
Charleston and Martinsburg, WV		2001 - 2003

CURRENT POSITION RESPONSIBILITIES

Ms. Sutphin is currently a Staff Engineer for the Civil/Design Group in the St. Albans office of TRIAD. In this capacity, Ms. Sutphin works directly under the supervision of a Registered Professional Engineer in performing all facets of civil design. Mrs. Sutphin has assisted in the completion of a wide variety of projects including site development design on difficult sites including both surface and subsurface constraints, development and evaluation of multiple SPCC plans in West Virginia, Kentucky, Virginia, Pennsylvania, and Ohio, and water/wastewater design calculations and computer modeling on various sites throughout West Virginia, Virginia, Ohio, and Kentucky. Ms. Sutphin assists in parking lot layouts, building site layout, infrastructure routing, grading and drainage design, and drainage studies. She assists project management on various civil, geotechnical, and quality control projects. Her duties include assisting the project manager in project scheduling, coordination, budget management, client interaction, and project team coordination. In addition to assisting the project manager in the above mentioned activities, Ms. Sutphin also assists in preparation of proposals and estimates on larger, long term projects. Ms. Sutphin's duties have included hydrologic and hydraulic analysis and design, erosion and sediment control plans, storm water management, slope stability analysis, drawing and specification preparation, design, design drafting (ACAD and WaterCad), construction inspection, quality control testing, shop drawing review, permitting and report preparation. Ms. Sutphin completes engineering calculations, studies, plans, reports, and data analysis, all under the supervision of a licensed engineer. Ms. Sutphin assists in the coordinating of construction projects and in conducting interim and final inspections of construction projects to determine compliance with applicable laws, regulations, and specifications.

Project Experience

New Haven WWTP Upgrade, Mason County, West Virginia

As a Staff Engineer, Ms. Sutphin has performed engineering services for the Town of New Haven. Project included multiple site visits and field inspection working directly with the DEP and plant staff to jointly obtain a working solution that fit their needs

Manchester Local School District, Adams County, Ohio

As a Staff Engineer, Ms. Sutphin has performed engineering services for the Town of Manchester. Projects have included assisting in the completion of computer models for water distribution systems to simulate the proposed and existing water distribution system delivering potable water and fire protection to local schools. Project consisted of various permitting activities, developing specifications, field visits, and fire flow testing. Projects developed pump station renovations for sewer lines and designed the layout for gravity sewer and force main to serve combined school complex. Multiple fire flow tests were performed to ensure proper water pressure and flow for fire protection to the schools.

Town of Matewan, Mingo County, West Virginia

As a Staff Engineer, Ms. Sutphin has performed engineering services for the Town of Matewan. Project included assisting in the completion of computer models of water distribution systems to simulate the proposed and existing system. Work consists of various permitting activities, cost estimates, developing specifications, field visits, and computer design. Project consisted of bringing potable water, one 75,000 gallon water storage tank, and fire protection to an area of the community.

Town of Belle, Kanawha County, West Virginia

As a Staff Engineer, Ms. Sutphin has performed engineering services for the Town of Belle. Project included inspecting an existing sewer system for leaks and safety concerns. Work consisted of field visits and developing a manhole inspection sheet used by the inspector to accurately and quickly inspect manholes. Project consisted of studying an existing system and providing recommendations to improve problem areas located by smoke testing and visual inspection.

Town of Hartford, Mason County, West Virginia

As a Staff Engineer, Ms. Sutphin has performed engineering services for the Town of Hartford. Project included assisting in the completion of various permitting activities, developing specifications, field visits, and funding applications.

Roush Land Developers, Mason County, West Virginia

As a Staff Engineer, Ms. Sutphin has performed engineering services for the Roush Land Developers in conjunction with the Town of Hartford. Project included assisting in exploring the feasibility and costs of various permitting activities and extending water service to a potential of nine houses in a proposed subdivision. The project consisted of field visits, water distribution modeling, and client liaison.

