Statement of Qualifications

West Virginia Department of Environmental Protection
Office of Abandoned Mine Lands & Reclamation

Parker Run Project Design

DEP16158

April 2, 2013

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

240 Scott Avenue, Suite 1
Morgantown, WV 26508

(304) 284-9222

www.hrg-inc.com

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HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

[BUILDING RELATIONSHIPS.
DESIGNING SOLUTIONS.]

April 2, 2013

Frank Whittaker
Department of Administration
Purchasing Division
2019 Washington Street, East
P.O. Box 50130
Charleston, WV 25305-0130

RE: Expression of Interest
West Virginia Department of Environmental Protection
DEP 16159 – Parker Run Design Project

Dear Mr. Whitaker:

Herbert, Rowland, & Grubic, Inc. (HRG) is pleased to submit for your consideration this proposal and "Expression of Interest" for the West Virginia Department of Environmental Protection (WVDEP), Office of Abandoned Mine Lands and Reclamation (AML&R) to provide engineering services for the Parker Run design project in Marion County, WV.

We have assembled a team of highly experienced personnel within the firm who have provided similar engineering services for numerous abandoned mine land reclamation and related projects over the years for a variety of clients including the West Virginia Department of Environmental Protection, the Pennsylvania Department of Environmental Protection, and the Ohio Department of Natural Resources. Our team is supplemented by two sub-consultants: *Geomechanics* from Elizabeth, PA, a leader in providing geotechnical engineering services for over 42 years for literally hundreds of projects involving abandoned mine lands and reclamation located throughout Appalachia; and *S&S Engineers, Inc.* from Charleston, WV, with experience in design, construction, and surveying of various environmental facilities dating back to 1980.

We welcome the opportunity to present our credentials to you and look forward to the chance to discuss our approach and our capabilities with the selection committee. Please contact me at 304-284-9222 if you have any questions or if I can provide any clarifications regarding our proposal.

Sincerely,
HERBERT, ROWLAND, & GRUBIC, INC.

Samer H. Petro, P.E.
Office Manager/Senior Project Manager

Enclosures

829 Fairmont Road, Suite 201 Morgantown, WV 26501
304.284.9222 [phone] • 304.284.9223 [fax]

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

[BUILDING RELATIONSHIPS.
DESIGNING SOLUTIONS.]

CORPORATE OVERVIEW

Herbert, Rowland & Grubic, Inc. (HRG) is an engineering and related services firm. We serve the Mid-Atlantic and Mid-West states with a contingent of 227 engineers, surveyors, planners, finance professionals, project managers, right-of-way acquisition specialists, and program administrators and continue to be recognized annually as an *Engineering News-Record top 500* firm. HRG has been in business for 50 years building relationships and providing solutions to our clients. We have offices throughout Pennsylvania, West Virginia, and Ohio. The following is a brief summation that demonstrates HRG's unique qualifications to provide services to the West Virginia Department of Environmental Protection:

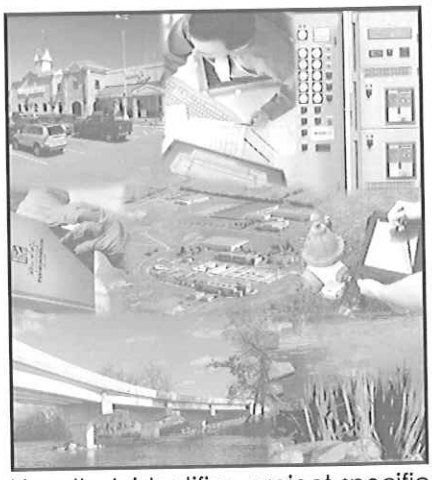
Responsiveness and Commitment:

Several of our proposed team of experienced professionals West Virginia residents and are proud and eager to serve West Virginia and their community. This is an extension of the HRG culture where our staff is not focused solely on calculations and field data, but on people – our clients; the men, women, and children they serve; our employees; and the citizens of whom we share the local community. That's why we strive – before any plans are prepared – to get to know the needs of all stakeholders, so that we can design innovative solutions tailored to meet everyone's unique needs.

HRG's Morgantown, WV office is approximately 47 miles from Philippi, WV and 26 miles from Marion County, WV, and is the location where Andrew Longenecker, our Project Manager, is based. With less than one hour of travel time, Andrew and the remainder of the Morgantown staff will be able to meet with WV DEP personnel whenever necessary to coordinate the details of any project or answer any questions you may have. In addition, our Cranberry Township and Harrisburg, PA office staff can easily respond and have an on-site presence within half working days' notice.

Full Service Capabilities and Experience:

We are a 227 employee full service firm offering expertise in the areas of transportation, environmental site assessments, civil and water resources, water and wastewater, site design, surveying, and GIS. This broad range of capabilities further enhances our ability to serve you by enabling us to handle every project need in-house from the initial project concept to project delivery.



Dedication to Quality Service:

It's especially desirable to hand over a project from start to finish to one firm when you know that firm possesses such strict standards for quality assurance and quality control as HRG does. In accordance with our quality control procedures, a project-specific QA/QC plan is developed for each undertaking that identifies project-specific communications procedures, schedule milestones, and checking milestones to be followed by all individuals. Our clients, including our higher education clients, can attest to the quality of our service.

RELATED DESIGN EXPERIENCE

Herbert, Rowland & Grubic, Inc.'s team of extremely experienced professionals, which includes several West Virginia registered professional engineers and surveyors, will work cohesively to meet and exceed your expectations. It is the experience and diverse background of our team members, working closely with our clients, that has ensured that our projects meet our clients' expectations and the needs of the communities that they serve. Made up of a diverse array of professional engineers, our team provides a "one-stop" resource that will provide you with **on-time quality services.** Our approach and methodology to provide all of the needed services, translates into a streamlined and seamless transition as projects progress from design to reality.

Environmental:

Our Knowledgeable staff of geologists and environmental professionals is the first resource to consider for providing environmental studies, site assessments, permit applications, remedial investigations, land recycling solutions, regulatory compliance management and litigation support.

While project specifications may vary, we consistently adhere to protocols established through the ASTM Standard Practice E 1527-05 guidance. We've conducted hundreds of site assessments on projects ranging from undeveloped land to industrial facilities that have a long history of hazardous material usage, handling, and storage.

In addition, many state or federally funded projects require a different range of investigation and documentation in compliance with the National Environmental Policy Act (NEPA). HRG's extensive experience with this process allows us to effectively prepare and coordinate these investigations. We offer a full range of services covering the preparation of Categorical Exclusion Evaluations, Environmental Assessments and Environmental Impact Statements as well as public involvement, social resources, noise studies, and agency coordination.

For remedial investigations, we possess extensive experience performing characterization studies of sites contaminated by hazardous substances and petroleum products. For site where regulated substances are discovered, HRG has managed soil and groundwater remediation projects ranging from minor contamination of soil by petroleum distillates to sites requiring recovery of nonaqueous liquids PCBs, and/or heavy metals impacting soils and groundwater. We employ remedial technologies only after careful consideration of cost benefit and technical reliability.

HRG is also experienced in developing and implementing approved plans for reuse of inactive industrial properties through state-run, voluntary cleanup programs, especially Pennsylvania's Land Recycling and Environmental Remediation Standards Act of 1995 (Act 2).

Our compliance management expertise includes Waste Management & Minimization, Air Quality, Water Quality, Hazardous Materials, and OSHA/Worker Right-to-Know requirements. We conduct training, perform environmental compliance evaluations for internal auditing purposes, develop and implement environmental and safety management plans, support preparation and submittal of permit applications, notifications, reports and correspondence related to numerous aspects of environmental and safety management.

We complete Preparedness, Prevention and Contingency (PPC) Plans and Spill Prevention, Control and Countermeasure (SPCC) Plans to comply with applicable regulatory requirements, minimize the impact your operation may have on the environment in the event of a release and develop best management practices to prevent such accidental releases.

HRG staff has extensive experience in all aspects of wetland investigations, from identification & delineation to mitigation design, construction oversight, and long-term monitoring. Where impacts are unavoidable, HRG offers a full range of services to help you obtain water obstruction and encroachment permits from the Department of Environmental Protection and Section 404 Permits from the U.S. Army Corps of Engineers.

Our experience with natural resources also includes watershed assessments, stream and habitat assessments, in-stream macro invertebrate studies, stream restoration and stabilization design, threatened and endangered species coordination. We also integrate the latest GIS technologies to enhance our studies.

Water Resources:

HRG provides a wide array of waterways permitting and design services that are targeted at preserving our streams, rivers and watersheds. Our services help you comply with current state and federal regulations while ensuring that these water resources can be enjoyed by future generations.

Our comprehensive watershed management services include assessing water quality using techniques such as macro-invertebrate study, identifying sources of potential runoff and pollution, designing Best Management Practices (BMPs), engineering stream restoration and stabilization measures, and preparing watershed assessments and river conservation plans. We also assist with the management of watershed alliances and help watershed organizations apply for the funding they need.

When wetlands will be impacted by a project, we identify and delineate these wetlands, prepare design alternatives to minimize the impact, and prepare the required permit applications if impact is unavoidable. We also design mitigation measures and complete construction and post-construction monitoring to ensure the continued survival of the aquatic life that inhabit these wetlands.

We also have extensive and relevant experience in the preparation of Phase I and Phase II Act 167 Watershed Stormwater Management Plans throughout Pennsylvania. This experience has given us an in-depth understanding of the requirements of the Department of Environmental Protection (DEP) will have for this state funded program, which significantly enhances our efficiency in completing the projects.

HRG's experienced staff possesses years of experience assisting counties and local governments in developing ordinances to address water quantity, water quality and channel protection standards. We have subsequently also helped countless clients comply with these regulations on their commercial, residential and industrial projects.

As recognized experts on National Pollutant Discharge Elimination System (NPDES) permitting, we have conducted numerous presentations on NPDES regulations to government and industry throughout the region. We are also a recognized expert in obtaining NPDES Phase II permits from the Department of Environmental Protection for post-construction stormwater management facilities.

In addition, HRG provides services such as Hydrologic and Hydraulic Analysis in support of many projects. We use HEC-HMC hydrologic modeling and HEC-RAS hydraulic modeling and structure design, scour analysis, dam breach analysis, floodplain analysis, and erosion and sedimentation control design to help you obtain water obstruction and encroachment permits from the Department of Environmental Protection and Section 404 Permits from the U.S. Army Corps of Engineers.

Transportation:

HRG's comprehensive array of traffic engineering services includes traffic impact studies, traffic signal design, congestion management studies and transportation planning. Our traffic studies, include an analysis of current and projected land use as well as thorough collection and analysis of existing traffic data. After identifying system requirements, we apply state-of-the-art software to design the most cost-effective traffic systems that maximize efficiency and promote safety.

Our transportation engineers have completed hundreds of roadway designs of verifying size and complexity – from interstate interchanges to bituminous overlays of local road. Our experience includes engineering services for dozens of large-scale improvement projects to enhance safety and increase capacity along major arterial roadways and interstates throughout the region.

Our engineers have completed more than 100 bridge replacements and rehabilitations. Our projects have ranged from locally sponsored, federally funded bridge replacements to state-owned, single- and multi-span structures traversing streams, highways and railroads. In addition, our Certified Bridge Safety Inspectors perform NBIS inspections to assess the physical integrity and structural adequacy of a wide variety of bridges.

Our staff provides comprehensive rail engineering services to private sector companies who rely on rail for transportation for their goods, public transportation agencies providing enhanced multi-model access, and railroad lines that transport freight for industry. We understand the fast-paced nature of your business and the dollars that depend on rapid response; therefore, we provide quick turnaround on all plans and deliverables to keep your project on track.

MANAGEMENT & STAFFING

The following is a brief overview of proposed key staff members who will be extensively involved in all WV DEP projects awarded to Herbert, Rowland & Grubic, Inc., including the Parker Run design project (DEP16158):

Andrew J. Longenecker is a Natural Resources Regional Service Group with Herbert, Rowland & Grubic, Inc. (HRG), and will act as **Project Manager** for the WV DEP and your prime point of contact. Possessing more than ten years of experience in the environmental field, Mr. Longenecker is responsible for the management of projects involving collection and analysis of watershed data, wetland identification and delineation, wetland mitigation design, site work, reports, bog turtle habitat screening, natural gas well pad and pipeline development, Phase I Environmental Site Assessment research and reports, and coordination with PADEP, US Army Corps of Engineers and additional federal and state agencies.

James B. Gue is an Environmental Scientist with Herbert, Rowland & Grubic, Inc. His responsibilities include field studies and assessments involving collection and analysis of watershed data; Phase I Environmental Assessment research and reports; wetland identification and delineation, wetland mitigation design, site work reports; traffic noise monitoring, modeling, and analysis; and the preparation of local, state, and federal permit applications. He also provides assistance with the development of geographic information systems and computer-aided drafting. Mr. Gue brings over 30 years of experience with the Ohio Division of Natural Resources including a background in the Abandoned Mine Lands Program, through which he conducted extensive acid mine drainage investigations, mining and reclamation inspections to monitor compliance with State and Federal laws, recommended mitigation methods and designs for acid mine drainage mitigation projects via multiple passive treatment system methodologies, including aerobic and anaerobic wetlands; prepared Acid Mine Drainage Abatement and Treatment plans for environmentally devastated watersheds; coordinated start-ups and acted as liaison to public environmental restoration efforts at multiple impacted watersheds, among other various roles he played throughout his extensive career history.

Douglas E. Weikel is the Director of Civil Services for Herbert, Rowland & Grubic, Inc. (HRG). Mr. Weikel has extensive experience in the preparation of studies, design, plans, and specifications for various municipal and civil engineering projects. His skills include municipal planning, construction management, contract administration, storm water design, and site design.

Samer H. Petro is the Manager of the Morgantown office of Herbert, Rowland & Grubic, Inc. (HRG), he provides client contact, business development, engineering design, and project management of various activities ranging from environmental studies, location studies, and analyses of alternative structures and roadways to final design of new structures and new highways; removal, replacement, and rehabilitation of existing structures, highways, and water and wastewater treatment facilities; and construction-phase services. Samer's experience and expertise also includes strengthening historic and existing structures using fiber reinforced polymer (FRP) composite materials and nondestructive testing methods for highway bridges and transportation related structures. He routinely coordinates each aspect of contract administration, construction phase services, including periodic field inspections from the award of contracts to project close-out.

Murat Tukel is an environmental and civil project manager. Mr. Tukel has an extensive background with the Ohio Environmental Protection Agency having acted as a natural resources engineer for the abandoned mine program, as well as the division of solid and infectious waste management program. Mr. Tukel has developed, planned and design mine reclamation projects, along with prepare necessary contracts, cost estimates, budgets, and selecting contractors. Mr. Tukel also has a background with permit to install (PTI) reviews for solid waste disposal landfills, composting, and incinerator facilities. He has also conducted RCRA generation and TSD facilities inspections, along with providing hazardous waste sampling and handling and educational presentations to professional groups and organizations.

Richard W. Warden is a natural resources engineer. Mr. Warden has an extensive background with the Ohio Division of Natural Resources, with the Division of Mineral Resources Management having acted as the sole engineer for Ohio's AML Emergency Program, and responsible for the review of Coal Regulatory permit applications and ARP's. He was also involved with resolving regulatory issues between Ohio DNR, OSMRE, and coal company officials. Mr. Warden was also responsible for supervising in-house design staff working under SMCRA for abandoned mine lands (AML) and forfeiture projects.

Appendix A

Insurance and Worker's Compensation Certification

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 06/11/2012

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

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

PRODUCER	CONTACT NAME:	
JAMES B MURDOCH INSURANCE GROUP INC 4300 Carlisle Pike Camp Hill, PA 17011	PHONE (A/C, No, Ext): (717)737-9900	FAX (A/C, No):
	E-MAIL ADDRESS:	

INSURED	INSURER(S) AFFORDING COVERAGE	NAIC #
Herbert Rowland & Grubic Inc 369 E Park Dr Harrisburg, PA 17111-2730	INSURER A : ERIE INS EXCH	26271
	INSURER B : ERIE INS CO of NY	26271
	INSURER C : CNA (Schinnerer)	20443
	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

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

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	GENERAL LIABILITY X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT LOC			Q410150093	5/1/2012	5/1/2013	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG 	$ 1000000 $ 1000000 $ 5000 $ 1000000 $ 2000000 $ 2000000 $
A	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS HIRED AUTOS SCHEDULED AUTOS NON-OWNED AUTOS			Q051502279	5/15/2012	5/15/2013	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) 	$ 1000000 $ $ $ $
A	UMBRELLA LIAB X OCCUR X EXCESS LIAB CLAIMS-MADE DED 0 RETENTION $			Q290170004	5/1/2012	5/1/2013	EACH OCCURRENCE AGGREGATE 	$ 10000000 $ 10000000 $
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		Q89-5100454	5/1/2012	5/1/2013	X WC STATU-TORY LIMITS OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 100000 $ 100000 $ 500000
C	Professional Liability			AEH 00-822-00-56	6/9/2012	6/9/2013	Per Claim Limit: $5,000,000 Aggregate Limit: $5,000,000	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Amanda Nerstetter

Appendix B

DEP16159 Signature Sheets and Affidavit

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

RFQ No. DEP 16159

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

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

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

DEFINITIONS:

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

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

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

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (*W. Va. Code* §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: Herbert, Rowland, & Grubic, INC.

Authorized Signature: [signature] Date: 3/26/2013

State of West Virginia

County of Wyoming, to-wit:

Taken, subscribed, and sworn to before me this 26 day of March, 2013.

My Commission expires Feb. 28, 2021.

AFFIX SEAL HERE

NOTARY PUBLIC [signature]

Official Seal
Notary Public, State of West Virginia
Joan L. Miller
WesBanco Bank
9 Commerce Drive
Westover WV 26501
My Commission Expires Feb. 28, 2021

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

Solicitation

NUMBER	PAGE
DEP16158	1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
FRANK WHITTAKER
304-558-2316

VENDOR
RFQ COPY
TYPE NAME/ADDRESS HERE

SHIP TO
ENVIRONMENTAL PROTECTION
DEPARTMENT OF
OFFICE OF AML&R
601 57TH STREET SE
CHARLESTON, WV
25304 304-926-0499

DATE PRINTED: 02/27/2013
BID OPENING DATE: 04/02/2013 BID OPENING TIME 1:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		906-29		

PARKER RUN PROJECT DESIGN

EXPRESSION OF INTEREST

THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, IS SOLICITING EXPRESSIONS OF INTEREST FOR PROFESSIONAL ENGINEERING DESIGN SERVICES AND CONSTRUCTION MONITORING SERVICES AT THE PARKER RUN PROJECT IN MARION COUNTY, WEST VIRGINIA, PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS.

****** THIS IS THE END OF RFQ DEP16158 ****** TOTAL:

SIGNATURE James Fellows TELEPHONE (304)284-9222 DATE 3-28-13
TITLE Office manager FEIN 23-1409730
ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO SOLICITATION, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: DEP16158

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

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

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

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

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

Herbert, Rowland, & Grubic, INC.
Company

Samer Petro
Authorized Signature

3/26/2013
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

CERTIFICATION AND SIGNATURE PAGE

By signing below, I certify that I have reviewed this Solicitation in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid or proposal for review and consideration; that I am authorized by the bidder to execute this bid or any documents related thereto on bidder's behalf; that I am authorized to bind the bidder in a contractual relationship; and that to the best of my knowledge, the bidder has properly registered with any State agency that may require registration.

Herbert, Rowland, & Grubic, Inc.
(Company)

Samer Petro
(Authorized Signature)

SAMER H. PEIRO, P.E.
(Representative Name, Title)

304-284-9222
(Phone Number) (Fax Number)

MARCH 26, 2013
(Date)

Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

Appendix C

AML Consultant Confidential Qualification Questionnaire

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
AML CONSULTANT QUALIFICATION QUESTIONNAIRE

Attachment "B"

PROJECT NAME	DATE (DAY, MONTH, YEAR)	FEIN
Parker Run Project Design (DEP16159)	1 March 2013	23-1609730

1. FIRM NAME	2. HOME OFFICE BUSINESS ADDRESS	3. FORMER FIRM NAME
Herbert, Rowland & Grubic, Inc.	369 East Park Drive Harrisburg, PA 17111	Herbert Associates, Inc.