Veterans of Foreign Wars, Mason County, West Virginia

As a Staff Engineer, Ms. Sutphin has performed engineering services for the Veterans of Foreign Wars Post in Mason County. Project included exploring the feasibility and costs associated with constructing a sewer service line to the Town's sewer collection system.

Lyons Addition, Mason County, West Virginia

As a Staff Engineer, Ms. Sutphin has performed engineering services for the Town of New Haven. Project consisted of various permitting activities, developing specifications, field visits, and design. Project consists of bringing sewer to the community. Work included obtaining school easement and right-of-way, health permit, sewer line layout evaluation, and developing specifications and plans.

Project Experience

ALCON WWTP Expansion, Cabell County, West Virginia

As a Staff Engineer, Ms. Sutphin has performed engineering services for Alcon Manufacturing. Project included assisting in the design of an additional waste water treatment package plant. Work consisted of various permitting activities, site design, developing specifications, field visits, and construction package preparation. Project consists of expanding waste capacity for Alcon Manufacturing.

New Haven Aerial Sewer, Mason County, West Virginia

As a Staff Engineer, Ms. Sutphin has performed engineering services for the Town of New Haven. Project included multiple site visits and field inspection working directly with the DEP, DOH, and plant staff to jointly obtain a working solution that fit their needs. The project included replacing an existing 10 inch ductile iron pipe supported above a tributary to the Ohio River on electric power poles. The sewer pipe was greatly deformed from its original layout. Ms. Sutphin assisted in designing a system of hangers, brackets, anchors, and other appurtenances to attach a new sewer line to the existing bridge running parallel to the existing 10 inch ductile iron pipe. Work included permitting, site visits, and design calculations.

Town of Moorefield, Hardy County, West Virginia

As a Staff Engineer, Ms. Sutphin has performed engineering services for the Town of Moorefield. Ms. Sutphin assisted in completing a Farmland Conversion Rating and required correspondence for funding packages and reports.

Desco Federal Credit Union, Boyd County, Kentucky

As a Staff Engineer, Ms. Sutphin has performed engineering services for Boyd County, Kentucky. Project included assisting in the completion of drainage calculations and site plan. Work consisted of various permitting activities and developing specifications.

Cabell Huntington Hospital, Cabell County, West Virginia

As a Staff Engineer, Ms. Sutphin has performed engineering services for Cabell Huntington Hospital. Projects have included assisting in the completion of parking lot and site design. Drainage calculations were performed to design storm water retention systems and size storm water distribution systems. Ms. Sutphin aided in the design of grading and drainage plans.

Liberty Square Parking Lot, Putnam County, West Virginia

As a Staff Engineer, Ms. Sutphin has performed engineering services for the repair of Liberty Square Parking Lot in Putnam County, West Virginia. Project included assisting in the formulation of recommendations on how to fix various problems found on the existing parking lot. The work consisted of design package preparation, preparation of specifications, quantity estimation, and client liaison in the field.

Union Carbide Corporation (Dow Chemical), South Charleston, West Virginia

As a Staff Engineer, Ms. Sutphin has performed engineering services for Union Carbide (Dow). Projects have included the completion of Monitoring and Emergency Warning Plans for Holz and Ward Impoundments.

Equitable Production Company, Pittsburgh, PA

As a Staff Engineer, Ms. Sutphin has generated various secondary containment designs and Spill Prevention Controls and Countermeasures (SPCC) Plans for gas well sites in WV, VA, OH, KY, and PA. The purpose of the secondary containment designs is to meet the requirements of the facility Spill Prevention Controls and Countermeasures (SPCC) Plan. The SPCC plan is required to provide a corrective action plan in the event of a petroleum products spill on Equitable Productions sites. Work on these sites consist of site surveying to generate existing conditions mapping, design of secondary containment facilities if the existing facility does not meet requirements, preparation of reports and specifications, and recommendations of how to improve the site.