4. HOME OFFICE TELEPHONE	5. ESTABLISHED (YEAR)	6. TYPE OWNERSHIP	6a. WV REGISTERED DBE
(717)564-1121	1962	Individual Corporation Partnership Joint-Venture	YES NO

7. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE
Herbert, Rowland & Grubic, Inc./Morgantown, WV/304.284.9222/Samer Petro, P.E./8

8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM	8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS
Robert C. Grubic, P.E., President Albert T. Brulo, P.E., Senior VP/Chief Operations Officer Brian D. Emberg, P.E., Senior VP/Chief Technical Officer Bruce A. Yerger, P.E., Vice President/Chief Financial Officer Jason A. Fralick, P.E., Vice President, Central Region Andrew M. Kenworthy, P.E., Vice President, Eastern Region James M. Lopresti, P.E., Vice President, Western Region Russell F. McIntosh, Vice President	Christopher K. Bauer, P.E., PTOE, Director of Transportation Services, 717.564.1121 Edward A. Ellinger, P.E., Director of Water and Energy Services, 717.564.1121 Douglas E. Weikel, P.E., Director of Civil Services/Survey Services, 814.238.7117 Jamie B. Keener, AICP, Director of Land Development, Planning, and Federal Marketing Services, 717.564.1121 Paul E. Nachlas, P.G., Dir. of Environmental Services, 717.564.1121

9. PERSONNEL BY DISCIPLINE

44	ADMINISTRATIVE	0	ECOLOGISTS	6	LANDSCAPE ARCHITECTS	6	STRUCTURAL ENGINEERS
0	ARCHITECTS	0	ECONOMISTS	1	MECHANICAL ENGINEERS	22	**SURVEYORS**
0	**BIOLOGIST**	2	ELECTRICAL ENGINEERS	0	**MINING ENGINEERS**	16	TRAFFIC ENGINEERS
28	**CADD OPERATORS**	3	ENVIRONMENTALISTS	0	PHOTOGRAMMETRISTS	9	OTHER
0	CHEMICAL ENGINEERS	7	ESTIMATORS	1	PLANNERS: URBAN/REGIONAL		
20	**CIVIL ENGINEERS**	2	**GEOLOGISTS**	25	SANITARY ENGINEERS		
15	CONSTRUCTION INSPECTORS	0	HISTORIANS	0	SOILS ENGINEERS		
0	DESIGNERS	6	HYDROLOGISTS	0	SPECIFICATION WRITERS	217	TOTAL PERSONNELL
4	DRAFTSMEN						

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 3
***RPEs other than Civil and Mining must provide supporting documentation that qualifies them to supervise and perform this type of work.**

10. HAS THIS JOINT-VENTURE WORKED TOGETHER BEFORE? YES NO NOT APPLICABLE

11. OUTSIDE KEY CONSULTANTS/SUB-CONSULTANTS ANTICIPATED TO BE USED. Attach "AML Consultant Qualification Questionnaire".

NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE
GEOMechanics, Inc. 600 Munir Drive, P.O. Box 386 Elizabeth, PA 15037-0386	Geo-Technical Services	X Yes No
NAME AND ADDRESS: S&S Engineers, Inc. 501 Eagle Mountain Road Charleston, WV 25311	SPECIALTY: Surveying Services	WORKED WITH BEFORE X Yes No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____Yes _____No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____Yes _____No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____Yes No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____Yes _____No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____Yes No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____Yes _____No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE _____Yes _____No

12. A. Are your firm's personnel experienced in Abandoned Mine Lands Remediation/Mine Reclamation Engineering?

YES Description and Number of Projects: Members of HRG have completed AML projects in the past, although not in WV but in Ohio. These projects involved the preparation of construction drawings for strip mine highwall elimination, spoil bank stabilization, shaft closures sensitive to bat habitat issues, GOB fires, mine drainage, and investigation and mitigation for AMD.

NO

B. Are your firm's personnel experienced in Soil Analysis?

YES Description and Number of Projects: HRG uses data from soils laboratories in preparing studies and designs. HRG will be using an esteemed sub-consultant for geo-technical services on projects.

NO

C. Are your firm's personnel experienced in hydrology and hydraulics?

YES Description and Number of Projects: HRG staff has experience addressing and resolving complex drainage issues related to roads, bridges, urban and rural development, site development for government and private clientele on hundreds of projects.

NO

D. Does your firm produce its own Aerial Photography and Develop Contour Mapping?

YES Description and Number of Projects: HRG develops contour mapping from mass points and break lines derived from outside aerial photography and LiDAR.

NO

E. Are your firm's personnel experienced in domestic waterline design? (Include any experience in evaluation of aquifer degradation as a result of mining.)

YES Description and Number of Projects: HRG designs on all aspects of water, wastewater, treatment, conveyance, and collection projects for both private and municipal (government) clients, including hundreds of projects company-wide.

NO

F. Are your firm's personnel experienced in Acid Mine Drainage Evaluation and Abatement Design?

YES Description and Number of Projects: HRG staff has experience investigating and recommending mitigation designs for acid mine drainage projects.

NO

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Petro, Samer H. Morgantown Office Manager/Contract Manager	0	10	0

Brief Explanation of Responsibilities
Provides client contact, business development, operations management, engineering design, and project management of various activities ranging from environmental studies, location studies, and analyses of alternative structures and roadways to final design of new structures and new highways, and water and wastewater treatment facilities, and construction-phase services.

EDUCATION (Degree, Year, Specialization)
B.S., 1987, Civil Engineering
M.S., 1993, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Society of Engineers Association of Bridge Construction & Design American Concrete Institute	P.E., 2003, West Virginia P.E., 2001, Ohio

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Weikel, Douglas E. Director of Civil Services	0	0	21

Brief Explanation of Responsibilities
Responsible for maintaining the general technical project standards, for executing the Quality Management Plan for Civil and Survey groups as well as developing company-wide strategy for those groups. In addition, provides client and project management for various projects involving stormwater management, wastewater conveyance and treatment, water resource design, and construction management.

EDUCATION (Degree, Year, Specialization)
B.S., 1988, Civil Engineering
B.S., 1995, Physics

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
Pennsylvania State Associate of Township Supervisors	P.E., 1997, Pennsylvania

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Gue, James B. Environmental Scientist II	30	30	10

Brief Explanation of Responsibilities: Responsibilities include field studies and assessments involving collection and analysis of watershed data; Phase I Environmental Assessment research and reports; wetland identification and delineation, wetland mitigation design, site work reports; traffic noise monitoring, modeling, and analysis; and the preparation of local, state, and federal permits applications. As a former 30 year employee of the ODNR Abandoned Mine Lands Section, responsibilities included the planning, monitoring and developing of abandoned mine land reclamation projects. Public health and safety projects were related to strip mine highwall elimination and spoil bank stabilization; deep mine related projects involved shaft closures sensitive to bat habitat issues and GOB pile fires; Mine drainage contaminated water supply projects involved private well replacements and public water line installations; investigated and recommended mitigation designs for acid mine drainage projects.

EDUCATION (Degree, Year, Specialization)
B.S. from Kent State University, 1981, Natural Resource Conservation

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Warden, Richard W. Natural Resources Engineer	33	33	0

Brief Explanation of Responsibilities
30 years' experience in AML projects and various other projects to support Ohio DNR facilities. Experience also included geotechnical subsurface investigations and slope stability analysis.

EDUCATION (Degree, Year, Specialization)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State) P.E., Ohio

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Tukel, Murat Environmental/Civil Engineer	4	12	0

Brief Explanation of Responsibilities
Responsible for developing, planning and designing mine reclamation projects, contract preparation and bidding, cost estimates, budgeting, contractor selection, and oversight of construction activities.

EDUCATION (Degree, Year, Specialization)
B.S., 1989, Environmental Engineering
M.S., 1991, Civil Engineering
M.B.A., 1998, Business

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
	P.E., Ohio

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Swisher, David M. Water & Energy Regional Service Group Manager	0	0	11

Brief Explanation of Responsibilities
Responsible for managing environmental engineering projects including: planning, permitting, design, construction administration, financial analyses, and project financing of water and wastewater infrastructure projects.

EDUCATION (Degree, Year, Specialization)
B.S. from The Pennsylvania State University, 2001, Civil and Environmental Engineering
M.S. from The Pennsylvania State University, 2002, Environmental Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Water Works Association Construction Specifications Institute Pennsylvania Municipal Authority Association Pennsylvania Water Environmental Association Water Environment Federation	P.E., Pennsylvania

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Rusnak, John Civil Project Manager/Team Leader	0	0	20

Brief Explanation of Responsibilities
Responsible for overseeing staff in the development of design concepts, preparing preliminary and final design drawings, developing technical specifications and bid documentation, and attending meetings and preparing, reviewing and delivering budgets for municipal clients. Also, provides oversight during construction and monitors project costs.

EDUCATION (Degree, Year, Specialization)
B.S., 1989, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Society of Civil Engineers	P.E., 1995, Pennsylvania

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Longenecker, Andrew J. Natural Resource Regional Service Group Manager	0	13	0

Brief Explanation of Responsibilities
Responsible for the management of projects involving stream restoration, collection and analysis of watershed data, wetland identification and delineation, wetland mitigation design, threatened and endangered species investigations, natural gas well pad and pipeline development, Phase I Environmental Site Assessments, and US Army Corps of Engineers and state agency permits.

EDUCATION (Degree, Year, Specialization)
B.S., 1997, Wildlife and Fisheries Resources
M.S., 2000, Biological Services

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
Society of Wetland Scientists	

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Varner, Roger B. Land Development Staff Professional	0	20	20

Brief Explanation of Responsibilities

Responsible for a variety of environmental engineering and permitting tasks and business development for oil and gas clients and land development clients. Such tasks include private and public water source investigation, sampling and analysis protocol, preparation of permit applications and plans for oil and gas well development sites, water management and planning studies for oil and gas well hydro-fracturing and production needs, and providing field investigation and inspection services for environmental projects. Mr. Varner has significant experience in water and wastewater facilities planning, federal, state, and regional permitting services, and preparation of regulatory reports and documents.

EDUCATION (Degree, Year, Specialization)

B.S., 1989, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Society of Civil Engineers	

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Savage, Benjamin J. Civil Construction Manager	0	13	0

Brief Explanation of Responsibilities

Responsible for overseeing a number of construction sites at one time and managing construction inspectors to insure conformance to requirements of contract documents for oil and gas construction projects including well pad sites, pipelines, and roads.

EDUCATION (Degree, Year, Specialization)

B.S. from West Virginia University, 1997, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
	P.E., 2003, West Virginia

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Stonebraker, Chad E. Land Development Senior CADD Technician	1	13	1

Brief Explanation of Responsibilities
Responsibilities include assisting the project manager in design, preparing Land Development plans, profiles, sections and details. Proficient with AutoCAD Civil3D 2011 and MicroStation software for base map and construction layout plan.

EDUCATION (Degree, Year, Specialization)
A.S.T., 2000, Computer Aided Drafting

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR AML PROJECT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Cardosi, Andrew D. Transportation Regional Service Group Manager	0	11	0

Brief Explanation of Responsibilities
Responsible for preparation of contracts and proposals, including development of technical scopes of work; project budgeting and cost estimating; bid documents preparation; contract administration; scheduling and planning updates for municipal reviews of land development and subdivision plans; Highway Occupancy Permit plan reviews; roadway design in areas such as roadway geometry, pavement design and analysis, drainage design and management, maintenance and protection of traffic plans, right-of-way plans; utility coordination; and construction inspection.

EDUCATION (Degree, Year, Specialization)
B.S. from The Pennsylvania State University, 2001

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Society of Civil Engineers	P.E., PA
American Society of Highway Engineers - Mid Allegheny	P.E., WV

14. PROVIDE A LIST OF SOFTWARE AND EQUIPMENT AVAILABLE IN THE PRIMARY OFFICE WHICH WILL BE USED TO COMPLETE AML DESIGN SERVICES

HRG will be utilizing S&S Engineers, Inc. for any and all related surveying and mapping services. The equipment they intend to use is as follows: Topcon Hiper SR GPS Survey System, One (1) Topcon TESLA Controller, Two (2)total stations, Two (2) GPS enabled, TDS Nomad data collectors with Bluetooth and Wi-Fi, Field surveying equipment

HRG will design work for WVDEP utilizing a secure network of computer aided design (CAD) equipment, software and trained personnel in the state of West Virginia. All computer systems are password protected, monitored by Symantec Endpoint protection, firewall, XWall filtering, and content policies to secure and protect against virus, adware, malware, spyware, and unauthorized intrusions.

Connected through a Windstream managed MPLS network our staff has the ability to share necessary plans among our locations or when remote access is required approved staff may access files and software via a secure virtual private network (VPN). Our staff utilizes some of today's latest technologies such as 24x7 email access, project planning & reports through Deltek Vision, and virtual desktops. In addition, approved staff utilizes tablet or smartphone technology for remote access to maintain communication with WVDEP. This will allow work designed for WVDEP to be prepared and updated at the office locations or accessed remotely anywhere internet is accessible that best meets the requirements and the scope of services for WVDEP.

Civil 3D, Trimble, and Microstation V8 software is utilized on 120 CAD stations throughout our locations. Additionally, equipment includes 10 large format (size E) plotters and 4 large Print/Copy/Scan T2300 Design Jets for black & white or color output. Plans are prepared by both dedicated CAD employees, engineering technicians, and licensed engineers in each of the firm's offices.

HRG, Inc. also utilizes top-of-the line survey equipment. Our survey work is accomplished with global positioning systems (GPS) and electronic distance measuring (EDM) survey stations with data gathering capabilities.

15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
2013 Township Wide Sewer Rehabilitation South Park, PA	South Park Township, PA 2675 Brownsville Road South Park, PA 15129	Design, Contract Administration, and Construction Observation	$250,000.00	0% (In Progress)
2013 Borough Wide Sewer Rehabilitation Bellevue Borough, PA	Bellevue Borough 537 Bayne Avenue Pittsburgh, PA 15202	Design, Contract Administration, and Construction Observation	$175,000.00	0% (In Progress)
Forebay Maintenance Sediment Removal Cranberry Township, PA	Sherwood Oaks 100 Norman Drive Cranberry Township, PA 16066	Design, Engineering Permit, Site Investigation, and Surveying	$11,000.00	5% (In Progress)
Pike Run Bridge #11 Replacement Washington Co., PA	Washington County Planning Commission 100 West Beau Street Washington, PA 15301	Surveying, H&H Studies, Categorical Exclusion Evaluation (CEE), Bridge Design, E&S Control Plan, Waterway Permits	$555,000.00	60% (In Progress)
Chartier's Bridge #61 Replacement Washington Co., PA	Washington County Planning Commission 100 West Beau Street Washington, PA 15301	Surveying, H&H Studies, Categorical Exclusion Evaluation (CEE), Bridge Design, E&S Control Plan, Waterway Permits	$375,000.00	40% (In Progress)

TOTAL NUMBER OF PROJECTS: 5

TOTAL ESTIMATED CONSTRUCTION COSTS: $1,366,000.00

16. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS SERVING AS A SUB-CONSULTANT TO OTHERS

PROJECT NAME, TYPE AND LOCATION	NATURE OF FIRMS RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CONSTRUCTION COST	
				ENTIRE PROJECT	YOUR FIRMS RESPONSIBILITY

17. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM WAS DESIGNATED ENGINEER OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
Upgrade Water Source and Distribution System Torrance, PA	PA-DAS c/o Torrance State Hospital 121 Longview Drive Derry Township Torrance, PA 15779	$620,000.00	2007	YES
West End Pond Renovation Venango County, PA	Clarion University Venango Campus 1801 West First Street Oil City, PA 16215	$900.000.00	2010	YES
Venango Campus Drainage Improvements Venango County, PA		$750,000.00	2012	YES
Township Wide Sanitary Sewer Rehabilitation Projects South Park, PA	South Park Township 2675 Brownsville Road South Park, PA 15129	(For Years 2008 through 2012) >$1,000,000.00	2008-2012	YES
Borough Sewer Repair Projects Bellevue Borough, PA	Bellevue Borough 537 Bayne Avenue Pittsburgh, PA 15202	(For Years 2008 through 2012) >$750,000.00	2008-2012	YES
County Act 167 Stormwater Management Plan Venango, PA	Venango County Planning Commission 1168 Liberty Street Franklin, PA 16323	>$150,000.00	2010	YES
County Act 167 Stormwater Management Plan Butler County, PA	Butler County Planning Commission Butler, PA	>$110,000.00	2010	YES
County Act 167 Stormwater Management Plan Washington County, PA	Washington County Planning Comission 100 West Beau Street Suite 701 Washington, PA 15301	>$138,000.00	2010	YES

18. COMPLE[illegible] WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM HAS [illegible]EN A SUB-CONSULTANT TO OTHER FIRMS (INDICATE PHA[illegible] OF WO[illegible] FOR WHICH YOUR FIRM WAS RESPONSIBLE)

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST OF YOUR FIRM'S PORTION	YEAR	CONSTRUCTED (YES OR NO)	FIRM ASSOCIATED WITH

19. Use this space to provide any additional information or description of resources supporting your firm's qualifications to perform work for the West Virginia Abandoned Mine Lands Program.