Project Experience

PROJECT EXPERIENCE SUMMARY

WV Department of Environmental Protection, Charleston, West Virginia

As a Staff Engineer, Ms. Sutphin has performed various engineering services for the WVDEP on multiple sites. Projects have included assisting in completion of Acid Mine Drainage Reclamation projects. The work has consisted of design package preparation, preparation of specifications, permitting, quantity estimation, and client liaison in the field.

Heeter Construction Inc., Logan County, West Virginia

As a Staff Engineer, Ms. Sutphin has performed engineering services for the Heeter Construction, Inc. in Logan County. The project consisted of construction of an excess spoil area to maintain approximately 1,053,000 cubic yards of fill volume. The work elements consisted of regrade work, drainage design, channel realignment, construction of a sediment basin, installation of wet mine seal, and other associated work. Two types of limestone rip rap channels were designed to redirect stormwater and mine drainage from an existing portal. The work has consisted of design package preparation, preparation of specifications, permitting, and construction quantity estimation.

Yeager Airport, Charleston, West Virginia

As a Staff Engineer, Ms. Sutphin has assisted in various engineering services for Yeager Airport. Projects have included assisting in completion of safety area improvements. The work has consisted of design package preparation, preparation of specifications, and construction quantity estimation.

Earnest M. McCarty Jr., (Mack), P.S.
Project Manager-Surveying Department

EDUCATION

B.S. Civil Engineering Technology	WV Institute of Technology, 1992
A.S. Surveying Technology	WV Institute of Technology, 1991
A.S. Drafting and Design	WV Institute of Technology, 1991

REGISTRATIONS AND LICENSES

Licensed Professional Surveyor:	West Virginia	(No.1001)
	Pennsylvania	(No.SU057606)
	Tennessee	(No.2140)
	Kentucky	(No.3666)

PROFESSIONAL ASSOCIATIONS AND ORGAIZATIONS

Society of American Military Engineers	Post President-2006
Huntington Post	Member Since 1998
West Virginia Association of Professional Surveyors	Member Since 1994

DIRECT WORK EXPERIENCE AND PRIMARY RESPONSIBILITIES

Triad Engineering, Inc., St. Albans, WV	Project Manager 2004 - Present
Woolpert LLP, St. Albans, WV	Project Manager 1996 - 2004
Chapman Technical Group, St. Albans, WV	Project Surveyor 1994 - 1996
Pray Construction Company, St. Albans, WV	Project Surveyor 1992 - 1994

CURRENT POSITION RESPONSIBILITIES

Mr. McCarty is currently the Project Manager of the Surveying Department for the St. Albans office of TRIAD. Having managed and completed a wide variety of projects including cadastral boundary surveys, boundary records research, conventional horizontal and vertical control networks, geodetic control surveys, topographic surveys, hydrographic surveys and photogrammetric control surveys. Mr. McCarty is proficient in the use of modern equipment including total stations, global positioning systems, automatic levels, digital levels and survey grade hydrographic equipment. Mr. McCarty is also well versed in the use of many forms of electronic data collection, data processing, and bringing it into drawing multiple CADD platforms for drawing development. Mr. McCarty is trained and proficient in the use of AutoDesk Land Development Desktop, Bentley MicroStation, Trimble Geomatics Office, Trimble Pathfinder Office, C & G Survey Software, Eagle Point, Microsoft Office Package including Word, Excel, Access, Outlook, PowerPoint and Project and the WordPerfect Office Suite of products. Mr. McCarty is also familiar with older surveying equipment, their history of usage, and how they apply when performing modern retracements.

TRIAD
TRIAD ENGINEERING, Inc.

Project Experience

Abandoned Mine Lands, Statewide Contract, WV

As a Project Manager provided services for topographic mapping and civil design for various Abandoned Mine Land (AML) projects throughout West Virginia. Various types of AML projects include landslide correction include retaining wall design and site grading and drainage improvements, acid mine drainage collection and neutralization, water line upgrade and extensions, and various projects requiring site regrading and drainage upgrade. Work on these projects also included establishing horizontal and vertical control surveys for aerial photogrammetry mapping, baseline layout, referencing control points, generating check cross sections and site surveys including all physical and topographic features of each unique site.

East Lynn Lake Boundary Survey - Wayne County, West Virginia

Boundary retracement and monumentation survey, record research, and reconnaissance necessary for the analysis, reconciliation and monumentation of portions of 15 individual tracts in 4 separate locations consisting of over one thousand acres located in Wayne County, West Virginia.

Beech Fork Lake - Wayne County, West Virginia

Completed a records research, and boundary and corner research as necessary to prepare for future surveying and monumentation along a 4 mile portion of boundary line for Beech Fork Lake consisting of 7 rural tracts and 600 acres.

USACE Huntington District - Hannibal Locks and Dam at New Martinsville to the Robert C. Byrd Locks and Dam near Gallipolis, Ohio.

Hydrographic Section – Oversaw the completion of cross section lines from bank to bank along a 153 mile stretch of the Ohio River from the Hannibal Locks Dam to the Robert C. Byrd Locks and Dam.

Hatfield Bottom Boundary Survey - Mingo County, West Virginia

Boundary and Monumentation Survey, establish the boundary of 20 individual tracts in 15 separate locations and/or severance lines consisting of approximately 10 acres supplied electronic files in Intergraph DGN format, plats and descriptions and addressed, plotted, and computer encroachments. All work was done in conjunction with Huntington District Corp of Engineers Flood Plain buy out.

Other hydrographic surveys included:

USACE Susquehanna River Northeastern Pennsylvania –125 miles 135 sections.

USACE Alum Creek Lake Delaware County, Ohio –Sedimentation volume survey.

USACE Leesville Lake Carroll County, Ohio –Sedimentation/volume survey.

USACE Summers County, West Virginia, Bluestone Lake –Sedimentation volume survey.

USACE Pocahontas County, West Virginia -Greenbrier River Sections, Marlinton LLP

USACE Greenup County, Kentucky -Greenup Locks Expansion.

USACE Clermont County, Ohio -Meldahl Locks Expansion. ***Madison Coal and Supply—Belle Vernon, Pennsylvania*** Lock #4 Diversion Dyke

Kokosing/Fru-Con, Kanawha County, West Virginia -Marmet Lock Replacement

Parsons-Main - Wood County, West Virginia Bellville Hydro Power Station.

USACE Huntington District Section 202 Levisa Fork and Tributaries - Pike County, Kentucky Horizontal and vertical base control networks. Managed the establishment of a complete horizontal control base throughout the county consisting of B-1 monuments placed at 4-mile intervals. In addition to the horizontal control, Mr. McCarty oversaw the establishment of a vertical base network throughout the county with a vertical benchmark at half-mile intervals. These control points were then used in various projects relating to the 202 project.

Project Experience

USDA Soil Conservation Service, North Bend Water Utilities Project, Ritchie County, WV

Completed a survey of ten miles of photo control for photo enlargements for the design of water line running from Cairo, West Virginia to the entrance of North Bend State Park then on to a proposed water treatment in Harrisville thence running to US Route 50 Also control for survey mapping photogrammetry of the proposed water treatment plant site in Harrisville, West Virginia.

Logan County Development Corporation - Logan County, West Virginia

Conducted the necessary records research and corner reconnaissance for partition a 20 acre portion out of a larger 20,000 acre tract Once the 20 acres was platted and monumented the tract was subdivided into smaller parcels for use as an industrial park.

Phillippi Multi Tenant Park - Barbour County, West Virginia

Conducted records research and retracement survey on a 40 acre site and monumented lost or obliterated corners. A subdivision was then platted and corners were set in the field for all new parcels to State of West Virginia minimum requirements.