20. The foregoing is a statement of facts.

Signature: Samer Petro Title: Office Manager Date: 3/27/2013

Printed Name: SAMER PETRO

Appendix D

AML and Related Project Experience Matrix

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

AML and RELATED PROJECT EXPERIENCE MATRIX

PROJECT	Exp. Basis C=Corp. P=Personal *	Additional Info Provided in Section (s) **	PROJECT EXPERIENCE REQUIREMENTS															PRIMARY STAFF PARTICIPATION/CAPACITY *** M=Management P=Professional					
			Abandoned Surface Mine Reclamation	Abandoned Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/Replacement	Construction Inspection/Management	Water Treatment	Equipment/Structure Removal	Stream Restoration	Geotechnical/Stability	James Gue	Murat Turkel	Richard Warden	Andrew Longenecker	Andrew Cardosi	
Andy Myers Mine Subsidence (ST-Os-19)	P			X					X		X		X				X	P					
Applegrove Road Mine Stabilization (ST-Pl-23)	P			X					X		X		X				X	P					
Belden Phase II (CR-Rs-19)	P		X			X				X	X		X	X		X		P					
Bergholz East Highwall (JF-Rs-11)	P		X								X		X					P					
Dean Miller Highwall (TS-Sn-27)	P		X								X		X					P					
Dick Rose Highwall (CL-Md-20)	P		X								X		X					P					
Dobson Road (CL-Fn-06)	P										X		X					P					
Dover 3 (SM-Nc-02)	P			X							X						X	P					
Dusty Quinn Sinkhole (JF-Sp-11)	P				X				X		X		X				X	P					
Ellsworth Coal Refuse (MH-El-01)	P		X				X				X		X	X	X			P					
Harsha South (CR-Rs-11)	P		X				X				X		X	X				P					
Hayes Highwall (CL-Mi-03)	P		X								X		X					P					
Huff Run 32 Pits AMD (CR-Rs-15)	P		X				X				X		X	X				P					
J.B. Drift Entry/Subsidence (ST-Os-23)	P				X				X		X		X					P					
Lattavo (TS-Lw-07)	P		X				X			X	X		X	X				P					
Martin Subsidence (SM-Sp-04)	P				X		X		X		X		X					P					
Masury Mine Subsidence (TR-Bl-06)	P				X		X		X		X		X					P					
Mill Rock Road Highwall (CL-Un-11)	P		X								X		X	X				P					
Mineral Ridge (MH-Au-08)	P			X	X				X		X		X				X	P					
Mineral -Zoar Road AMD (TS-Sn-23)	P						X				X		X	X				P					
North Canton Sinkhole (ST-Pl-26)	P				X				X		X		X				X	P					
Richard Beaver HW (CL-Md-19)	P		X								X		X	X				P					
Salem Small Projects 2005 (UP-Sa-2005)	P				X		X		X		X		X				X	P					
Salem Small Projects 2006 (UP-Sa-2006)	P				X		X		X		X		X				X	P					
Senff Road Slope Repair (WN-Pt-05)	P		X			X					X		X				X	P					

Tapscott Maintenance (CR-Fx-06)	P				X		X		X		X		X				X	P					
Thomas Road Subsidence (SM-Tv-07)	P				X		X		X		X		X					P					
Toronto Mine Drain (JF-Ic-12)	P				X	X	X		X		X		X					P					
Turturice Highwall (CL-El-27)	P		X				X			X	X		X					P					
Weaver Mine Subsidence (ST-Pk-03)	P				X		X		X		X		X					P					
Applegate Road (CL-Wa-01)	P		X				X			X	X		X					P					
State RT. 165 (MH-Bv-03)	P		X				X			X	X		X					P					
Frost Highwall (CI-Fr-02)	P		X				X			X	X		X					P					
Black Diamond Shafts (MH-MI-01)	P				X				X		X		X				X	P					
Eastern Mine Shaft Reclamation (JF-St-06)	P				X				X		X		X				X	P					
Columbiana County Clay Portals (CL-Lp-01)	P				X				X		X		X				X	P					
East Liverpool Mine Opening (CL-Lp-02)	P				X				X		X		X				X	P					
Briar Road (CR-Rs-02)	P		X				X			X	X		X					P					
Parsons Mine Fire (JF-Sp-03)	P		X					X			X		X					P					
New Buffalo Shaft (MH-Bv-04)	P				X				X		X		X				X	P					
Roach Run Entries (JF-Rs-04)	P				X				X		X		X				X	P					
Palmyra Shafts (PT-Pm-02)	P				X				X		X		X				X	P					
Carlson Reclamation Project (CL-Un-02)	P		X				X			X	X		X				X	P					
Squaw Creek - Vienna Township Shafts (TR-Vn-01)	P				X				X		X		X				X	P					
Sheets Highwall (JF-Kn-15)	P		X				X			X	X		X				X	P					
East Fairfield Coal / Petersburg (MH-Sp-02)	P		X				X			X	X		X		X		X	P					
Sugarcreek Clay & Limestone (TS-Ab-01)	P		X				X			X	X		X				X	P					
Red Malcuitt Inc. (TS-Fn-01)	P		X				X			X	X		X				X	P					
Malvern West Reclamation (ST-Sn-01)	P		X				X			X	X		X				X	P					
Spanson Drive (TS-MI-03)	P		X				X			X	X		X				X	P					
Kollar Shafts (ST-Bh-02)	P				X				X		X		X				X	P					
Mt. Vernon Ave (ST-Mk-01)	P		X				X			X	X		X				X	P					
Ellesmere Ave. IV (ST-Nc-09-E)	P			X							X		X				X	P					
Tuscarawas County Road 14 (TS-Xx-03)	P		X				X			X	X		X				X	P					
Kellog Reclamation (CL-Ws-02)	P			X							X		X				X	P					
Mineral Ridge Subsidence (TR-Wf-02)	P			X							X		X				X	P					

Knight Highwall (CL-Un-06)	P		X				X			X	X		X				X	P					
Diamond Shaft (PT-Pm-01)	P				X				X		X		X				X	P					
Hood Mine Drain (JF-Sf-05)	P				X	X			X		X		X				X	P					
Brookfield Shaft (TR-Bf-03)	P				X				X		X		X				X	P					
Cline Highwall (JR-Ic-01)	P																						
Woodworth Pits (MH-Bv-02)			X				X			X	X		X		X		X	P					
Tuscarawas County Road 16 (TS-Cl-01)	P		X				X			X	X		X				X	P					
Copeland Oaks Highwall (MH-Sm-02)	P		X				X			X	X		X				X	P					
Stiffler Shaft (TS-Fr-01)	P				X				X		X		X				X	P					
St. Joseph Coal II (ST-Bh-01-F)	P		X				X			X	X		X				X	P					
Tusco Subsidence (TS-Sn-01)	P			X							X		X				X	P					
Spade Subsidence (SM-Fn-01)	P			X							X		X				X	P					
Mary Mahoney Mine Shafts (ST-Lw-03)	P				X				X		X		X				X	P					
Mairoiello Highwall (ST-Sn-08)	P		X				X			X	X		X				X	P					
Ellesmere Ave IV (ST-Nc-07)	P			X							X		X				X	P					
Nesbitt III (ST-Nc-03-E)	P			X							X		X				X	P					
Nesbit II (ST-Nc-02-E)	P			X							X		X				X	P					
Trumbull County Shafts II (TR-Xx-02)	P				X				X		X		X				X	P					
Tuscarawas County Mine Seeps (TS-Xx-01)	P		X				X			X	X		X				X	P					
Camp Zimerman (TS-Cl-05)	P										X		X				X	P					
Zimmerman Highwall (JF-Kn-10)	P		X				X			X	X		X				X	P					
Lupe Ave Emergency (ST-Pl-12-E)	P			X							X		X				X	P					
McLaughlin Highwall (CR-Cn-01)	P		X				X			X	X		X				X	P					
Jobes Reclamation (TS-Sn-04)	P		X				X			X	X		X				X	P					
Eastern Ohio Water Supply (ST-Cn-16)	P					X					X	X	X					P					
State Route 800 (TS-Un-10)	P		X				X			X	X		X				X	P					
Finn Mine Shaft (WN-Cp-06)	P				X				X		X		X				X	P					
Kaufman Reclamation (TS-Go-15)	P			X		X											X	P					
Ault Water Supply II (TS-Wr-14)	P					X					X	X	X					P					
Birkenstock Mine (SM-Gr-07)	P			X							X		X				X	P					
Tice Highwall (JF-Kn-06)	P		X				X			X	X		X				X	P					

Columbiana County Shafts (CL-Sl-01)	P				X				X		X		X				X	P					
South Egypt Road (MH-Gr-01)	P			X							X		X				X	P					
Hollow Ridge Road (WN-Cp-11)	P			X							X		X				X	P					
Swift Road (CR-Br-04)	P		X				X				X		X				X	P					
Shenandoah Gob (TS-Go-08)	P		X			X	X				X		X	X				P					
Overhead Subsidence (ST-Cn-17)	P			X							X		X				X	P					
Osborne Subsidence (ST-Nc-14-E)	P			X							X		X				X	P					
Mast II (WN-Pt-02)	P				X				X		X		X					P					
Flemming (TS-Dv-02)	P		X			X	X				X		X	X			X	P					
Butler Subsidence (TS-Sn-15-E)	P			X							X		X				X	P					
Cable Highwall (JF-Ic-03)	P		X				X				X		X				X	P					
Snyder Mine Drainage (TS-Fr-04)	P				X	X			X		X		X				X	P					
North Canton Subsidence (ST-Pl-19-E)	P			X							X		X				X	P					
Woodworth (MH-Bv-13-E)	P		X				X				X		X		X		X	P					
Chapel Hill Church (SM-Sp-01)	P				X				X		X		X				X	P					
Mathey Water Well (TS-Sn-18)	P					X					X	X	X					P					
Hicks Subsidence (WN-Cp-07-E)	P			X							X		X					P					
Huff Run Reclamation (TS-Sn-13)	P		X				X				X		X					P					
Yellow Creek Blow Out (Jf-Sl-01)	P				X	X					X		X			X		P					
Forney (ST-Pl-16)	P			X							X		X				X	P					
Veley Long (TS-Sl-04)	P					X					X	X	X					P					
Cvetkovic (MH-Au-02)	P			X							X		X				X	P					
Drake Shaft (ST-Lw-01)	P				X				X		X		X				X	P					
Gorthey (TS-Sn-07)	P				X				X		X		X				X	P					
Barnhill Tipple (Ts-Go-03)	P		X				X				X		X		X			P					
Spiker Reclamation (ST-Sn-03)	P		X				X				X		X					P					
Jacob #3 (TR-Hb-01)	P				X				X		X		X				X	P					
South Massillon Mine (ST-Bh-04)	P				X						X		X				X	P					
Velleca Mine Seeps (TS-Wr-01)	P		X		X									X			X	P					
Kaufman II (TS-Go-25)	P			X		X						X					X	P					
Maurer (TS-Wr-04)	P		X				X				X		X				X	P					

Sponseller (ST-Sn-02)	P		X				X				X		X				X	P					
Rogers Highwall (CL-El-04)	P		X				X				X		X				X	P					
Shook Subsidence (MH-Au-01)	P			X							X		X				X	P					
Vienna Shafts (TR-Vn-01)	P				X				X		X		X				X	P					
Linden AMD (CR-Rs-04)	P		X			X								X		X		P					
Turnbull Subsidence (CL-Un-04)	P			X							X		X				X	P					
New Springfield Church (MH-Sp-09)	P		X				X				X		X				X	P					
Maple Highwall Phase 2 Reclamation	P		X								X	X					X		M				
Cherry Valley Coke Ovens Reclamation	P			X	X	X			X		X	X		X	X	X	X		M				
Hawkins Road Tipple Removal	P				X		X			X	X		X		X				M				
Wolfe Shaft Reclamation	P				X				X		X		X						M				
Oakview Drive Sobsidence	P			X					X		X		X				X		M				
Voorhees Highwall Reclamation	P		X								X	X							M				
Weaver Highwall Reclamation	P						X				X		X						M				
Quaker Raceway Portal Closure	P		X		X						X		X						M				
Viny Reclamation	P		X			X					X	X	X						M				
Gaither Highwall Reclamation	P		X			X					X	X							M				
Ferrebee Subsidence	P				X	X			X		X		X						M				
Mount Tabor Church Mine Drainage Remediation	P					X	X				X	X	X						M				
Brown Hill Road Subsidence	P					X			X		X		X						M				
Duladahn Mine Drainage Remediation	P					X					X	X	X				X		M				
Clinton Mine Opening Portal Closure	P				X						X	X	X						M				
SR165 Maintanenance	P						X		X		X		X						M				
Brier Ridge Burning Gob Pile - Jefferson County	P		X					X			X		X	X						P			
Wills Creek Tipple - Coshocton County	P		X	X		X					X		X	X	X	X	X			P			
Stratton Mine Opening - Jefferson County	P		X	X	X						X		X							P			
Patton Run Reclamation Project - Belmont County	P		X			X					X		X			X	X			P			
Kirkendall Highwall Emergency - Athens County	P		X	X	X	X					X		X							P			
Cassingham Emergency - Coshocton County	P		X	X		X					X		X							P			
Roush Highwall Emergency Project	P		X								X		X							P			
W/T Gravel Mine Openings	P		X	X							X		X							P			

Acree Landslide	P		X			X					X		X							P			
Cherry Hill Burning Gob - Guernsey County	P		X					X			X		X							P			
Lavender Gob Pile - Meigs County	P		X					X			X		X							P			
Ironman Enterprises - Coshocton County	P		X			X					X		X			X				P			
Hutt Coal Forfeitures - Coshocton County	P		X			X					X		X			X				P			
Pike Run Bridge #11 - Washington County, PA	P					X					X											M	
Chartier's Bridge #61 - Washington County, PA						X					X											M	

* List whether project experience is corporate or personnel based or both.

** Use this area to provide specific sections or pages if needed for reference.

*** List Primary Design personnel and their functional capacity for the projects listed.

Appendix E

HRG Team Resumes

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

ANDREW J. LONGENECKER
Environmental Project Manager

Mr. Longenecker is an Environmental Project Manager with Herbert, Rowland & Grubic, Inc. (HRG). Possessing more than ten years of experience in the environmental field, Mr. Longenecker is responsible for the management of projects involving collection and analysis of watershed data, wetland identification and delineation, wetland mitigation design, site work, reports, bog turtle habitat screening, natural gas well pad and pipeline development, Phase I Environmental Site Assessment research and reports, and coordination with PADEP, US Army Corps of Engineers and additional federal and state agencies.

EDUCATION:
M.S., Biological Sciences, Marshall University, 2000

B.S., Wildlife and Fisheries Resources, West Virginia University, 1997

CERTIFICATION(S):
OSHA 40-Hour HAZWOPER
Qualified Bog Turtle Surveyor

PROJECT EXPERIENCE

Chesapeake Energy Corporation, Ohio – Role: Project Manager. Responsible for day-to-day management of the survey and design of natural gas well pads and access roads throughout Chesapeake's Utica Shale play. Project entailed site selection, environmental clearances, preliminary design, survey, final design, erosion and sediment control packages, plat design, and final stake out.

Exco Resources, Inc., Penn Township, Lycoming County, PA – Role: Environmental Scientist. Responsible for identification and delineation of regulated waters within proposed natural gas well pad and access road sites. Project entailed environmental clearances, preliminary design, survey, final design, erosion and sediment control packages, plat design, and final stake out.

Stone Energy, West Virginia – Role: Environmental Scientist. Responsible for day-to-day management of HRG's environmental services related to this client's design and build of natural gas well pads and access roads throughout its Marcellus Shale play. Project entailed site selection, environmental clearances, preliminary design, survey, final design, erosion and sediment control packages, plat design, and final stake out.

RELATED EXPERIENCE

From September 2006 to May 2012, Mr. Longenecker was employed with Liberty Environmental, Inc. as a Project Manager and Pennsylvania Qualified Bog Turtle Surveyor. He was responsible for the day-to-day management of the Natural Resources Group with specific oversight of all wetland/ecological investigations, permitting, and site selection pertaining to the Marcellus and Utica shale formations, commercial and residential developments, and roadway design. Additional duties included wetland field delineations, regulated waters impact permitting, Phase I, II, and III Bog Turtle Surveys, Phase I ESAs, threatened/endangered/rare species investigations, habitat restoration plans, and groundwater sampling.

From September 2005 to September 2006, Mr. Longenecker was employed with Aqua-Terra Environmental Ltd. as a Biologist. In this role, he gained experience in Phase I Bog Turtle Habitat Surveys, radio telemetry studies, wetland identification and delineation, herpetological salvage, permitting, threatened/endangered/rare species investigations, habitat restoration plans, benthic macro-invertebrates surveys, and evaluation of aquatic ecosystems.

ANDREW J. LONGENECKER

From February 2002 to September 2005, Mr. Longenecker was employed with Skelly and Loy, Inc. as a Wildlife Biologist and an Environmental Scientist. He gained experience in wetland identification and delineation, study and evaluation of aquatic ecosystems, stream and river classification, threatened/endangered/rare species investigations, and environmental permitting and documentation. He assisted with biological assessments for benthic macro-invertebrates and fish, ambient water quality evaluations, and physical habitat evaluations. Mr. Longenecker participated in field surveys and radio telemetry studies for bog turtles, as well as numerous other amphibians and reptiles associated with wetlands, vernal pools, and waterways. He also served as a field team leader that applied the principles of fluvial geomorphology to natural stream channel design projects. He routinely participated in site evaluation, stream type classification, regional curve development, restoration plan design, permitting, and construction management. He assessed watersheds, wrote comprehensive watershed plans, assisted in Phase II bog turtle surveys, and analyzed spatial data using ArcView GIS.

From June 2000 to February 2002, Mr. Longenecker was employed with Berks County Conservancy as a Natural Resource Specialist. In this position, he assessed watersheds and wrote comprehensive watershed plans, performed ecological surveys and sampling, conducted stream rehabilitation projects, monitored water quality, sampled benthic macro-invertebrates, delineated wetlands, analyzed spatial data using GIS, performed bog turtle radio telemetry and bog turtle habitat assessment and protection, composed grant proposals, ran education programs, and conducted habitat workshops.

TRAINING

- OSHA 8-Hour HAZWOPER Refresher
- Wetlands Construction Design, Rutgers New Jersey Agricultural Experimental Station (NJAES) Office of Continuing Professional Education
- River Morphology and Applications, Wildland Hydrology, Inc.
- Applied Fluvial Geomorphology, Wildland Hydrology, Inc.
- AV Streams Workshop, Penn State University
- Natural Stream Design Workshop, Villanova University
- ArcView – GIS, Penn State University

PROFESSIONAL MEMBERSHIP(S)

Society of Wetland Scientists

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

JAMES B. GUE
Environmental Scientist II

Mr. Gue is an Environmental Scientist with Herbert, Rowland & Grubic, Inc. (HRG). His responsibilities include field studies and assessments involving collection and analysis of watershed data; Phase I Environmental Assessment research and reports; wetland identification and delineation, wetland mitigation design, site work reports; traffic noise monitoring, modeling, and analysis; and the preparation of local, state, and federal permit applications. He also provides assistance with the development of geographic information systems and computer-aided drafting.

Various Well Pads, for Carrizo Oil & Gas, Inc., Various Locations throughout PA - Role: Environmental Scientist II. Projects entailed initial site reconnaissance, wetland identification and delineation, pad and infrastructure location selection on the basis of environmental constraints, and Ohio Biodiversity clearances. Projects involved numerous wells in Trumbull County, Ohio and Mercer County, Pennsylvania.

Various Well Pads, for Chevron Appalachia, LLC., Various Locations throughout PA & WV - Role: Environmental Scientist II. Projects entailed responsibility for initial site reconnaissance, wetland identification and delineation, pad and infrastructure location selection on the basis of environmental constraints, and obtaining Ohio Biodiversity clearances. Projects involved numerous wells in Marshall and Wetzel Counties in West Virginia.

Various Well Pads, for Chesapeake Energy Corporation, Various Locations throughout Northeast and Easter OH - Role: Environmental Scientist II. Projects included responsibility for initial site reconnaissance, wetland identification and delineation, pad and infrastructure location selection on the basis of environmental constraints, and obtaining Ohio Biodiversity clearances. Projects involved numerous wells location in the Appalachian foothills and Ohio Valley area.

RELATED EXPERIENCE

From 1982 to 2011, Mr. Gue was employed by the Ohio Department of Natural Resources, Division of Mineral Resources Management in Columbus Ohio.

From 2008 to 2011 Mr. Gue served as an Environmental Specialist 3 for the ODNR Abandoned Mine Lands Program. His responsibilities included: performing environmental research, investigation and oversight of program activities while overseeing lower-level environmental specialists; coordinating staff activities pertaining to major complex abandoned mine land reclamation projects; reviewing and ensuring technical completion of documents, letters, permits and plans prepared by lower-level environmental specialists and support staff; coordinating schedules for program projects and staff; and providing training to new staff and continuously updated training for existing staff.

EDUCATION:
B.S., Natural Resource Conservation, Kent State University, 1981

Studies, Groundwater Hydrology, Wright State University, 1997

CERTIFICATION(S):
ACOE Wetlands Identification and Delineation Certification, Community College of Allegheny College

Eastern United States Wetlands Awareness, Identification and Delineation Certificate, US Department of the Interior

First Aide, CPR, Blood borne Pathogens & AED, Safety Consulting Services

Training Emergency Action Planning, Safety Consulting Services

Training Hand & Power Tools, Safety Consulting Services

Training Hazard Identification, Safety Consulting Services

Training Incident Reporting and Investigation, Safety Consulting Services

Wetlands Awareness, U.S. Department of the Interior

Wetlands Identification & Delineation, Community College of Allegheny County

During this time period Mr. Gue duties also included: reporting regional program activity progress and recommending improvements to supervisors; providing field-related program information to assist in budget preparations; assisting in the development and implementation program policy, rules and procedures; providing coordination and communication among programs, divisions, districts and other governmental agencies; providing media for the general public that require total accountability, immediate response and accessibility; providing assistance to private citizens, industry representatives and governmental agencies relative to environmental findings and analyses; preparing research papers relative to acid mine drainage research and construction projects; developing educational materials, newsletters and environmental programs; and providing testimony for court and administrative hearings.

From 1986 to 2008, Mr. Gue was an Environmental Specialist 2 for the ODNR Abandoned Mine Lands Program. In this position his responsibilities included: planning, monitoring, reviewing and assisting in the comprehensive development of projects related to abandoned mine land reclamation projects; investigating eligibility of mine related public complaints; utilizing GPS and GIS technologies including ARCGIS and ARCMAP in compilation of a state-wide abandoned mineland inventory; conducting and preparing environmental assessment and categorical exclusion applications including wetlands identifications and delineations, endangered species assessments and archaeological site reviews; and submitting and revising environmental assessment approvals as coordinated with the Federal and State EPAs, Army Corps of Engineers Buffalo and Huntinton districts, Department of the Interior's Office of Surface Mining and the US Fish and Wildlife Service. Mr. Gue also coordinated and submitted applications for Army Corp of Engineers 404 and State of Ohio EPA 401 water quality permits, ensured compliance with Army Corp of Engineers nationwide 27 water quality permits, prepared and submitted State of Ohio EPA approvable storm water permits, devised storm water permit inspection reporting methods, and conducted storm water permit compliance inspections and submitted pertinent reports.

Also during this time period, Mr. Gue was responsible for: conducting extensive acid mine drainage investigations and recommending mitigation methods and designs for acid mine drainage mitigation projects via multiple passive treatment system methodologies, including aerobic and anaerobic wetlands; preparing Acid Mine Drainage Abatement and Treatment plans for environmentally devastated watersheds; coordinating start-ups and acted as liaison to public environmental restoration efforts at multiple impacted watersheds; assisting public health and safety project designs and developing best-fit site layouts; preparing grant requests and reports for state and federal EPA funding; maintaining databases for all aspects of work; and overseeing project contracts, construction inspection, tracked construction costs, approved contractor payment estimates and submitted related reports.

From 1982 to 1986 Mr. Gue was a Reclamation Specialist 1. He job duties consisted of conducting mining and reclamation inspections to monitor compliance with State and Federal laws, assisting in State permit application reviews and revisions, conducting investigations of violations, preparing comments regarding state policy and program requirements, and preparing technical reports and maintaining files.

TRAINING

- Acid Forming Materials 1, Department of the Interior, Office of Surface Mining
- Acid Forming Materials 2, Department of the Interior, Office of Surface Mining
- AMD Treat for Acid Mine Drainage Treatment Estimation, Department of the Interior, Office of Surface Mining
- Analysis of Aquifer Characteristics with AQTESOLV, Department of the Interior, Office of Surface Mining
- ArcGIS for Mining and Reclamation, Department of the Interior, Office of Surface Mining
- ArcPad Software and Use of Attribute Fields for the Abandoned Mines Inventories, ODNR, GIS Section
- ArcView for Mining and Reclamation, Department of the Interior, Office of Surface Mining
- Completing the Ohio Historic Inventory, State of Ohio Historic Preservation Office
- CPR Safety Training, Safety Consulting Services
- Designing Gates and Closures for Endangered Bat Hibernaculum, Department of the Interior, Office of Surface Mining
- Engineering Principles for Program Personnel, Department of the Interior, Office of Surface Mining
- Evaluation of Deep Mine Bat Hibernaculum, US Fish and Wildlife Service

- Field Identification of Potential Roost Trees Used by Indiana Bats, US Fish and Wildlife Service
- Geology and Geochemistry of Acid Forming Materials, Department of the Interior, Office of Surface Mining
- Ground Water Monitoring Well Installation and Groundwater Sampling, Nielsen Environment Field School
- Groundwater Modeling and Analysis with Groundwater Vistas, Department of the Interior, Office of Surface Mining
- Identification and Preservation of Threatened and Endangered Bat Habitat, ODNR, Division of Wildlife and Bat Conservation International
- Identification, Mapping, and Inventory of Ohio Soils, ODNR Division of Soil and Water
- Introduction to Grant Writing, Crossroads Resource Conservation and Development
- NEPA Procedures, Department of the Interior, Office of Surface Mining
- Ohio EPA General Construction Stormwater Permit Workshop, Ohio Environmental Protection Agency
- ORAM Training, Ohio Environmental Protection Agency
- Passive Treatment Theory and Application, Department of the Interior, Office of Surface Mining
- Physical and Chemical Properties of Soil, Department of the Interior, Office of Surface Mining
- Project Management, Department of the Interior, Office of Surface Mining
- TerraSync Software for the Timble GeoExplorer, Herbert, Rowland & Grubic, Inc.
- Trimble GeoExplorer GPS for Positioning and Geolocation, Herbert, Rowland & Grubic, Inc.
- Trimble Juno GPS for Location and Inventory of Abandoned Mines, ODNR, GIS Section
- Water Quality Analysis Using Aquachem, Department of the Interior, Office of Surface Mining
- Wetland Botany Training, Institute of Botanical Training
- Wetlands Awareness Course, United States of the Interior, National Technical Training Program
- Wildlife Habitat Enhancement, Wildlife Habitat Council

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

SAMER H. PETRO, P.E.

Office Manager/Senior Project Manager

As Manager of the Morgantown office of Herbert, Rowland & Grubic, Inc. (HRG), Samer provides client contact, business development, engineering design, and project management of various activities ranging from environmental studies, location studies, and analyses of alternative structures and roadways to final design of new structures and new highways; removal, replacement, and rehabilitation of existing structures, highways, and water and wastewater treatment facilities; and construction-phase services. Samer's experience and expertise also includes strengthening historic and existing structures using fiber reinforced polymer (FRP) composite materials and nondestructive testing methods for highway bridges and transportation related structures. He routinely coordinates each aspect of contract administration, construction phase services, including periodic field inspections from the award of contracts to project close-out.

EDUCATION:
B.S., Civil Engineering, West Virginia University, 1987

M.S., Civil Engineering, West Virginia University, 1993

LICENSE(S):
Professional Engineer, WV
Professional Engineer, OH
Professional Engineer, PA

RELATED EXPERIENCE

Prior to joining HRG in 2012, Mr. Petro served as the WV Operations Manager and Senior Project Manager for Gannett Fleming, Inc. in Morgantown, WV. In this role, Mr. Petro was involved in various capacities for the following selected projects:

- Headsville Bridge Replacement, Mineral County, WV, West Virginia Department of Transportation, Division of Highways
- Dolls Run Bridge Replacement, Monongalia County, WV, West Virginia Department of Transportation, Division of Highways
- Morgantown Personal Rapid Transit (MPRT) Facilities Master Plan, Morgantown, WV, West Virginia University
- SR 28 over Yutes Run Bridge, Pennsylvania Department of Transportation, District 11
- SR 19 Morrisville Bridge, Pennsylvania Department of Transportation, District 12
- Purple Line over Anacostia River Bridge, Maryland Transit Administration (MTA)
- Automated Train Guideway, Phoenix, AZ, City of Phoenix Sky Harbor International Airport
- North Shore Connector, Pittsburgh, PA, Port Authority of Allegheny County
- 19th Avenue Bridge, City of Phoenix, AZ
- 16th Street Bridge, City of Phoenix, AZ
- Thunderbird Road over Cave Creek, City of Phoenix, AZ
- Washington Street Pedestrian Bridge, Phoenix, AZ, City of Phoenix Sky Harbor International Airport
- King's Covered Bridge, Pennsylvania Department of Transportation, District 09
- Water Treatment Plant Expansion, New Bethlehem, PA, Redbank Valley Municipal Authority
- Wastewater Treatment Plant Expansion, Grove City, PA, Borough of Grove City

- Evansdale Campus Bridge - Garage, Morgantown, WV, West Virginia University

Prior to joining Gannett Fleming in 2004, Mr. Petro worked with the College of Engineering and Mineral Resources with West Virginia University in Morgantown, WV, as a research structural engineer. His responsibilities included a wide variety of bridge design, rehabilitation, and structural investigation using nondestructive intelligent devices, involving steel, concrete, engineered wood, and fiber reinforced polymer (FRP) composite materials for the following projects:

- Wood Bridge, Barbour County, WV, West Virginia Department of Transportation, District 7
- Railroad Bridge, Moorefield, WV, West Virginia Department of Transportation, State Rail Authority

Mr. Petro's experience also includes several years with DMJM/Harris (Presently AECOM) in Morgantown, WV as a Project Bridge Engineer. During this time his responsibilities included structural design activities for the following projects:

- Elkins Bypass, Elkins, WV, West Virginia Department of Transportation
- Mon/Fayette I-68 Interchange and Expressway, Morgantown, WV, West Virginia Department of Transportation
- Mon/Fayette I-68 Interchange and Expressway, Morgantown, WV, West Virginia Department of Transportation

PUBLICATION(S) AND PAPER(S)

Petro S.H., "First-class upgrade: Series of bridges in Phoenix Strengthened Successfully." Roads & Bridges Magazine, May 2010.

Petro S.H., Peaslee M.T., Leech T.G., "Strengthening a Concrete Slab Bridge Using CFRP Composites." ISEC-5, The Fifth International Structural Engineering and Construction Conference, Las Vegas, Nevada, 2009 (accepted for publication and presentation).

Petro et al. "Integral Abutments and Jointless Bridges (IAJB) 2004 Survey Summary". FHWA Conference: Integral Abutments and Jointless Bridges (IAJB), Baltimore, Maryland, 2005.

Petro et al. "Saving Covered Bridges with Glass Fiber Reinforced Polymers," APT Bulletin, The Journal of the Association for Preservation Technology, 2004.

Petro et al. "Nondestructive Evaluation Methods for Highway Bridges", WVDOH, Charleston, WV 1995.

PROFESSIONAL MEMBERSHIP(S)

American Concrete Institute (ACI): Member of ACI 440 Committee
American Society of Civil Engineers (ASCE)
Association for Bridge Construction and Design (ABCD)

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Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

JOHN RUSNAK, P.E.

Civil Senior Project Manager/Team Leader

Mr. Rusnak is a civil regional service group manager with Herbert, Rowland & Grubic, Inc. (HRG). Mr. Rusnak is responsible for overseeing staff in the development of design concepts, preparing preliminary and final design drawings, developing technical specifications and bid documentation, and attending meetings and delivering budgets for municipal clients. Mr. Rusnak also provides oversight during construction and monitors project costs.

EDUCATION:
B.S., Civil Engineering, The Pennsylvania State University, 1989

LICENSE(S):
Professional Engineer, PA

CERTIFICATION(S):
Certified Construction Documents Technologist, CDT

MUNICIPAL EXPERIENCE

South Park Township, Allegheny County, PA – Role: Project Manager. Responsible for providing design oversight and project administration on sanitary and storm sewer projects within the Township. Projects include the South Gould Drive and Brownsville Road Sanitary Sewer Reconstruction and Protection Project; CDBG Sewer Rehabilitation Projects; NPDES Phase II MS4 Permit services; and the 2003 through 2010 Township-wide Sanitary Sewer Rehabilitation Projects.

Middlesex Township, Butler County, PA – Role: Municipal Engineer. Responsible for providing design and bid phase services and construction administration for Township projects. Attends Municipal Supervisor and Planning Commission meetings. Acts as liaison between PennDOT municipal services and Township staff. Projects include Years 2003 through 2010 Road Programs and the Kyle Road Rehabilitation project.

Greenville Borough, Mercer County, PA – Role: Municipal Engineer. Responsible for attending municipal council meetings and providing design oversight and project administration of Borough-related projects, including the federally funded and PennDOT administered Main Street Enhancement (Streetscape) projects (Phases I and II).

Borough of Slippery Rock, Butler County, PA – Role: Municipal Engineer. Responsible for attending Municipal Council meetings, providing design oversight and project administration for Borough-related projects, and reviewing land development plans.

Slippery Rock Municipal Authority, Butler County, PA – Role: Project Manager. Responsible for providing design oversight and project administration on sewer and water construction projects. Projects include the Kiester Road Force Main Replacement Project, the 2002 Waterline Replacement Project, the 2003 and 2004 Trickling Filter Improvement Projects, Standby Power Generator and Portable Sewage Pump Procurement, and 2005 Water Well Construction Project.

COUNTY STORMWATER MANAGEMENT PLANS (ACT 167)

Act 167 Plan, Phase I and Phase II, Washington County, PA – Role: Project Manager. Responsible for compiling and reviewing work involving the Phase I Scope of Study and the Phase II Stormwater Management Plan. Project entailed

the facilitation of public outreach meetings with PA DEP and Washington County Planning Commission to gather public endorsement and provide education on the Act 167 Plan and process under Phase I. Acted as Project Manager for the Phase II Plan overseeing compilation of problem area information, coordinating meetings, reviewing Draft Plan Reports and Model Ordinance.

Act 167 Plan, Phase I and II, Butler County, PA – Role: Project Manager. Responsible for drafting and reviewing work involving the Phase I Scope of Study and the Phase II Stormwater Management Plan, including facilitation of public outreach meetings with PA DEP and Butler County Planning Commission. Project entailed gathering public endorsements and providing education on the Act 167 Plan and process under Phase I. Also acted as Project Manager for the Phase II Plan overseeing compilation of problem area information, coordinating meetings, reviewing Draft Plan Reports and Model Ordinance.

Act 167 Plan, Phase II, Venango County, PA – Role: Project Manager. Responsible for drafting and reviewing work involving the Phase I Scope of Study and the Phase II Stormwater Management Plan, including facilitation of public outreach meetings with PA DEP and Venango County Planning Commission. Project entailed gathering public endorsements and providing education on the Act 167 Plan and process. Also acted as Project Manager for the Phase II Plan overseeing compilation of problem area information, coordinating meetings, reviewing Draft Plan Reports and Model Ordinance.

MISCELLANEOUS PROJECT EXPERIENCE

Borough of Ambridge Municipal Authority, Borough of Ambridge, Beaver County, PA – Role: Civil Engineer. Responsible for providing design oversight and project administration. Project entailed services for the Belt Filter Press Room Ventilation Upgrade, 2003 Sanitary Sewer System Minor Repair Project, and the Park Road Sanitary Sewer and Force Main Project.

Western Kelly Boulevard 2002 Stormwater Study and 2006 Study Update, Slippery Rock Borough, Butler County, PA – Role: Civil Engineer. Responsible for performing stormwater analysis. Project entailed analysis of a 52-acre area within Borough limits. Made recommendations and provided construction costs estimates addressing adequacy of existing facilities to handle current and future rainfall events.

Upgrade Water Source and Distribution System, Pennsylvania Department of General Services (DGS)/Torrance State Hospital, Blairsville, PA – Role: Project Manager. Responsible for providing design, oversight, project management and administration for the construction of a 600 GPM water booster pump station and distribution system improvements. Project entailed updating the raw water chemical feed system at the water treatment plant.

West End Pond Renovation Project, Venango Campus of Clarion University, Oil City, PA – Role: Project Manager. Responsible for taking concept designs through final design and construction. Project entailed applying for permits and providing design and construction phase oversight, project management and administration for renovation of a 2.5 acre pond on the Clarion University of Pennsylvania, Venango County Branch Campus, as well as addressing accessibility issues associated with pond and campus property.

West End Pond Annual Dam Inspection, Venango Campus of Clarion University, Oil City, PA – Role: Project Manager. Responsible for inspecting a medium hazard dam in accordance with Pennsylvania Department of Environmental Resources Dam Inspection guidelines.

Sherwood Oaks Annual Dam Inspection, Cranberry Township, Butler County, PA – Role: Project Manager. Responsible for inspecting the low hazard dam in accordance with Pennsylvania Department of Environmental Resources Dam Inspection guidelines.

West Hill Industrial Park Expansion for Armstrong County Industrial Development Authority, Kittaning, Armstrong County, PA – Role: Civil Engineer. Responsible for performing site infrastructure design, E&S control plans, and permit application Project entailed work for a 175-acre industrial park expansion project.

Conrail Occupancy Permits for Wastewater Treatment Facility and Water Transmission Main Installation for Beaver Falls Municipal Authority, City of Beaver Falls, Beaver County, PA – Role: Civil Engineer. Responsible for preparing permit application and coordinating associated fieldwork for utility line installation within Conrail right-of-way.

Beaver County Corporation for Economic Development, Bridgewater Borough, Beaver County, PA – Role: Project Manager. Responsible for preparing and coordinating concept design for trail and walkway project connecting Beaver Borough and Bridgewater Borough waterfront park. Attended meetings and coordinated permit applications.

AT&T Wireless, City of Pittsburgh, Allegheny County, PA – Role: Civil Engineer. Responsible for performing site development services for 11 remote tower locations in western Pennsylvania, West Virginia, and Ohio. Project entailed the coordination of field data collection, final plan development, land development plan submission, and represented client at municipal meetings.

RELATED EXPERIENCE

From 1993 to April 2002, Mr. Rusnak was a municipal engineering representative with Michael Baker, Jr., Inc. in Beaver, PA. His duties included engineering design and oversight of staff; project and financial management; construction monitoring; grant, loan, and permit application and administration; land development and subdivision plan review; ordinance drafting and review; resident compliant resolution; preparation of project bid documents and technical specifications; and meeting attendance. Clients/projects managed during this time period include: Borough Engineer, Borough of Baden; Township Engineer, Rochester Township; Township Engineer, New Sewickley Township; and Authority Engineer, New Sewickley Township Municipal Authority.

From 1989 to 1993, Mr. Rusnak was a project engineer with Uni-Tec Consulting Engineers, Inc. in State College, PA. He was responsible for various municipal-related projects, specifically water storage and distribution, groundwater remediation, and road rehabilitation and reconstruction projects. He performed state-funded grant and loan application work related to municipal projects.

During the summers of 1987 and 1988 while attending Penn State University, Mr. Rusnak was a summer intern with Universal Technical, Inc. in State College, PA, serving as the construction inspector on various sewerage and water distribution system upgrade projects.

During the summer of 1986 while attending Penn State University, Mr. Rusnak was a summer intern with Mid-Atlantic Engineering, Inc. in Scranton, PA, serving as concrete, asphalt, and construction materials testing technician.

TRAINING

- Basics in Complying with Underground and Aboveground Storage Tanks, The Pennsylvania Chamber of Buisness & Industry
- Municipal Engineers Fall Education Seminiar, PSATS
- Project Management for Engineers, PMI Registered Education Provider

COMMUNITY SERVICE

Mr. Rusnak served as a board member and past President for the Glen Eden Homes Association (GEHA) located in Cranberry Township, Butler County, PA. Under his direction, the board was responsible for overseeing budget, maintenance, and day-to-day operations of the 400 residential unit association.

JOHN RUSNAK, P.E.

PROFESSIONAL MEMBERSHIP(S)

American Society of Civil Engineers

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

MURAT TUKEL, P.E.

ENVIRONMENTAL/CIVIL PROJECT MANAGER

RELATED EXPERIENCE

From 2008 to 2012 Mr. Tukel was a Natural Resources Engineer III with the Ohio Department of Natural Resources, Abandoned Mine Program in Salem Ohio. In this capacity he acted in a professional engineer capacity overseeing personnel (2 engineers and 1 construction specialist) in Abandoned Mine Land, Public Health, & Safety program. He was responsible for developing, planning and designing mine reclamation projects, contract preparation and bidding, cost estimates, budgeting, contractor selection, and oversight of construction activities.

From 2000 to 2008 Mr. Tukel was an Environmental Supervisor with the Ohio Environmental Protection Agency, Division of Solid and Infection Waste Management in Twinsburg, Ohio. He was responsible for supervision of technical staff in administration of environmental (solid and infectious waste) laws and regulations. He served an active role in administration of rule, policy, and law changes. He was also responsible for various interviewing, hiring, mentoring, coaching, training, and performance evaluations of technical staff. He also provided technical assistance in interpretation of Ohio solid and infectious waste laws. Mr. Tukel was in direct contact with various consultants, other government entities, and regulated community. He was also responsible for various report generation and project tracking, purchasing, budgeting, strategic planning tasks, along with preparing reports for litigation and providing testimony.

From 1996 to 2000 Mr. Tukel was an Environmental Engineer with the Ohio Environmental Protection Agency, Division of Solid and Infection Waste Management in Twinsburg, Ohio. He was responsible for permit to install (PTI) reviews for solid waste disposal landfills, composting, and incinerator facilities. He was also responsible for detailed plans for landfill design, leachate and gas collection and management systems. He was also responsible for closure plans and slope stability studies. He also provided active participation in various rule-creation processes. He provided extensive knowledge on Ohio's Solid Waste regulations and provided technical assistance to public and regulation communities and represented the State of Ohio in various public meetings.