Cadastral/Boundary Retracement Surveys - Charleston Landfill Survey,

Boundary Survey, Charleston, WV; Phillippi Multi-Tenant Building, Boundary survey and subdivision layout, Phillippi, WV; Clay County Public Service District, Boundary and control surveys and site mapping, Clay County, WV; T&W Enterprises, Scary Creek Site Plan, Site Survey, St. Albans, WV; Mount Olive Correctional Center Warden's Residence, Mt. Olive Correctional Center, Boundary Survey, Mt. Olive, WV; Town of Poca Annexation Plan, Poca, WV; City of S. Charleston-Coventry Woods Annexation Plan, S. Charleston, WV; City of St. Albans-Lakewood Area Annexation Plan, St. Albans, WV; Clay-Roane Public Service District-Varneytown Area Annexation Plan, Clay County, WV.

Topographic Surveys - WVDOT, Corridor L,

Site mapping and boundary survey, Summersville, WV; Central WV Regional Airport Authority, Yeager Airport, Site mapping, Charleston, WV; Eastern WV Regional Airport Authority, Shepherd Field, Site mapping, Martinsburg, WV; Buckhannon-Upshur Airport Authority, Site mapping, Buckhannon, WV; Mercer County Airport Authority, Site mapping, Bluefield, WV; Charleston Job Corp. Center, Site mapping, Charleston, WV; Seneca Rocks Visitors Center, Site mapping, Seneca Rocks, WV; Columbia Gas Headquarters Storm Sewers, Site mapping, Charleston, WV; WV University National Resources Center, Site mapping, Morgantown, WV.

Geodetic Surveys - Mingo County Airport Authority,

Site mapping and photo mapping control, Williamson, WV; Barbour County Airport Authority, Photo mapping control, Phillippi, WV; Town of Monongaha, Site mapping, Monongaha, WV; Petersburg Water Treatment Plant, Control survey and site mapping, Petersburg, WV; Roane County Airport Authority, Photo mapping control, Spencer, WV; USDA-SCS, North Fork Hughes River Water System, Site mapping and photo control, Ritchie County, WV; West Virginia Air National Guard, Control survey and site mapping, Yeager Airport, Charleston, WV.

Construction Surveys - Mason County Commission,

Site mapping and construction layout, Mason County Airport, Point Pleasant, WV; WV Graduate College-Administration Building, Site mapping and construction layout, S. Charleston, WV; City National Bank, Site mapping and construction layout, Various locations in WV; Exxon Company, USA, Site mapping and construction layout, Various locations in WV; Chapman Technical Group, Post Office Renovations, Construction layout, St. Albans, WV; APCO, N. Charleston Service Center, Construction layout, Charleston, WV; WV Behavioral Health Complex, Building layout, Weston, WV; Northern Regional Jail/WV Regional Jail Authority, Building layout, Moundsville, WV; Leaps and Bounds/McDonald's Corporation, Building layout and project scheduling, Various locations across the United States; Tyler County Soil Remediation Facility, Building layout, Bens Run, WV; Liberty High School-New Addition, Building layout, Clarksburg, WV; Go-Mart, Inc., Tank Rehabilitation, Site mapping and construction layout, St. Albans, WV; Union Boiler/Union Carbide Corp., Construction layout, S. Charleston, WV