From 1991 to 1996 Mr. Tukel was an environmental specialist with the Ohio Environmental Protection Agency, Division of Hazardous Waste Management in Twinsburg, Ohio. He was responsible for permit to install (PTI) reviews for hazardous waste treatment, storage, and disposal (TSD) facilities. He was also responsible for closure plans, corrective action plans, and risk assessments. Mr. Tukel also conducted RCRA generator and TSD facility inspections, along with related correspondence and enforcement actions. He provided technical assistance to legal staff and regulated community, along with providing hazardous waste sampling and handling and education presentations to professional groups and organizations.

EDUCATION:

M.B.A., Business Administration, Cleveland State University

M.S., Civil Engineering, Cleveland State University

B.S., Environmental Engineering, Cleveland State University

LICENSE(S):

Professional Engineer, OH

MURAT TUKEL, P.E.

From 1989 to 1991 Mr. Tukel was a research assistant with Cleveland State University, Civil Engineering Department in Cleveland, Ohio. During this time he was responsible for software development in Subsurface Contaminant Transport Modeling, along with design and simulations in other software.

In 1988 Mr. Tukel was an environmental engineer/summer intern with the Turkish Petroleum Refineries Association in Izmit, Turkey. His responsibilities included performing inspections at the wastewater treatment plant, monitoring plant efficiency, sampling collection and field testing, and compiling data and prepared reports and computerizing the office's manual bookkeeping task.

In 1987 Mr. Tukel was a project design engineer/summer intern with the SU-YAPI engineering and consulting company in Ankara, Turkey. He was responsible for the evaluation of rehabilitation of Izmir Metropolitan area wastewater collection and treatment system and engineering design of its expansion, along with written documentation and proposal preparation for bids.

TRAINING

AML Design Workshops on Dangerous Openings, Dangerous Highwalls, Subsidence, Drilling and Grouting
AutoCAD coursework on 3D Map Raster Design for Underground and Surface Mine Mapping, Carlson Mining Site Design, and SedCAD
Various Engineering application workshops on Environmental Geophysics, Drilling, Trenching and Excavating, Contract Management, and Risk Management

MEMBERSHIPS

Member, Beta Gamma Sigma, Honorary Society
Executive Director, Turkish American Scientists and Scholar Association (2006-2007)
Vice President, Turkish-American Society of Northern Ohio (2000-2004)

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RICHARD W. WARDEN, P.E.
NATURAL RESOURCES ENGINEER

RELATED EXPERIENCE

LICENSE(S):
Professional Engineer, OH

From February 2011 to December 2012, Mr. Tukel worked with The Ohio State University, through Ohio DNR on a pilot project to develop a group using CCB's. He was responsible for coordinating with contractors to devise a technique to deliver the grout, which was successfully performed on September 28, 2012. This grout was to be placed into this "simulated" angur hole in order to demonstrate the following activities of using highway mining equipment during remaining operations.

From March 2007 to June 2010, Mr. Warden was requested to handle tasks related to the OSMRE 733 action on a part-time basis. He was responsible for development the majority of the bond computing spreadsheet for Ohio that is currently being used to set bond rates on active coal mining permits. Mr. Warden was the lead technical liaison and trainer between DMRM, the coal industry, and OSMRE, regarding the current bond calculations. He was also the lead engineer reporting to Ohio's Reclamation Forfeiture Fund Advisory Board during its development of a solvency report to the Governor of Ohio.

Between 1996 and 2006 Mr. Warden was requested to resolve conflicts between DMRM and contractors, deal with landowners regarding problems that were not mining related, work with media inquiries and to train DMRM staff.

In 1995, Mr. Warden was announced as the sole engineer for Ohio's AML Emergency Program. He was involved in all engineering tasks for emergency program projects, including portions of field investigations, personal design efforts, consultant selection, review of consultant work, contracting, and construction oversight. He was also responsible for tracking budgetary issues such as consultant invoicing, available balances, and coordination with OSMRE. These projects involved determining if complaints were mining related and usually required investigations of structures and their foundations. These projects included mine drainage issues; landslides; subsidence's; open shafts and portals; mine gas; burning gob; refuse piles; and coal piles.

From 1992 to 1995 Mr. Warden, during a reorganization of DMRM, became responsible for review of Coal Regulatory permit applications and ARP's. Some of those applications including blasting, AOC information, and underground mining design and subsidence control plans. He was also more involved with resolving regulatory issues between Ohio DNR, OSMRE, and coal company officials.

From 1986 to 1992 Mr. Warden worked with the Division of Mineral Resources Management (DMRM), through the Ohio DNR. He was primarily responsible for supervising in-house design staff working under SMCRA for abandoned mine lands (AML) and forfeiture projects. This involved a maximum staff of 13 individuals comprised of engineers, design technicians, survey personnel and other support staff. He performed oversight as well as personal designs and construction inspections, along with typical budgetary analysis and HR related

tasks for his position. Designs often included slope stability computations for landslide repairs and verifying Approximate Original Contour (AOC) for forfeiture projects.

From 1984 to 1986 Mr. Warden worked with the Office of Chief Engineer with the Ohio DNR. He was responsible for civil engineering tasks related to various projects to support Ohio DNR facilities. These projects included roadways, water supply systems, dam rehabilitation, public dock facilities and infrastructure for state operated buildings.

From 1979 to 1984 Mr. Warden worked with the Division of Water, Dam Safety Program through the Ohio DNR. He was responsible for evaluation of dams for structural, geotechnical and hydraulic and hydrologic adequacy.

TRAINING

Erosion and Sedimentation Control, American Society of Civil Engineers
Water Surface Profiling and Floodplain Analysis Seminar, American Society of Civil Engineers
Expert Witness Training, OSMRE NTTP
Underground Mining Technology, OSMRE NTTP
AML Design Workshop: Subsidence, OSMRE NTTP
SEDCAD 4, OSMRE TIPS
Instructor Training Course, OSMRE NTTP
Fed Projects & Historic Preservation Law, OSMRE NTTP
AML Design Workshop: Subsidence, OSMRE NTTP

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Engineering & Related Services

PAUL E. NACHLAS, P.G.

Director of Environmental Services

Mr. Nachlas is the Director of Environmental Services of Herbert, Rowland & Grubic, Inc. (HRG). In this capacity, he is responsible for the management of the firm's environmental services. Also, he provides services to a diverse client base, including comprehensive Remedial Investigations/Feasibility Studies of industrial properties, soil and groundwater remediation, environmental site assessments for real estate transactions, underground storage tanks, landfill permitting and/or closure, and water resource evaluation and development.

EDUCATION:
M.S., Geology, Boston College, 1985

B.S., Geology, Denison University, 1979

LICENSE(S):
Professional Geologist, PA
Professional Geologist, NC

CERTIFICATION(S):
OSHA 40-Hour HAZWOPER

PROJECT EXPERIENCE

Dura-Bond, LLC, Steelton Borough, Dauphin County, PA – Role: Environmental Scientist. Responsible for characterizing soils (historic fill) requiring remediation to assess for waste disposal options. Project entailed sampling the historic fill to determine if releases of regulated substances had occurred. Managed remediation by aggregating the fill into areas otherwise planned for impervious cover and the regulated fill was placed below the cap to accomplish pathway elimination as allowed by the Land Recycling and Environmental Remediation Standards Act. Constituents of concern included priority pollutant metals, petroleum compounds, and PCBs.

Colonial Metals Company, Columbia Borough, York County, PA – Role: Environmental Scientist. Responsible for developing alternatives for managing 20,000 cubic yards of secondary brass smelting foundry slag. Project entailed delisting and co-product determination for the slag which avoided extremely costly disposal. Soils beneath the slag pile were determined to be historic fill that was impacted by regulated substances in the slag. The regulated fill will be managed as part of Act 2 remediation that is ongoing for the property. Constituents of concern included priority pollutant metals, most notably lead and cadmium.

Consolidated Scrap Resources, Inc., City of Harrisburg, Dauphin County, PA – Role: Environmental Scientist. Responsible for characterization of auto shredder residue and Form U application approval. Project entailed annual Form 26R reporting and waste recertification for ongoing disposal approval. Constituents of concern included PCBs and priority pollutant metals, most notably lead.

Consolidated Scrap Resources, Inc., City of Harrisburg, Dauphin County, PA – Role: Environmental Scientist. Responsible for characterization of soil residues that had accumulated in operating scrap processing facilities in Harrisburg and York that resulted in Form U application approval. Project entailed Annual Form 26R reporting and waste recertification for disposal as needed. Constituents of concern included PCBs, priority pollutant metals, and petroleum distillates.

Shipley Energy, City of York, York County, PA – Role: Environmental Scientist. Responsible for completing sampling and waste characterization for multiple sites where soils with petroleum constituents were generated during underground storage tank removal. Project entailed evaluating disposal and

recycling alternatives and arranging for disposal of soils in accordance with applicable solid waste management regulations. Constituents of concern included PCBs, priority pollutant metals, and petroleum distillates.

C.E. Lutz, Inc., Elizabethtown, Lancaster County, PA – Role: Environmental Scientist. Responsible for completing sampling and waste characterization for multiple sites where soils with petroleum constituents were generated during underground storage tank removal. Project entailed evaluating disposal and recycling alternatives and arranging for disposal of soils in accordance with applicable solid waste management regulations. Constituents of concern included PCBs, priority pollutant metals, and petroleum distillates.

Law Firm Client, Borough of Abbottstown, Adams County, PA – Role: Environmental Scientist. Responsible for evaluating processed incinerator waste that had been placed onto a property for fill in the context of a PA DEP-issued General Permit. Project entailed preparing an opinion regarding the acceptability of the use of the material. Constituents of concern included priority pollutant metals and petroleum distillates.

Law Firm Client, Benton Township, Columbia County, PA – Role: Environmental Scientist. Responsible for evaluating foundry sand that had been placed onto a residential property for fill in the context of a PA DEP-issued General Permit. Project entailed preparing an opinion regarding the acceptability of the use of the material. Constituents of concern included priority pollutant metals and petroleum distillates.

Alliance Carolina Tool and Mold, Inc., Arden, Buncombe County, NC – Role: Environmental Scientist. Responsible for characterizing and obtaining approval to dispose of soils containing chromium at concentrations that required disposal as a hazardous waste. Managed final disposal and manifesting of waste.

Tyler Run, LLC, Spring Garden, York County, PA – Role: Environmental Scientist. Responsible for managing characterization sampling for remediation wastes containing priority pollutant metals and PCBs. Prepared a Self Implementing Plan under EPA's TSCA Program and a Cleanup Plan under PADEP's Act 2 Program and managed completion of site remediation pursuant to these Plans.

Farm Property, Upper Allen Township, Cumberland County, PA - Role: Environmental Scientist. Responsible for characterization of solid wastes that had accumulated on the property during former operations of an orchard farm which were discovered in the course of environmental due diligence for the property. The Project entailed characterization of the waste to determine whether that it was suitable for disposal as municipal-like waste. Waste disposal approval was received and the material was transferred to a suitably permitted facility for disposal.

Former Forry's Exxon, Jefferson Township, York County, PA - Role: Environmental Scientist. Responsible for characterization and remediation of soils and groundwater with contamination attributable to regulated, underground storage tanks pursuant to PA Code Title 25, Chapter 245. This site attained a Site Specific Standard, inclusive of a deed notice.

Musser's Market, Quarryville, Lancaster County, PA - Role: Environmental Scientist. Responsible for characterization and remediation of soils and groundwater with contamination attributable to regulated, underground storage tanks pursuant to PA Code Title 25, Chapter 245. This site attained a Site Specific Standard, inclusive of a deed notice.

Adamstown Auto Center, Abbottstown Borough, Adams County, PA - Role: Environmental Scientist. Responsible for characterization and remediation of soils and groundwater with contamination attributable to regulated, underground storage tanks pursuant to PA Code Title 25, Chapter 245. This site attained a Site Specific Standard, inclusive of a deed notice.

RELATED EXPERIENCE

PAUL E. NACHLAS, P.G.

Mr. Nachlas' experience as a professional geologist, solving subsurface problems by using hydrogeological and geophysical investigative methods, began in 1982. His method of investigation stresses systematic collection and analysis of data which permit detailed characterization of site specific conditions that are integral to completing the objectives of each project.

Mr. Nachlas has considerable experience in performing investigations of environmental liability. He has routinely utilized the now standard ASTM protocols for Site Assessments. He has performed Transaction Screens, Phase I and Phase II Environmental Site Assessments at a wide range of facility locations and business types. Mr. Nachlas has additional experience in managing environmental liabilities through federal regulatory programs such as RCRA, TSCA, NPDES and the CWA. He is knowledgeable and experienced in the state programs that afford environmental management options for purchasers of properties such as the Commonwealth's Act 2 Program.
Mr. Nachlas has extensive experience in completing RI/FS of industrial facilities and consequently has developed a rigorous approach to resolving the impacts that such facilities may have on soils, groundwater, and surrounding environs. He stresses the fundamentals of characterizing the site specific, three dimensional physical/chemical conditions which control migration of suspected or known regulated substances. Additionally, he maintains a strong commitment to developing work plans that are technically solid and defensible in the context of accepted industry standards and environmental statutes. Rigorous analytical evaluation is given to every set of data, as the individual investigation demands.

Stressing innovation in investigative techniques, Mr. Nachlas utilizes field and laboratory methods which generate data that cost-effectively characterize a study area. His experience includes soil testing that enables quantitative determination of the mass of soils impacted by chemical wastes as well as the transport mechanisms and fate of those chemicals in the subsurface. Further, he has extensive experience in three dimensional characterization of hydrogeologic and water quality conditions from monitoring wells and multi-level piezometers in variable geologic settings. He has conducted detailed testing and evaluation of a wide array of aquifer conditions to assess groundwater flow and chemical transport, and to ensure capture of chemical plumes.

Based on the characteristics of soil and groundwater determined from remedial investigations, Mr. Nachlas has prepared comprehensive feasibility studies to identify cost effective and expedient alternative methods for aquifer and soil remediation. He has direct experience in design and implementation of soil and aquifer restoration systems, including in-situ treatment of soils and site wide groundwater recovery and treatment systems.

Mr. Nachlas has successfully obtained co-product determinations for both residual and hazardous (by characteristics) waste materials. In these cases, he was instrumental in identifying a buyer for the co-product as well as preparing the technical justification for the actual determination. His work in this area afforded substantial cost savings, minimized long-term liability, and promoted recycling of a material that would have otherwise been disposed as regulated waste.

TRAINING

- Hazardous Waste Field Training, Phoenix Safety Associates, LTD.
- OSHA 8-Hour HAZWOPER Refresher, Eichelbergers, Inc.
- OSHA 10-Hour Construction Outreach, Eichelbergers, Inc.

PROFESSIONAL MEMBERSHIP(S)

PA Chamber of Business and Industry
PA Council of Professional Geologists: "Board Directors 2002-2008, President Elect 2006-2007, President 2008"
Pennsylvania Ground Water Association
Sigma Xi

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Engineering & Related Services

DAVID M. SWISHER, P.E.

Water & Energy Regional Service Group Manager

Mr. Swisher is a regional service group manager with Herbert, Rowland & Grubic, Inc. (HRG) responsible for managing environmental engineering projects including: planning, permitting, design, construction administration, financial analyses, and project financing of water and wastewater infrastructure projects.

EDUCATION:
M.S., Environmental Engineering, The Pennsylvania State University, 2002

B.S., Civil and Environmental Engineering, The Pennsylvania State University, 2001

LICENSE(S):
Professional Engineer, PA

CERTIFICATION(S):
Construction Document Technologist

Water System Operator, PADEP

Water Treatment Plant Operator, Class B

WASTEWATER FACILITIES PLANNING

Act 537 Plan for Woodward Township, Clearfield County, PA – Role: Project Manager. Responsible for the completion of a multi-municipal Act 537 Sewage Facilities Plan. Project entailed a review of on-lot sewage needs in two municipalities including a variety of structural alternatives. The Act 537 Plan Update recommended the construction of a sanitary sewer extension to serve approximately 250 EDUs to alleviate public health problems associated with malfunctioning on-lot disposal systems.

Act 537 Plan for Centre Region, Centre County, PA – Role: Assistant Project Manager. Responsible for assisting in the update of a multi-municipal Act 537 Sewage Facilities Plan. Project entailed a review of on-lot sewage needs in six municipalities including a variety of decentralized and non-discharge alternatives. Act 537 Plan Update also included a dynamic model of the major components of the Sanitary Sewer System, with peak instantaneous flow modeling to beyond 20 MGD.

Act 537 Plan for Spring Township, Centre County, PA – Role: Assistant Project Manager. Responsible for the completion of an Act 537 Sewage Facilities Plan. Project entailed implementation of a Township-wide Sewage Management Plan (SMP) and extension of public sewers in the Sunnyside and Greens Valley Areas.

Act 537 Plan for Benner Township, Centre County, PA – Role: Assistant Project Manager. Responsible for the completion of an Act 537 Sewage Facilities Plan. Project entailed implementation of a Township-wide Sewage Management Plan (SMP) and extension of public sewers in the Buffalo Run Road Area.

Act 537 Plan for Walker Township, Centre County, PA – Role: Assistant Project Manager. Responsible for the completion of an Act 537 Sewage Facilities Plan. Project entailed implementation of a Township-wide Sewage Management Plan (SMP), public sewer system, and a 0.02 MGD package wastewater treatment plant.

Act 537 Plan for Nippenose Township, Lycoming County, PA – Role: Assistant Project Manager. Responsible for the completion of an Act 537 Sewage Facilities Plan. Project entailed construction of a public sewer system and a 0.07 MGD package wastewater treatment plant in the Antes Fort Area.

Act 537 Plan for Morris Township, Clearfield and Centre County, PA – Role: Assistant Project Manager. Responsible for the completion of a multi-municipality Act 537 Plan to serve the Villages of Munson, Casanova, and

Pardee. Project entailed evaluation of over 20 different structural alternatives, including remote treatment facilities and alternative collection technologies such as vacuum sewers.

Minor Act 537 Plan for Potter Township, Centre County, PA – Role: Assistant Project Manager. Responsible for the completion of a Minor Act 537 Sewage Facilities Plan. Project entailed use of a Component 3m Sewage Facilities Planning Module for extension of public sewer system to serve approximately 70 EDUs.

WASTEWATER COLLECTION AND TREATMENT

Whiteside Sanitary Sewer Extension for Woodward Township Sewage and Water Authority, Clearfield County, PA – Role: Project Manager and Design Engineer. Responsible for the preliminary design, permitting and preparation of funding applications. Project entailed the extension of sanitary sewer service to serve approximately 250 EDUs. Construction included approximately 40,000 linear feet of gravity sewer, 2,400 linear feet of low pressure sewer, 2, 400 linear feet of forcemain and two sewage pumping stations.

Wastewater Treatment Plant Headworks Upgrades for Fox Township Sewer Authority, Elk County, PA – Role: Design Engineer. Responsible for the design, permitting and generation of contract documents. Project entailed construction of a new headworks facilities at an existing 0.4 MGD WWTP. The new headworks facility included a mechanically cleaned in-channel spiral screening system designed for a peak flow rate of 1.4 MGD.

Wastewater Treatment Plant Upgrades for Woodward Township Sewage and Water Authority, Clearfield County, PA – Role: Project Manager and Design Engineer. Responsible for the design, permitting and generation of contract documents. Project entailed the design and installation of a mechanically cleaned in-channel spiral screening system designed for a peak flow rate of 1.4 MGD at an existing 0.56 MGD WWTP. The project also included the design of a new coagulant feed storage facility to enhance solids and phosphorus removal in the treatment process.

Wastewater Treatment Plant Upgrades for Borough of Mifflinburg, Union County, PA – Role: Design Engineer. Responsible for design, permitting and generation of contract documents. Project entailed construction of a new headworks facilities at an existing 1.2 MGD WWTP. The new headworks facilities included a series of fine screens to provide pretreatment for the membrane bioreactor process, a vortex grit removal system, influent flow metering, screenings handling equipment and raw wastewater pumping designed for a peak flow rate of 9.0 MGD.

Wastewater Treatment Plant Re-rate for Woodward Township Sewage and Water Authority, Clearfield County, PA – Role: Design Engineer. Responsible for the preparation of a NPDES and Water Quality Management Part II Permit. Project entailed re-rating of existing facilities from 0.385 MGD to 0.560 MGD. This re-rate included an analysis of the influent pumping station, equalization basin, aeration units, aerobic digesters, and chlorination facilities. A hydraulic profile and mass balance were also prepared for the treatment plant.

Wastewater Treatment Plant Re-rate for Hemlock Municipal Sewer Cooperative, Columbia County, PA – Role: Design Engineer. Responsible for preparation of a NPDES and Water Quality Management Part II Permit. Project entailed organic rerating of the existing facilities. This re-rate included an analysis of the clarifiers, aeration units and aerobic digesters. A mass balance was also prepared for the treatment plant.

10th Street Sanitary Sewer Repair for Borough of Mifflinburg, Union County, PA – Role: Design Engineer. Responsible for the rehabilitation of 1,000 lineal feet of sanitary sewer through cured-in-place piping and manhole lining.

WATER RESOURCES PLANNING AND SOURCE DEVELOPMENT

Water System Improvements Feasibility Study for the Suburban Lock Haven Water Authority, Clinton County, PA – Role: Project Manager. Responsible for the completion of a Water Feasibility Study. Project entailed evaluation of the existing water distribution system facilities and to make recommendations on any identified deficiencies. The Study involved the creation of a hydraulic water model of the existing system to identify the source of recurring low water pressures and lack

of fire protection. The Study included several alternatives for upgrading the water system, and ultimately recommended the construction of approximately 15,000 linear feet of waterline and a water booster station to provide looping and redundancy within the system.

Water Supply Well Development for the Haines Woodward Municipal Authority, Haines Township, Centre County, PA – Role: Project Manager. Responsible for design and permitting. Project entailed design services for a new drinking water supply well. The water supply well was developed with a safe yield of 45 gpm and included the design of flow metering/control devices and modifications to the existing chlorination facilities.

Fairfield Township Water Feasibility Study for the Lycoming County Water and Sewer Authority, Lycoming County, PA – Role: Project Manager. Responsible for the completion of a Water Feasibility Study. Project entailed development of a public water system to serve existing businesses and residences. The Study included an evaluation of waterline alignment alternatives, projected water demands and fire protection needs, finished water storage requirements, potential storage tank locations, water pressure projections and interconnections with neighboring public water systems.

WATER TREATMENT

Membrane Filtration Pilot Test for The Pennsylvania State University, Centre County, PA – Role: Water Systems Engineer. Responsible for the design, construction, and operation of a pilot test facility utilizing numerous water treatment technologies. Project entailed a 2-month pilot test utilizing two (2) low pressure ultrafiltration systems, two (2) low pressure submerged ultrafiltration systems, one (1) conventional filtration system (including coagulation, flocculation, sedimentation and sand filtration), two (2) reverse osmosis systems, a powdered activated carbon feed system, and four (4) granular activated carbon columns.

Membrane Filtration Facility for Miles Township Water Authority East, Centre County, PA – Role: Project Manager. Responsible for the design, permitting, generation of contract documents and construction administration of 0.10 MGD direct filtration membrane water treatment facility. Project entailed process design services for membrane filtration, pH adjustment, corrosion control, on-site mixed oxidant gas generation for disinfection, and clarification for backwash reclamation.

Chlorination System for Lycoming County Water and Sewer Authority, Lycoming County, PA – Role: Water Systems Engineer. Responsible for the design, permitting, generation of contract documents and construction administration. Project entailed design services for a well house and disinfection facilities for a 0.10 MGD potable groundwater system. Disinfection facilities included an on-site generation sodium hypochlorite system.

Membrane Filtration Pilot Test for Rebersburg Water Company, Centre County, PA – Role: Water Systems Engineer. Responsible for the design, construction, and operation of a pilot testing facility. Project entailed a 2-month pilot test utilizing direct membrane filtration water treatment processes.

Membrane Filtration Pilot Test for Borough of Duncannon, Perry County, PA – Role: Water Systems Engineer. Responsible for assisting in the design, construction, and operation of a pilot testing facility. Project entailed design services for a pilot testing facility utilizing direct filtration membrane water treatment processes. Process design included potassium permanganate oxidation for iron, manganese, and color removal, coagulation and flocculation for enhanced total organic carbon removal, and direct filtration utilizing hollow-fiber microfiltration.

Water Treatment Operations for Aaronsburg Water Pipes, Inc., Centre County, PA – Role: Water Systems Engineer. Responsible for backwashing of filters, water quality sampling and testing, and generating monthly operational reports. Project entailed service operations for a 0.072 MGD diatomaceous earth water filtration facility.

WATER DISTRIBUTION AND STORAGE

Lycoming Mall Interconnection for the Lycoming County Water and Sewer Authority, Lycoming County, PA - Role: Project Manager. Responsible for design, permitting, generation of contract documents and construction administration. Project entailed design of approximately 1,000 linear feet of 12-inch waterline, a 2.2 MGD water booster station, and associated system improvements.

Grey Fox Plaza Waterline & Storage Tank for Lycoming County Water and Sewer Authority, Lycoming County, PA - Role: Project Manager. Responsible for design, permitting, generation of contract documents and construction administration. Project entailed design of approximately 16,000 linear feet of 8-inch and 12-inch waterline, a 200,000-gallon welded steel elevated storage tank, and associated system improvements.

Whiskey Run Waterline Extension for Suburban Lock Haven Water Authority, Clinton County, PA - Role: Project Manager. Responsible for design, permitting, generation of contract documents and construction administration. Project entailed design of approximately 17,500 linear feet of 6-inch waterline, a 76,000 gallon per day water booster station, and associated system improvements.

Waterline Design for Suburban Lock Haven Water Authority, Clinton County, PA – Role: Project Manager. Responsible for design, permitting, generation of contract documents and construction administration. Project entailed design of approximately 5,000 linear feet of 8-inch and 12-inch waterline and appurtenances to serve new development in Lamar Township.

PROFESSIONAL MEMBERSHIP(S)

American Water Works Association
Construction Specifications Institute
Pennsylvania Municipal Authority Association
Pennsylvania Water Environment Association
Water Environment Federation

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

CHAD E. STONEBRAKER

Senior Land Development CADD Technician

Mr. Stonebraker is a Senior Land Development CADD Technician with Herbert, Rowland & Grubic, Inc. (HRG). His responsibilities include assisting the project manager in design, preparing Land Development plans, profiles, sections and details. He is proficient with AutoCAD Civil3D 2011 and Microstation software for base map and construction layout plan preparation. Prior to joining HRG, Mr. Stonebraker worked as a Senior CADD Technician designer for 12 years.

PROJECT EXPERIENCE

Natural Gas Well Pad Development, Marshall County, West Virginia - CADD Technician responsible for boundary and topographic surveying to support the preparation of required regulatory permitting including WV DOH Encroachment Permits and Maintenance Agreements, Erosion and Sediment Control plans and Well Location Plats for the development of Marcellus Shale natural gas well pad sites.

Natural Gas Well Pad Development, Marshall, Preston and Wetzel Counties, West Virginia - CADD Technician responsible for boundary and topographic surveying to support the preparation of required regulatory permitting including WV DOH Encroachment Permits and Maintenance Agreements, Erosion and Sediment Control plans and Well Location Plats for the development of Marcellus Shale natural gas well pad sites.

Natural Gas Well Pad Development, Wetzel County, West Virginia - CADD Technician responsible for boundary and topographic surveying to support the preparation of required regulatory permitting including WV DOH Encroachment Permits and Maintenance Agreements, Erosion and Sediment Control plans and Well Location Plats for the development of Marcellus Shale natural gas well pad sites.

Natural Gas Well Pad Development, Preston and Taylor Counties, West Virginia - CADD Technician responsible for boundary and topographic surveying to support the preparation of required regulatory permitting including WV DOH Encroachment Permits and Maintenance Agreements, Erosion and Sediment Control plans and Well Location Plats for the development of Marcellus Shale natural gas well pad sites.

Chesapeake Energy Corporation – Role: CADD Technician. Responsible for assisting in the design and plans preparation for several new natural gas well pads using Civil 3D software.

Habitat for Humanity – Role: CADD Technician. Responsible for preparing a subdivision plat and sidewalk layout.

EDUCATION:
A.S.T., Computer Aided Drafting, Pittsburgh Technical Institute, 2000

LICENSE(S):

CERTIFICATION(S):
Basic First Aid, Safety Consulting Services

Blood borne Pathogens, Eichelbergers, Inc.

Emergency Action Planning, Hand and Power Tools, Hazard Identification, Incident Reporting & Investigation, Eichelbergers, Inc.

Graphic Communication, Preston Vocational Center

CHAD STONEBRAKER

RELATED EXPERIENCE

From 2000 to 2011, Mr. Stonebraker was a Senior Technician employed by Gannett Fleming. His responsibilities included site, bridge, and municipal and highway design.

From 1999 to 2000, Mr. Stonebraker was a CADD Technical employed by Hanlon Electric Company. Using AutoCAD 2000 Mr. Stonebraker was responsible for revising drawings.

From 1992 to 1994, Mr. Stonebraker was a Seaman Apprentice with the United States Navy.

TRAINING

Safety Training, Safety Consulting Services

PUBLICATION(S) AND PAPER(S)

"How to Hack DTMs with InRoads" BE Magazine Volume 5, Issue 3

PRESENTATION(S) AND LECTURE(S)

Presented at the Bentley Conference, 2007, Baltimore, MD

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

DOUGLAS E. WEIKEL, P.E.

Director of Civil Services

Mr. Weikel is Director of Civil Services for Herbert, Rowland & Grubic, Inc. (HRG). Mr. Weikel has extensive experience in the preparation of studies, design, plans, and specifications for various municipal and civil engineering projects. His skills include municipal planning, construction management, contract administration, storm water design, and site design.

Countywide Act 167 Stormwater Management Plans - Role: Project Manager. Responsible for directing and managing the stormwater management projects with the County staff, technical analysis and writing, as well as leading many public meetings to solicit input and educate stakeholders regarding new stormwater regulations. Projects entailed the development of a Stormwater Management Plan for all watersheds within each County that included a detailed technical analysis of selected watersheds using HEC-GeoHMS, HEC-HMS, and HEC-RAS with a methodology to account for volume control guidance in future conditions. From the Plans, stormwater management criteria and standards were developed as well as a Model Ordinance to address water quality, volume, and rate computational methodology; groundwater recharge requirements; stream bank erosion standards; and overbank and extreme event standards. The Model Ordinances included a small project application to address incremental increases of impervious area as well as for ease of implementation. The Plans also identified existing problem areas and potential solutions to them. The following details the Counties plans were developed as well as the watersheds where detailed analysis was performed:

- Erie County, PA - French Creek and Lake Erie Tributaries (also began an Integrated Water Resources Plan)
- Crawford County, PA - French Creek and Oil Creek,
- Jefferson County, PA - Northfork Redbank and Sandy Lick Creeks,
- McKean County, PA - Allegheny River, Potato and Tunugwant Creek,
- Warren County, PA - Conewango Creek,
- Butler County, PA - Connoquenessing and Buffalo Creeks,
- Washington County, PA - Chartiers Creek
- Venango County, PA – several subwatersheds throughout the county
- Mifflin County, PA - Juniata River and Jacks Creek,
- Potter County, PA - Oswayo Creek and Genesee River,
- Clarion County, PA

MUNICIPAL ENGINEERING

Centre Regional Metropolitan Planning Organization, Centre County, PA – Role: Member of Technical Committee. Responsible for overseeing transportation projects within the Centre Region including US Route 322, US Route 220, and US Route 26 (I-99) major construction projects. Member of several subcommittees Responsible for Transportation Enhancement Projects and Small Roadway Projects.

EDUCATION:
B.S., Physics, East Stroudsburg University, 1995

B.S., Civil Engineering, The Pennsylvania State University, 1988

LICENSE(S):
Professional Engineer, PA

Benner Township, Centre County, PA – Role: Township Engineer. Responsible for conducting various engineering services for the Township including reviewing land development plans, assisting in the development of ordinances, design of pedestrian bridges, preparation of PA DEP/USCOE Joint Permits, liaison with PennDOT, designing road reconstruction projects, stormwater management projects, sinkhole abatement, and providing general consulting.

Mifflinburg Borough, Union County, PA – Role: Borough Engineer. Responsible for completing various services including:

- Market and Fifth Street Reconstruction Project - Design of roadway reconstruction that included waterline, sewer line, and storm sewer replacement/upgrades
- Fourth Street Stormwater - Design of stormwater system reconstruction within PennDOT roadway
- Cherry Street Reconstruction - Design of roadway reconstruction that includes waterline, sewer line, storm sewer replacement/upgrades, and intersection and access improvements
- Haney Park Complex Improvements - Design of recreational park improvements
- Bulk Storage Building - Construction administration for a new salt storage building
- Downtown Improvement Project - Assisted the Borough in obtaining Transportation Enhancement funding
- Designed project involving the reconstruction of the sidewalks through the Business District, widening SR 45, and courtyard improvements.
- Maple Street Water & Sewer Improvements – Design and construction management of 1150 lf of new waterline and 400 lf of new sewer lines.
- 10th Street Slip Lining – Design of 1000 lf of sanitary sewer slip lining.
- Community Park Parking Lot Reconstruction – Design of stormwater system improvement system and parking lot/entrance road reconstruction.

Bradford Township, Clearfield County, PA - Role: Project Manager. Responsible for completing various services including:

- Water Obstruction and Encroachment Permit for the Lake Street stream culvert replacement
- Water Obstruction and Encroachment Permit for the metal arch span over Millstone Run
- Shiloh Road water distribution system design and construction documents
- Annual small flow treatment facility review and report

Milesburg Borough, Centre County, PA – Role: Borough Engineer. Responsible for completing stormwater study of a flood-prone area recommending several innovative methods to solve runoff problems, design bridge abutment protection, and curb and sideway replacement project.

Smithfield Township, Huntingdon County, PA – Role: Township Engineer. Responsible for conducting plan reviews, road reconstruction projects, stormwater management projects, and general consulting.

Lewisburg Borough, Union County, PA – Role: Project Manager. Responsible for designing of street reconstruction projects which included storm sewer study and construction.

Unionville Water System, Unionville Borough, PA – Role: Project Manager. Responsible for consulting services and liaison for the Borough's reservoir lining project to alleviate existing leakage causing capacity problems and development of a new supply well.

SCI-Rockview, Centre County, PA - Role: Project Manager. Responsible for assisting the facility to comply with NPDES Phase II Services for MS4s. Created plan of action and organized/managed all measurable goals of the six minimum control measures to meet NPDES permit compliance. Tasks included public education, public involvement, illicit discharge, detection and elimination, site and post construction runoff controls, and good housekeeping measures.

Hemlock Road Culvert Project, Fox Township, Elk County, PA- Role: Project Manager. Responsible for the design and permitting of replacement of the existing culverts crossing Hemlock Road as well as stream restoration downstream of the culverts.

Fox Township, Elk County, PA - Role: Design Engineer. Responsible for the design and permitting of stormwater management. Project entailed design of drainage systems through several neighborhoods in the township.

Petersburg Borough, Huntingdon County, PA – Role: Project Manager. Responsible for developing a stormwater management plan. Project entailed analysis and recommendations for storm sewer replacements and prioritization of projects for existing storm sewer system for the Borough of Petersburg.

SITE DESIGN

Kinzua Bridge State Park Visitors Center, McKean County, PA – Role: Project Manager. Preliminary design is complete. Responsible for stormwater management, site layout, Erosion & Sedimentation Control plans, NPDES permits, water storage and supply, sanitary sewer and treatment plant. Project entails a DCNR State Park project following Low Impact Development principles for a new Visitor Center, new Maintenance Facility, new potable water system and new sanitary sewer system. Project is targeting LEED-Silver designation.

Regional Digester Facility for Cove Area Regional Digester, Blair County, PA – Role: Design Engineer. Responsible for the site design and permitting of a manure treatment facility. Project entailed arrangement of facilities, site grading, roadway design and stormwater management systems.

Susquehanna Water Plant, West Hempfield Township, PA - Role: Project Engineer. Responsible for stormwater management and e/s design and permitting for water treatment plant modifications including membrane technology expansion.

Conestoga Water Plant, City of Lancaster, PA – Role: Project Engineer. Responsible for stormwater management and e/s design and permitting for water treatment plant modifications including membrane technology expansion.

Tressler Lutheran Services – Role: Design Engineer. Responsible for site design and construction including grading, stormwater management, utilities and municipal approval of the following:

- Ohesson Manor, Mifflin County, PA - Phase two of a cottage-style elderly housing development
- Locust Grove Cottages, Juniata County, PA - Conceptual master plan of a cottage-style elderly housing development and design of the first phases
- Buffalo Valley, Lewisburg, PA - Cottage-style elderly housing development including a community center
- Rhodesmere, Lewisburg, PA - Expansion of assisted care living facility

AT&T Wireless - Role: Project Manager. Responsible for 25 individual cellular telephone facilities throughout Pennsylvania. Projects entailed municipal approval process, site plans, Environmental Impact Statements, and NEPA requirements.

Mid-Centre County Authority, Boggs Township, PA – Role: Project Engineer. Responsible for the site design for wastewater treatment plant expansion.

DOUGLAS E. WEIKEL, P.E.

WASTEWATER COLLECTION AND TREATMENT

Spring-Benner-Walker Joint Authority, Centre County, PA – Role: Project Manager. Responsible for design of several sewer extension projects including:

- Mingoville - 26,000 linear feet of gravity sewer; 10,000 linear feet of force main; two submersible pump stations; two suction lift pump stations which include site, building, and chlorination facilities; and a metering pit
- Spring Creek - Design of sewer extension project that includes 31,000 linear feet of gravity sewer and three stream crossings of Spring Creek
- Dawson Avenue Sewer Extension - Design of sewer extension to eliminate a pumping station
- Greens Valley Sewer Extension - Design of 15,000 linear feet of sanitary sewer extension

Milton Municipal Authority, Northumberland County, PA – Role: Project Manager. Responsible for projects including the following:

- Front Street Pump Station - Design of a rehabilitation that includes pump replacement, new comminutor, addition of second floor on existing building, and HVAC rehabilitation
- Cameron Avenue Pump Station - Design of replacement of pump station building
- Sludge Dewatering - Design of new belt filter press (BFP) dewatering system. BFP was determined through extensive pilot testing and based on life-cycle cost
- Equalization - Analyzed flow equalization for industrial loading on the wastewater treatment plant
- DAP/Urea Feed System - Design of a chemical feed system
- Conducted Phase I Environmental Site Assessment of three former railroad tracts located in an industrial area

CONSTRUCTION

Stage 6 Additions and Modifications - Beneficial Reuse for University Area Joint Authority, Centre County, PA - Role: Project Manager. Responsible for resident engineer for expansion of existing wastewater treatment facility to a total 9.0 MGD wastewater treatment and reuse. Project costs were in excess of $55 million. Conventional facility design included screening and degritting, primary settling, biological nutrient removal, secondary clarification, monomedia granular filtration, and ultraviolet disinfection. Solids handling design included rapid sludge blending, centrifugation, and composting. Advanced treatment included microfiltration, reverse osmosis, corrosion control and pH adjustment, ultraviolet disinfection, and on-site generation of sodium hypochlorite for residual disinfectant.

Woodward Township Sewage and Water Authority, Clearfield County, PA – Role: Project Manager. Responsible for performing construction administration and resident project representative services for an upgrade to a water treatment facility that included new backwash pumps, finish water pumps, replacement of control valves, concrete tank rehabilitation, new soda ash feed system with storage silo and pneumatic feed system, and other miscellaneous items.

Stroudsburg Municipal Authority, Monroe County, PA – Role: Project Manager. Responsible for performing construction administration for new 0.385 MGD wastewater treatment plant construction, new bridge, roadway, and a mechanical screening operation at the Houtzdale SCI.

Borough of Milton, Northumberland County, PA – Role: Resident Engineer. Responsible for construction of pump station and force main to serve industrial park and for several roadway reconstruction projects including cold recycling.