Parviz J. Jalali, P.E.
Senior Project Engineer Geotechnical

EDUCATION

BA, Civil Engineering
BS, Civil Engineering

Tehran Institute of Technology, 1973
West Virginia Institute of Technology, 1979

REGISTRATIONS AND LICENSES

Registered Professional Engineer

West Virginia

DIRECT WORK EXPERIENCE AND PRIMARY RESPONSIBILITIES

Triad Engineering, Inc.
St. Albans, WV

Senior Engineer
1991- present

Triad Engineering
St. Albans, WV

Project Engineer
1988- 1991

Triad Engineering
St Albans, WV

Staff Engineer
1980- 1988

Rahyar Engineering Consultants, Inc
Tehran, Iran

Staff Engineer
1975- 1976

CURRENT RESPONSIBILITIES

As a senior geotechnical engineer, Mr. Jalali is responsible for geotechnical engineering analysis and design, preparation of geotechnical engineering reports and logging and inspection of soil and rock borings. Mr. Jalali has developed a specialized permeability testing program to facilitate design of a suitable clay liner for a large hazardous waste impoundment designed by TRIAD. Mr. Jalali operates our in-house computers for slope stability analysis, quantity determinations, and computer aided design drafting. Mr. Jalali supervises the project team for geotechnical and geologic studies for all highway related projects. Duties include design and implementation of the subsurface investigation, assignment of laboratory testing, approval of design drawings and technical specifications.

TRIAD
Triad Engineering, Inc.

Project Experience

Appalachian Corridor "H", Hardy County, WV

TRIAD has performed geotechnical and surveying services as a sub consultant for several sections of Appalachian Corridor H. One of the larger sections was for Section 4, located between Baker and Wardesville in Hardy County. This length of Appalachian Corridor H mainline included approximately 12,270 meters. As part of the mainline, six bridges were proposed to carry the new alignment over WV 55 & 259, Lost River (at three locations), Sauerkraut run and Trout Run. This work was accomplished for the design firm.

The geotechnical investigation consisted of a geological study for the region, drilling a total of 274 roadway borings and 254 structure borings, full-time field inspection of the drilling activities, laboratory testing of the soil/rock samples, preparation of boring logs, cut slope/bench recommendations for the proposed cut areas, slope stability analyses/evaluation for all proposed fill areas, detailed foundation recommendations (shallow and/or deep) for abutment and piers for the six proposed bridges, and preparation of complete geotechnical reports for the mainline and bridges.

Coalfields Expressway, Sophia, WV

As the senior geotechnical engineer on this project, Mr. Jalai oversaw all geotechnical aspects of the project including developing a boring layout based on the project cross-sections provided by the client. His work included supervision of work of field inspectors during the subsurface investigation. Mr. Jalai supervised the design of cut and fills slopes, performed settlement calculations for embankment fills, estimated shrink/swell factors for excavated materials, and tabulated probable sources of select embankment. After the original subsurface investigation and geotechnical report was completed, the WVDOT decided to extend the project 800 ft. in an attempt to balance borrow and waste. A recall boring list was developed in order to continue the project.

King Coal Highway, Mercer County, WV

As the senior geotechnical engineer on this project, Mr. Jalai oversaw the lead inspector as he worked in the field during the subsurface investigation and logging soil and rock. Designed and implemented cut and fill slopes, performed slope stability analyses on critical embankment fills, oversaw settlement calculations for embankment fills, estimated shrink/sell factors for excavated materials, and tabulated probable sources of select embankment. Supervising and approval of all geotechnical reports for the project, including three bridges (Bridge Nos. 10084, 10085, and 10086) which included foundation recommendations and bearing capacity computations for each of the bridge abutments and piers.

West Virginia Route 9, Jefferson and Berkeley Counties, WV

As the senior geotechnical engineer Mr. Jalai supervised the inspectors and reviewed the logging of all soil and rock from bore holes and controlled the involved drill rigs. Oversaw the design and implementation of cut and fill slopes, slope stability analyses on critical embankment fills, the estimated shrink/sell factors for the excavated materials, and the tabulations of probable sources of select embankment.