TRAINING

- Best Management Practices Manual Training, Pennsylvania Department of Environmental Protection, 2007
- Construction Outreach 10-hour Safety Consulting Services, Eichelbergers, Inc., 2006
- Pennsylvania Stormwater Management Symposium, Villanova University, 2009
- Project Managers Bootcamp, PSMJ Resources, 2006

Appendix F

Sub-Consultants

-GeoMechanics

-S&S Engineers, Inc.

HRG
Herbert, Rowland & Grubic, Inc.
Engineering & Related Services

GeoMechanics, inc
Millennium III Professional Park, 600 Munir Drive
P.O. Box 386, Elizabeth, PA 15037-0386
Phone: (724) 379-6300 • Fax: (724) 379-4242

January 23, 2013

Herbert, Rowland & Grubic, Inc.
240 Scott Avenue, Suite 1
Morgantown, WV 26508

ATTENTION: Samer H. Petro, P.E.
Office Manager / Senior Project Manager

Re: West Virginia Department of Environmental Protection
Office of Abandoned Mine Lands and Reclamation
Request for Quotations - Various Projects

Letter of Association

Gentlemen:

In accordance with our recent discussions, GeoMechanics, Inc. (GMI) is pleased to submit a *"Letter of Association"* to provide geotechnical and related engineering services on a subconsultant basis to Herbert, Rowland & Grubic, Inc. (HRG) for any individual projects under the above-referenced program requiring such expertise.

GMI has been providing geotechnical engineering services for over 42 years. This experience includes literally hundreds of projects involving abandoned mine lands and reclamation located throughout Appalachia. Such projects have ranged from mine subsidence and mine fire abatement studies to design for reclamation of abandoned surface mines. Over 70 of these projects were completed by GMI as Prime Consultant under a multi-year Open-End Contract with the US Office of Surface Mining Reclamation and Enforcement (formerly US Bureau of Mines) for mine subsidence and mine fire abatement studies throughout the Eastern United States; and several were located in West Virginia. In addition, GMI has been involved in the design of new facilities for the Federal Bureau of Prisons at various locations in West Virginia and its surrounding states that have involved reclamation of abandoned surface and deep mines.

Walter M. Lorence, P.E., Vice President, will serve as Principal-in-Charge for geotechnical engineering services provided by GMI. Mr. Lorence has been involved in the geotechnical engineering analysis, design and construction of projects throughout the Eastern United States and in Asia for over 42 years. Jahangir J. Kabir, Ph.D., P.E. and M. Andrew Lafferty, M.S., P.E. will serve as Geotechnical Managers for the individual projects. Dr. Kabir is currently registered in the State of West Virginia. Messrs. Lorence and Lafferty will apply for registration through reciprocity. Copies of the current resumes of these individuals are attached along with a Company Profile.

January 23, 2013

We wish to extend our appreciation for the opportunity to participate in your ***Letter of Interest*** for this interesting and challenging contract. Should you have any questions or require additional information, please contact us.

Very truly yours,
GEO-MECHANICS, INC.

Walter M. Lorence, P.E.
Vice President

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Attachments
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COMPANY PROFILE

GeoMechanics, inc

Consulting Engineers/Scientists
Elizabeth, Pennsylvania

A. TECHNICAL CAPABILITIES

GeoMechanics, Inc. is a professional civil/geotechnical/environmental engineering organization incorporated under the laws of the Commonwealth of Pennsylvania in 1969. GeoMechanics, Inc. utilizes in-house test drilling, laboratory soils and rock testing, instrumentation, design engineering and inspection capabilities to provide a full range of services to its clients from project inception through completion. To this end, GeoMechanics, Inc. employs a full-time staff of civil engineers, mining engineers, engineering geologists, water resources engineers, designers, draftspersons, drillers and laboratory and field technicians. As a result, GeoMechanics, Inc. is capable of providing a broad range of services within the civil, geotechnical and environmental engineering disciplines that includes the following:

- subsurface exploration and testing
- instrumentation
- stabilization grouting
- laboratory soils and rock testing
- civil/geotechnical/structural engineering
- soil mechanics and rock mechanics
- engineering geology
- mining engineering
- hydraulic engineering
- surface and ground water hydrology
- environmental assessment
- construction inspection and supervision

Our staff includes members who have considerable experience in all of the above service areas and have worked extensively with the Public as well as the Private Sectors throughout the United States and abroad.

The types of projects for which GeoMechanics, Inc. has provided services on a national and international level vary in scope from basic consultation to in-depth studies to state-of-the-art research and include:

- soils and foundation investigations for high-rise and low-rise buildings such as offices, shopping malls, hospitals, apartment complexes, housing developments, industrial plants, etc.

- structure foundation evaluation and design for bridges, transmission towers, stacks, silos, conveyor systems, etc
- complete design and construction documentation for earth and rockfill dams
- landslide investigations and design of stabilization techniques
- geotechnical investigations for underground facilities, mines and tunnels
- mine fire, mine subsidence and limestone cavity collapse investigations and remediation design
- highway design and pavement evaluation
- soil/structure interaction design of cofferdams, bulkheads and earth retaining structures
- surface and ground water management, including flood protection studies, hydraulic design of bridges and culverts, and dewatering design for deep excavations
- geotechnical and environmental engineering design of sanitary landfills; construction and demolition waste sites; flyash, bottom ash and slag disposal areas; and residual and hazardous waste disposal facilities
- Phase I and Phase II Environmental Site Assessments for property transfer
- instrumentation and behavior monitoring of dams, embankments, excavations, retaining structures and structure foundations
- structure distress investigations related to lateral earth pressures foundation settlement and subsurface piping and design of rehabilitation techniques

The involvement of GeoMechanics, Inc. on these projects begins with subsurface exploration and testing and continues through the design phase to the construction stage and often extends into post-construction monitoring.

B. SUBSURFACE EXPLORATION

GeoMechanics, Inc. is completely equipped to perform subsurface explorations that are needed to collect data regarding the subsurface soils, rock, ground water and mining conditions. This information is used to develop the spatial distribution and engineering properties of foundation materials that area needed in predicting stress distributions and soil/rock-structure interaction so that safe, yet practical and economical, foundation support systems and related geotechnical design parameters along with site preparation criteria can be developed. GeoMechanics, Inc. has conducted drilling programs for foundation investigations and environmental studies throughout the United States involving a variety of equipment, both land-based and afloat, and is, therefore, cognizant of the requirements and methodologies employed in designing and performing subsurface investigations on all types of projects.

GeoMechanics, Inc. is currently on the PennDOT "Approved Test Boring Contractors List," and has successfully completed open-end drilling contracts with PennDOT, PaDER, the U.S. Army Corps of Engineers, the U.S. Bureau of Mines and the U.S. Office of Surface Mining. All our drilling personnel have been trained and are experienced in drilling on sites involving the identification/containment of hazardous waste constituents.

C. LABORATORY AND FIELD TESTING

As a part of providing comprehensive services, GeoMechanics, Inc. maintains laboratory facilities capable of performing the types of tests necessary for determining the soil and rock parameters for either design and analysis or quality control measures. Our laboratory staff is qualified and experienced in performing direct shear and triaxial compression tests, consolidation/expansion tests, permeability tests, CBR and compaction tests as well as index property and other routine tests. In addition, our engineering geology staff is experienced in performing qualitative and quantitative mineralogical tests such as binocular microscopy, petrography and X-ray diffraction.

GeoMechanics, Inc. is currently accredited for laboratory soils testing by the U.S. Army Corps of Engineers and the AASHTO Materials Reference Laboratory (AMRL).

Field testing, where economically feasible, is being increasingly utilized in geotechnical engineering investigations due to either more representative data collection or in conjunction with laboratory testing. In-situ tests generally employed consist of permeability tests, hydraulic pressure tests, borehole pressuremeter tests, CBR tests, plate load tests, vane shear tests, etc. Our personnel have a considerable track record in performing both the routine or especially designed field tests to simulate conditions pertaining to specific sites.

D. INSTRUMENTATION

GeoMechanics, Inc. has the capability and experience to install and monitor all forms of instrumentation that are often needed for data collection, construction control and post-construction monitoring such as pneumatic, electric and vibrating-wire piezometers, vertical and horizontal inclinometers, load cells, strain gauges, settlement sensors, water observation wells, extensometers, convergence pins, settlement monuments, accelerometers, etc.

E. CONSTRUCTION INSPECTION AND MONITORING

The GeoMechanics, Inc. staff includes individuals with considerable experience in inspection and monitoring of all phases of earthworks, dewatering and foundation construction. The inspection staff consists of graduate engineers and geologists capable of performing routine tests, such as in-place density and CBR tests, and more difficult tasks involving recognizing changed conditions and suggesting alternatives.

Monitoring of caisson and piling installations, slurry trench construction, mine stabilization and site improvement by dynamic compaction as well as compaction grouting are some of the other areas in which GeoMechanics, Inc. has considerable construction experience.

F. ENVIRONMENTAL ASSESSMENT/WASTE MANAGEMENT

The project team of GeoMechanics, Inc. has been involved in the investigation and remedial design of hazardous and residual waste sites throughout the United States for the past thirty (30) years. Our clientele includes industry, governmental agencies, developers and cleanup contractors. Our project experience includes the identification, study and design aspects of corrective measures for residual and hazardous waste associated with environmental assessments for property transfer, landfill design, site closure requirements, water treatment protective measures, ground water recovery and treatment systems, spill control measures and the installation of monitoring well networks.

GeoMechanics, Inc. is capable of providing a full range of evaluation and design services applicable to the work that is needed to investigate contaminated or potentially-contaminated sites. The experience of GeoMechanics, Inc. in operation of our in-house drilling and testing equipment provides us with a valuable understanding of data acquisition and interpretation techniques. GeoMechanics, Inc. is particularly familiar with the geotechnical, geohydrologic and environmental considerations that are unique to hazardous waste disposal sites. Our personnel are experienced in analytical and numerical (finite element and finite difference) modeling of ground water flow and contaminant transport, consolidation, stress-strain relationships, surface water hydrology and open channel hydraulics and are capable of utilizing existing numerical or analytical models or developing appropriate models to represent conditions as they exist in the field. The complexity of models chosen for use depends on the actual field conditions, the project goals and the available resources.

G. SITE STABILIZATION/GROUND IMPROVEMENT

GeoMechanics, Inc. also has expertise and experience in both the design and implementation of site stabilization/ground improvement by grouting techniques including mine subsidence control, grout curtains for ground water and seepage control, and compaction grouting for ground improvement and rehabilitation of distressed buildings and pavements.

H. COMPUTER CAPABILITIES

GeoMechanics, Inc. routinely uses standard as well as specialized "in-house" computer programs covering stress distribution, settlement analysis, seismic analysis, mine subsidence analysis, slope stability analysis, retaining structures (including tie-back walls), 2-D and 3-D anisotropic seepage and ground water migration, flood routing, and earthwork. The programs are based on "closed-form solutions" and numerical techniques such as the Finite Element and Finite Difference Methods.

Analysis and design assignments are facilitated through the use of our in-house computer facilities which include fully integrated and networked Windows-based systems and a multiple-work-station computer-aided drafting and design (CADD) system using both AutoCAD and MicroStation software that provides a systematic method for organizing and storing the accumulated design knowledge of the firm. This experience base is accessible to our staff and makes available the full breadth and depth of the firm's knowledge and expertise for specific projects.

I. CONTRACT COMPLIANCE

GeoMechanics, Inc. qualifies as a Small Business Concern and has been certified as a Disadvantaged Business Enterprise by numerous governmental agencies, including the Pennsylvania Department of Transportation, Bureau of Equal Opportunity and the Allegheny County MBE/WBE/DBE Certification Program.

The GeoMechanics, Inc. office complex is located in Elizabeth Township, Allegheny County, Pennsylvania. All design activities are performed at or coordinated from this location.

Jahangir J. Kabir, Ph.D., P.E.

Project Manager

Education:
Ph.D. (1988), Geotechnical Engineering, Iowa State University, Ames, IA
M.S. (1983), Geotechnical Engineering, Michigan Technological University, Houghton, MI
B.S. (1977), Civil Engineering, Bangladesh University of Engineering and Technology, Dhaka, Bangladesh

Professional Affiliations:
Professional Engineer, PA, 1990
Professional Engineer, WV, 2010
Professional Engineer, OH, 2011

Summary of Experience:
Dr. Kabir is Senior Geotechnical Engineer/Project Manager responsible for all technical aspects of project design.

Detailed Project Experience:

- 1990 to present, Project Engineer/Project Manager with GeoMechanics, Inc. Responsible for performing geotechnical analyses, preparation of reports, and the development of testing and analytical methods suitable to special projects.

- Served as project manager or supervising principal for subsurface explorations and geotechnical engineering investigations for over 10 sections of Interstate and Limited Access Freeways and the Light Rail Transit System (LRT) – Stage II and the North Shore Connector for the Port Authority of Allegheny County, PA. Specific aspects of design involved cut and fill slopes, temporary and permanent retaining structures, reclamation of abandoned surface mining, design of stabilization for weak ground and abandoned deep mines, pavement design, foundation support for bridges and drainage structures, underground parking garages, railroad stations and instrumentation for performance monitoring.

- Served as principal geotechnical engineer on several high-rise structures such as the 26-story 3 PNC Plaza and 40-story 4 PNC Plaza with three (3) levels of underground garages in Pittsburgh, PA. Special geotechnical issues involved design of deep foundations subjected to high downward and uplift forces, support of excavations extending below ground water table, underpinning of foundations of adjacent buildings and special ground improvement techniques.

- Responsible for geotechnical investigation and supervision during the construction phase of large shopping centers. Geotechnical considerations involved foundations support systems or variable foundation bearing medium, deep cuts and high fill embankments, earth retainage systems such as MSE malls, soil-nail walls, soldier beam-lagging walls, pavement design, blasting requirements and instrumentation programs.

- 1988 to 1990, Geotechnical Engineer for M.A. Iqbal Consulting Engineers, Reading, PA. Assignments included, but not limited to, subsurface soil investigation; design, analysis and selection of foundations; preparation of soils and foundation reports, and earthwork specification for one airport, one storage facility consisting of six silos, one water treatment plant and three shopping centers. Involved in slope stability, liner design, preparation of specification for a landfill in Cumberland, Pennsylvania.

- Developed instrumentation programs and supervised installation and monitoring of various types of instruments. These include inclinometers, piezometers, settlement rods, plates and remote sensors, bonded strain gages, etc. and provided data about embankment cut sloes and retaining structures behavior and performance.

M. Andrew Lafferty, P.E.

GeoMechanics, inc.
Consulting Engineers/Scientists
Elizabeth, Pennsylvania

Project Engineer

Education:
M.S. in Civil Engineering, University of Pittsburgh (2003)
B.S. in Civil Engineering, Penn State University (1997)

Active Professional Registrations:
Pennsylvania -- Civil Engineering (2007)

Experience:
15 Years with GeoMechanics, Inc.

Detailed Project Experience:

- Served as Project Engineer and/or Project Manager for geotechnical engineering studies involving analysis and design along with preparation of formal reports for commercial and residential developments, state prison additions, school additions, retaining structures and industrial foundations.
- Prepared geotechnical engineering reports, recommendations and specifications for highway, bridge, landslide, retaining wall, reinforced soil slope and commercial projects.
- Performed geotechnical engineering design for cut and fill slopes and structure foundations, including abandoned mine land reclamation and stabilization of abandoned deep mines, for major highway projects.
- Prepared specifications and construction drawings including special geotechnical treatments for highway projects.
- Prepared specifications and construction drawings for mine stabilization grouting programs and compaction grouting programs.
- Supervised subsurface boring contract during geotechnical engineering design phases for new highway projects including drilling and laboratory testing programs.
- Performed geotechnical analyses such as slope stability, settlement, bearing capacity, resilient modulus determination, pavement design, retaining wall design, reinforced soil slope design, pile design and caisson design.
- Performed evaluation of bearing capacity and settlement for a variety of deep foundation systems to include drilled shafts (caissons), H-piles, pipe and auger cast-in-place piles.
- Performed geotechnical analyses using computer software, such as DigiPro (inclinometer data), DARWin (pavement), STEDWin (slope stability), FHWA RSS (reinforced soil slope), SPILE (pile capacity), LPILE (lateral pile capacity and deflection) and GRLWEAP (pile driveability).
- Performed and coordinated site sampling and preparation of soil and rock samples for acid base accounting test program to be used in the determination of acid forming potential of exchange material. Performed alkaline quantity and application rate analysis for the treatment of potential acid forming material to be used in highway embankments.
- Supervised and coordinated field inspection personnel for phases of geotechnical construction.
- Performed data collection and reduction for monitoring instruments such as settlement monuments, pile load tests, vertical inclinometers and vibratory wire gauges.
- Performed and coordinated site sampling and preparation of soil and rock samples for laboratory testing programs.
- Served as resident geotechnical engineering technician on earthmoving projects that include housing developments, commercial buildings and several story office buildings. Work included in-situ testing of soil using Nuclear Densimeter and one-point proctor tests; concrete testing such as slump, air entrapment and preparation of testing cylinders; foundation inspection for strip footings, augercast piles and caissons; and instrument monitoring and data reduction for vertical inclinometers, settlement monitoring instruments and pile load tests.

Walter M. Lorence, P.E.
Vice President / Senior Geotechnical Engineer

Education:
B.S.C.E., 1970, Carnegie-Mellon University
Post-Graduate Credits in Geotechnical Engineering, Carnegie-Mellon
University and University of Pittsburgh
Continuing Education Courses:
Current Practices in Pile Design and Installation
Rapid Excavation and Tunneling
Management of Uncontrolled Hazardous Waste Sites
Geotextiles and Geomembranes in Construction
Rock Mechanics in Civil and Mining Engineering

Professional Affiliations:
American Society of Highway Engineers
American Society of Testing and Materials
Society for Mining, Metallurgy, and Exploration, Inc.

Project Assignment:
Mr. Lorence is Senior Project Manager responsible for all phases of project development and is Technical Director of the AMRL-accredited laboratory of GeoMechanics, Inc.

Professional Registration:
Professional Engineer, Pennsylvania (1974)

Detailed Project Experience:

Mr. Lorence has 42 years of geotechnical engineering experience on projects located throughout the United States and in Asia. As a Principal of GeoMechanics, Inc., he is responsible for all phases of project development, beginning with client contact/proposal preparation and ending with design/ report submission and construction certification. He has served a Project Manager/Principle Investigator for projects involving all forms of intrusive (borings, test pits, DMT, penetrometer, pressuremeter, vane shear) and remote sensing (seismic refraction, electrical resistivity, VLF electromagnetic induction, electromagnetic conductivity) exploration techniques.

Mr. Lorence is Technical Director of the AMRL-accredited laboratory of GeoMechanics, Inc. and, as such, is knowledgeable about the various testing methods employed as well as the interpretation and application of the test results. Using the subsurface exploration and laboratory testing data, he has performed detailed geotechnical engineering analyses and has developed discrete recommendations for design and construction of earth and rockfill dams; Interstate and Class 1 highways; building and structure foundations; municipal, residual and hazardous waste disposal facilities; retaining walls and excavation supports; seepage and ground water control/ manipulation; and so on.

Mr. Lorence is also the Radiological Safety Officer of GeoMechanics, Inc.

Specific examples of project-related experience of Mr. Lorence are as follows:

- ***PA Turnpike Open-End Contracts*** - Mr. Lorence is currently serving and has recently served as Contract Manager for three (3) separate systemwide open-end contracts for geotechnical engineering services with the Pennsylvania Turnpike Commission. He is/was responsible for coordination with the PTC's geotechnical manager, preparation of Technical and Price Proposals for the individual Work Orders, assignment of technical and support staff, tracking progress, technical review of in-house work products and preparation of monthly invoices and progress reports.

- ***Phase 3, 4 and 5 Student Housing and Vulcan Parking Garage, California University of PA*** - Mr. Lorence served as Project Manager for all geotechnical aspects of design and construction of Residence Halls A through F and the Vulcan Parking Garage at the California University of Pennsylvania in California, Pennsylvania. Design services included directing detailed subsurface and mining investigation and laboratory testing programs; conducting bearing capacity, settlement, slope stability, mine subsidence prediction and heaving (mineralogical expansion) analyses; preparing recommendations for the type and depth of building foundations, allowable soil/rock pressures, type and extent of subsurface stabilization/ improvement; and preparing specifications for deep mine stabilization and for treatment of pyritic materials exposed at building subgrade. Construction services included supervision of monitoring and testing personnel for deep mine stabilization, treatment of pyritic materials, site grading and building foundation installation.