John B. (Jobe) Hope
Field Technician Supervisor

EDUCATION

Dupont High School
West Virginia State College
WVDOH Certifies Tech Training Classes – Compaction, Aggregate, Portland Cement and Bituminous Concrete
Troxler 8 Hour Nuke Safety and Operation
Troxler Radiation Safety Officer Training
40 OSHA Training
MSHA Training
MSHA Impoundment Inspector Training
ACI Training and Classes
USACOE – Contractor QC Training

CERTIFICATIONS

WVDOH/DOH Compaction Inspector
WVDOH/DOH Portland Cement Inspector
WVDOH/DOH Aggregate Inspector
WVDOH/DOH Bituminous Inspector
ACI – Grade I Field Tech
ACI – Grade I Lab Tech
40 OSHA HAZWAPER Certification
MSHA –Certified Impoundment Inspector
MSHA –Above Ground Hazard Trained
US Army COE – Construction QC Manager for Contractors
PCI Level I and II

EMPLOYMENT HISTORY

Triad Engineering, Inc., St. Albans, WV	Field Technician Supervisor 1999 - Present
Triad Engineering, Inc., St. Albans, WV	Field Services Manager 1997 - 1999
Triad Engineering, Inc., St. Albans, WV	Field and Lab Technician 1990 - 1997

CURRENT POSITION RESPONSIBILITIES

Mr. Hobe is currently the Field Technician Supervisor for the St. Albans office of TRIAD. In this capacity he oversees the field staff, by handling calls from technicians on technical matters, staffing and scheduling and serving as the branch RSO. Mr. Hope also handles and in house QA/QC, schedules training classes, keeps all records of inspections and calibrations. In addition, he also writes proposals for perspective jobs, assigns new jobs and lab work and writes all QC plans.

TRIAD
Triad Engineering, Inc.

Marshall University Football Stadium, Huntington, WV

Duties included the Testing and Sampling of site concrete. Testing of utility line backfill for compaction. The testing of structural steel and light foundation connections for proper bolt torque.

Sixth Street Bridge, Huntington, WV

Duties included Testing and Sampling of all West Virginia Department of Highways (WVDOH) classes of concrete. The monitoring thickness and testing of both fills and backfills for compaction. The sampling and testing of the river water for clarity during construction. Maintaining Quality Control Charts.

Georgia Pacific Plant, Mount Hope, West Virginia

Duties included Testing and Sampling of all concrete. Testing and monitoring lift thickness of tills. Collection of new proctor samples when material changes occurred. Utilization of an onsite lab to cure and break the test cylinders at proper intervals. Reporting of all information.

King's Daughter Medical Center Addition, Ashland, Kentucky

Duties included the Testing and Inspection of auger cast pile foundation installation. Testing and Sampling of site concrete.

American Electric Power's North Charleston Service Center, Charleston, WV

Duties included the Testing and Sampling of site concrete, Testing and Monitoring of fill and backfill placement. The shipping of test samples to AEP lab and the receiving and recording of the test data. Inspection of plumbing crews including installation of work. Backfill of utility trenches. Inspection of testing the lines. Inspection of concrete finishers work. Filling out of AEP's daily log sheets.

RCB Locks and Dam, Apple Grove, West Virginia

Duties included site concrete Testing and Sampling. The testing of fill placement by sandcone method. Collection and determination of usability of site fill materials. Utilized onsite lab for gradation/sieve analysis.

Endocrine Disruptor Study, Potomac, Ohio, Monongahela and Kanawha Rivers

Duties included the Sampling and Collection of raw river water to be tested by EPA and WV DEP for Endocrine Disruptors. The labeling and shipping of the samples to the testing labs. Photographic locations for the report and document river levels and clarity.

Commerce Park and West Pea Ridge Bridges, Huntington, West Virginia

Duties included the sampling and testing of all classes of WVDOH concrete. Testing and monitoring of lift thicknesses of fills and backfills. The collection of aggregate samples.

Route 10 Overpass Overlay, Chapmanville, West Virginia

Duties included the sampling and testing of the latex modified concrete for the overlay. Including the making of chloride perm samples.