- ***Consol Energy Center and Parking Garage*** - Mr. Lorence recently served as Project Manager and Principal Investigator for geotechnical issues during the design and construction of this new multi-use arena that is the home of the Pittsburgh Penguins and the associated parking garage in the City of Pittsburgh, Pennsylvania. Spread footings bearing on competent bedrock were selected for the north portions of both structures. However, historic fill and building rubble to moderate depths and weak subcropping bedrock (claystone) were present under the south building areas; and high capacity (up to 1,400-ton service load) caissons socketed into bedrock were used to support the column loads.

Stringent differential settlement tolerances would normally have dictated the use of a structurally-supported floor slab for the ice surface. However, rammed aggregate piers were used to improve the load-carrying and settlement characteristics of the subsurface materials, including the historic fill and building rubble; and conventional slab-on-grade construction was used at a substantial cost savings.

- ***PNC Park*** - Mr. Lorence was Project Manager and Principal Investigator for geotechnical issues during the initial feasibility study, final design and during construction of this new baseball facility in the City of Pittsburgh, PA. Rubble fill and demolition wastes to moderate depths and weak subcropping bedrock (claystone) were primary considerations in selection of the appropriate type and depth of foundations for the park. High capacity (115-ton service load) augercast piles embedded 15 feet into dense fluvioglacial sand and gravel were ultimately selected for support of ballpark foundations, and their capacity was verified by a series of pile load tests. The presence of a 10-foot diameter deteriorated combination sewer at shallow depths presented a unique challenge during construction. Mr. Lorence was responsible for the analysis and design of a timber matting system to protect the sewer during staging of the large erection cranes.

- ***Ford City Bridge*** - Mr. Lorence was Project Manager for the geotechnical engineering design and for consultation during construction of a 3-span bridge carrying State Route 128 over the Allegheny River in Ford City, PA. The 2 river pier foundations were designed as spread footings bearing on top of a 9-meter thick tremie concrete seal placed to bedrock. Problems were experienced during excavation and placement of the tremie seal at Pier 1. Confirmation drilling encountered up to 1 meter of river sediment between the tremie seal bottom and bedrock and a large zone within the tremie concrete where segregation had occurred, most likely due to loss of the tremie seal during concrete placement. High capacity pin piles (mini piles) socketed into bedrock were ultimately selected to bypass the tremie seal and to transfer the bridge foundation loads to the underlying competent sandstone bedrock. Mr. Lorence was responsible for consultation with PennDOT and the Contractor in selection of the method of rehabilitation, geotechnical review of the remedial design, supervision and monitoring of 2 pile load tests to confirm pile design capacity, and observation/documentation of production pile installation. The pile load tests were performed to 2.5 times the original design load. The Contractor was then permitted to modify the pin pile design to accommodate a safety factor of 2 applied to the maximum test load.

- ***Alum Run Dam*** - Mr. Lorence served as the Construction Manager and Engineer-of-Record during construction of Alum Run Dam, a 350' high slurry impounding dam in Eastern Ohio. His responsibilities included coordination with the Owner and the USACOE-appointed Board of Consultants, planning of the separate construction stages, preparation of plans and specifications for bidding of the various construction stages, design of modifications necessitated by field conditions and varying mine production rates, construction observation/documentation and construction certification. Mining operations were terminated prematurely, and construction was topped off at a height of 180 feet. The dam and reservoir were abandoned by reservoir filling, controlled embankment breaching and stream channel reconstruction.

Publications:

Lorence, W.M., Alvi, J.M. and Murphy, B.J., "Augered Cast-in-Place Piles in Flood Plains", The Deep Foundations Institute Specialty Conference, Pittsburgh, Pennsylvania, 2001.

Lorence, W.M., Rudenko, D. and Ackerman, H.D., "Seismic Refraction Technique Applied to Highway Design in a Strip-Mined Area of Southwestern Pennsylvania", 42nd Annual Highway Geology Symposium, Albany, New York, 1991.

Lorence, W.M. and Alvi, J.M., "Anchored Earth Embankment Flood Protection and River Erosion", U.S. – Pakistan Binational Symposium on Mechanics of Alluvial Channels, Lahore, Pakistan, 1985.

S&S ENGINEERS, INC.

WVDOH - SPECIFIC PROJECT EXPERIENCE

INSPECTION, SURVEYING, MAPPING, R.O.W., UTILITY RELOCATION & ENVIRONMENTAL PROJECTS

1.
Wilbur Smith & Associates; Charleston, WV

Route 10 Man to Logan - Topographic map verification, Cross-sections, progress quantity surveys, as-built surveys, Logan County, WV.

2. JMT, Inc.; Parkersburg, WV

Construction stakeout, centerline alignment, monthly quantity estimates, grade check and related work on 3 contracts of Corridor "D", Parkersburg, WV

Construction stakeout, centerline alignment, monthly quantity estimates, grade check and related work on Route 2, Weirton, WV.

3. SAI Consulting Engineers; Westover, WV

Field surveying and topographic mapping, field survey for mapping edits and verification of accuracy, stake the centerlines at 25 ft intervals and hub all centerline control points on Olde Hi Carpenter Bridge Replacement, St. Marys, Pleasants County, WV.

4. GAI Consultants, Inc.; Charleston, WV

Borehole stakeout, R.O.W. questionnaire, RW1 & RW2 drawings, utility locations and verification, mainline & connecting roads plans, rough flagging of centerline for preliminary field review for South Branch Potomac Bridge Replacement, Romney, Hempshire County, WV.

Borehole stakeout, field surveys for mapping edits and verification of accuracy, stake the centerlines, monumentation of centerline and benchmarks, rough flagging of centerline for preliminary field review (PFR), and final field review (FFR) for Willowwood Bridge Replacement, Hinton, Summers County, WV.

5. **Earth Tech; New York, NY**

Field surveying, controls, right of way questionnaire, preparation of RW1, RW2, and RW3, utility relocation, boreholes stakeout, property information, etc. for Coalfields Expressway, (3.5 miles), Sophia, WV

Waterlines and Water Tank Relocation Study as sub-consultant, for Coalfields Expressway, (3.5 miles), Sophia, WV

Right of Entry for project, borehole stakeout, field surveys, centerline stakeout, locate and verify the ownership of all public and private utilities in the project area on Black Fork Bridge Replacement, Parsons, Tucker County, WV.

6. **L. Robert Kimball & Associates, Inc.; Ebensburg, PA**

Aerial control panels, horizontal and vertical control surveys by GPS and EDMs, reduction of notes and marking controls on photographs for mapping.

a. Man to Logan Route 10, Logan County, WV
b. Harper Road Interchange, Beckley, WV
c. Dunlop Creek Bridges, Raleigh County, WV
d. Sutton to Webster Springs, WV
e. East Grafton Bridges, Taylor County, WV
f. Roanoke to Jane Lew Road, Harrison County, WV
g. Riverside Expressway, Marion County, WV
h. Eldora - Whitehall Interchange on I-79, Marion County, WV
i. Rivesville Connector, Marion County, WV
j. Gauley Bridge, Fayette County, WV
k. Naugatuck, Mingo County, WV
l. Tennerton Road Center Turn Lane, Upshur County, WV
m. Sutton to Webster Springs, Braxton & Webster Counties, WV

7. **Legion Design / Campbell & Associates; Washington, DC**

Utility identification and utility relocation study as sub-consultant for expansion of I-81 from four lanes to six lanes.

a. Dry Run Interchange on I-81
b. I-81 Widening (4.5 miles)

Field surveying, controls, right of way questionnaire, preparation of RW1, RW2, and RW3, utility relocation, boreholes stakeout, property information, etc.

8. **KCI Technologies, Inc.; Mechanicsburg, PA**

Tennerton Center Turn Lane, (2.5 miles) Buckhannon, WV

Existing utilities such as gas, cable, water, sewer, stormsewer, telephone, electric relocation impacts due to 2.2 miles of center turn lane construction. Field surveying, controls, right of way questionnaire, preparation of RW1, RW2, and RW3, utility relocation, boreholes stakeout, property information, etc.

Soils, geology, mining, groundwater, surface water, municipal and industrial wastewater, and hazardous wastes portion of the Environmental Assessment, Whitehall - Eldora Interchange, I-79, Marion County, WV

Soils, geology, mining, groundwater, surface water, municipal and industrial wastewater, and hazardous wastes portion of the EIS for 12.5 miles of proposed four lane highway, Environmental Impact Statement, Route 10 Man to Logan, Logan County, WV.

Route 10 Man to Logan - GPS control survey for mapping on environmental clearance studies.

9. **RQAW Corporation; Charleston, WV**

U.S. 340 from VA-WV State Line, 1.84 Miles Toward Charles Town, WV

Field surveying, controls, right of way questionnaire, preparation of RW1, RW2, and RW3, utility relocation, boreholes stakeout, property information, etc.

10. **Mountaineer Grading Co. -** Riverside Expressway, I-79 interchange, Fairmont, WV. Field surveying on control placement, construction slope stakes and fine grading stakes.

11. **Chelyan Public Service District** - 8" sewers and 24" interceptor relocations for Chelyan Bridge Project funded by WVDOH. Completed in 1997 (Approximately $750,000).

12. **Chelyan Public Service District** - 6" forcemain relocation for U.S. Route 60 Expansion Project funded by WVDOH. Completed in 1998 (Approximately $100,000).

S&S ENGINEERS, INC.

WVDOH - SPECIFIC PROJECT EXPERIENCE

INSPECTION, SURVEYING, MAPPING, R.O.W., UTILITY RELOCATION & ENVIRONMENTAL PROJECTS

1. **Wilbur Smith & Associates; Charleston, WV**

   Route 10 Man to Logan - Topographic map verification, Cross-sections, progress quantity surveys, as-built surveys, Logan County, WV.

2. **JMT, Inc.; Parkersburg, WV**

   Construction stakeout, centerline alignment, monthly quantity estimates, grade check and related work on 3 contracts of Corridor "D", Parkersburg, WV

   Construction stakeout, centerline alignment, monthly quantity estimates, grade check and related work on Route 2, Weirton, WV.

3. **SAI Consulting Engineers; Westover, WV**

   Field surveying and topographic mapping, field survey for mapping edits and verification of accuracy, stake the centerlines at 25 ft intervals and hub all centerline control points on Olde Hi Carpenter Bridge Replacement, St. Marys, Pleasants County, WV.

4. **GAI Consultants, Inc.; Charleston, WV**

   Borehole stakeout, R.O.W. questionnaire, RW1 & RW2 drawings, utility locations and verification, mainline & connecting roads plans, rough flagging of centerline for preliminary field review for South Branch Potomac Bridge Replacement, Romney, Hempshire County, WV.

   Borehole stakeout, field surveys for mapping edits and verification of accuracy, stake the centerlines, monumentation of centerline and benchmarks, rough flagging of centerline for preliminary field review (PFR), and final field review (FFR) for Willowwood Bridge Replacement, Hinton, Summers County, WV.

S&S ENGINEERS, INC.

QUALIFICATIONS OF FIRM

SERVICES

S & S Engineers, Inc. was formed in 1980 to provide consulting engineering and surveying services to government, industry, municipalities, commercial, and individuals.

S & S Engineers provides a wide variety of technical services in the following areas:

Engineering:

- Water Supply, Treatment, Storage, and Distribution Systems
- Wastewater Collection and Treatment Systems
- Industrial and Hazardous Waste Treatment Systems
- Environmental Site Assessments
- Storm Water NPDES Permit Services
- EPA and WVDEP Compliance Discharge Permits
- WVDEP 401 and USACE 404 Permit Services
- Solid Wastes Management and Landfill Designs
- Subdivision Design and Permit Applications
- Site Development Plans
- Earth Work Quantity Estimates
- Street Paving Design and Drainage Control
- Construction Management
- Technical Expert Testimony

Surveying:

- Aerial Mapping Control Surveys
- Topographic Mapping

- Rights-of-Way and Land Acquisition Maps
- GPS/GIS Services
- Loan and Refinancing Surveys
- Property Surveys
- Construction Stakeout
- Computer Mapping

S & S Engineers' office, with 4,100 sq. ft. area, is conveniently located at the Yeager Airport Complex in Charleston, West Virginia. S & S uses the latest CAD software on computers and electronic distance measurement instruments to complete the work in a professional, timely and cost-effective manner.

The highly qualified staff consisting of engineers and land surveyors is supported by technicians, draftspersons, construction inspectors, and office clerical staff.

Cost effective design and survey projects are processed using Autocad Softdesk and Eagle Point software. Other software packages utilized are Haestead Flow Master, SCS TR55 Urban Hydrology, WaterCAD, StormCAD, FlowMaster, Carlson Survey 2006, Word Perfect, CAD scanning conversion and various spread sheet applications.

The survey crew is equipped with Topcon APL 1 Robotics Total Station set and Nikon Total Station EDMI with TDS/SMI Data Collectors. The instruments have a range of over 9,000 feet and storage capacity of +3,000 survey locations. S & S has provided GPS/RTK/GIS services since 1991 using Trimble, Ashtech and Magellan GPS equipment as an alternate to high cost long distance traverse with accurate results.

S & S has provided services on projects funded by the U.S. Environmental Protection Agency, HUD-Small Cities Block Grant, WV Infrastructure Council, WV Water Development Authority, Economic Development Administration, U.S. Corps of Engineers, USDA-Farmers Home Administration, Soil Conservation Service, Office of Surface Mining, U.S. Forest Service, America Recovery & Reinvestment Act, state and local government agencies as well as industry and private businesses.

STATES OF REGISTRATION

S & S Engineers, Inc. has Engineers and Surveyors registered in the following states:

West Virginia
Kentucky
Ohio
Virginia

S&S ENGINEERS, INC.

CURRICULUM VITAE

ASHOK M. SANGHAVI, P.E., DEE, QEP **PRESIDENT**

SUMMARY

Forty Three years of professional experience in environmental, water supply, wastewater, solid wastes management, civil and mining engineering fields. He has provided planning, design, construction management and technical expert testimony for environmental and general civil engineering projects. He has prepared Phase I environmental site assessments and carried out subsequent Phase II and Phase III remediation work. He has also prepared portions of environmental impact statements for highway projects. Having worked for state government, as well as private firms, he thoroughly understands both sides, which results in extremely satisfactory completion of a project. He has extensive knowledge of the state and federal water supply, and wastewater laws and regulations. In addition, he is fully familiar with federal/state grant and loan programs.

EXPERIENCE WITH FIRM

S & S Engineers, Inc.
President

As the president of the firm, he manages all the projects, assuring professional work and timely completion of work at reasonable fees. He has *hands on* experience in planning, design and construction management and troubleshooting activities in water supply, wastewater, and environmental fields. He has provided technical expert testimony in courts on drainage control, sediment control, wastewater discharges and environmental impacts. He has thorough knowledge of federal and state grant/loan programs.

PAST EXPERIENCE

West Virginia State Health Department
1) Acting Chief, Wastewater Division; 2) District Engineer; 3) Water Supply Engineer

In various capacities, he has gained valuable experience related to water supplies from abandoned mines for small communities, wastewater treatment needs, assistance in planning and design of water and wastewater systems, governmental functions such as writing regulations, design standards, liaison with public, private

groups and other agencies. He prepared "draft" design standards for wastewater systems which are now adopted by the State Health Board.

Flaherty-Giavara Associates; New Haven, Connecticut
Project Manager

Experience includes planning and design of wastewater facilities, recreational facilities solid waste management plans and general environmental services.

ACADEMIC BACKGROUND

M.S.C.E. (Major - Environmental Engineering) 1970
Partial course work for Ph.D.

PROFESSIONAL REGISTRATION

Registered Professional Engineer, West Virginia
Registered Professional Engineer, Ohio
Registered Professional Engineer, Kentucky
Registered Professional Engineer, Virginia
Diplomate, American Academy of Environmental Engineers
Qualified Environmental Professional, IPEP

PROFESSIONAL AFFILIATIONS

Member, West Virginia Rural Water Association
Member, Water Pollution Control Federation (President, WV Section, 1987-88) (National Director 1989-92)
Member, American Water Works Association

AWARD

Arthur Sidney Bedell Award, Water Environment Federation, (1993)

S&S ENGINEERS, INC.

CURRICULUM VITAE

RANDY BROOKS CRACE, P.S. **VICE PRESIDENT**

SUMMARY

Thirty Eight years of surveying and technical experience. Areas of concentration in boundary surveys, mapping, topography, subdivisions, annexations, right of ways, subdivision development, construction stakeout, solid waste disposal permits, aerial mapping controls, GPS-RTK survey control networks, oil and gas well locations, land development projects, wastewater collection systems, surface and underground mining permits, construction stakeout, hydrology, erosion and sediment control plans, stormwater retention systems, site grading plans, parking lot layout, WVDOH driveway permits, AutoCadd / Softdesk / Eagle Point / software programs, Geographic Information Systems, Phase I - ASTM environmental site assessment and expert witness testimony in surveying field.

EXPERIENCE WITH FIRM

S & S Engineers, Inc.
Vice President

Management of support staff on engineering and land surveying projects for EPA, HUD, WVDOH, industrial, commercial, and private development. Reporting directly to the president for project budgets, manpower estimates, staff assignments and contract management.

EXPERIENCE WITH OTHER FIRMS

Assistant Coordinator

Assisted in the management of survey crews, processing and plotting of data by PC computer, and scheduling of the drafting with the department supervisor for EPA wastewater projects. Special assignments included compiling, processing, mapping and testimony for city boundary annexations.

Surveyor

Responsible for the professional services in mortgage loan

inspections, oil & gas well locations and permits, construction layout and management on coal facilities, various engineering and land surveying assignments to the private sector.

Field Crew Supervisor

Duties included engineering and layout on short span bridges, right of way maps, oil & gas well locations, mining permits, Department of Health permits, commercial site surveys and site planning, subdivision design of lots and utilities, engineering of roadways and bridge approaches, and basic surveying and mapping services to the general public.

Survey Crew Chief

Direct field survey crew on engineering surveys for mining permits, quantity estimates, mountain top removals, alignment of overland belts, boundary locations, royalty line controls.

Engineering Technician

Assisted the engineer on the preparation of surface and deep mine maps, coal property maps for investors, mining permit applications, mineral reserve estimates and geologic columns of core drilling.

U.S. Army - SP4
Honorable Discharge - 1974

ACADEMIC BACKGROUND

MUCGS, Institute, WV
Attended graduate classes toward M.S., Major in Environmental Studies

West Virginia State College, Institute, WV
BA, Major Industrial Technology, December 1989

Cedar Lakes Conference Center, Ripley, WV
OSHA 40 Hour Hazardous Materials, July 1990

AGC/WSDOT
Construction Site Erosion and Sediment Control Certification
Spokane, WA, April 2005

Environmental Site Assessment
Commercial Real Estate Certification
ASTM E-1527 & E-1528, Phoenix, AZ October 2001
ASTM E 1527-05 Phase I and USEPA AAI, Las Vegas, NV 2006

West Virginia Department of Environmental Protection
Approved Person - Mining Permits 1986

Putnam County Schools, Hurricane, WV
Real Estate Law, 90 Hour certificate, 1985

ACSM Surveying Instrumentation and Coordinate Computation Certificate, 1978

U.S. Army Ordinance Center, Aberdeen, MD, 1972
Certificate in Fuel and Electrical Systems Repair

Center College, Charleston, WV 1970
Technical Degree, Drafting

PROFESSIONAL REGISTRATIONS

Professional Surveyor, West Virginia, 1982
Professional Surveyor, Ohio, 1990
Registered Surveyor, Kentucky, 1982

PROFESSIONAL ASSOCIATIONS

Member, West Virginia Association of Land Surveyors
Member, American Congress on Surveying & Mapping
Member, National Society of Professional Surveyors
Associate, American Institute Architects, WV

S&S ENGINEERS, INC.

CURRICULUM VITAE

JESSIE O. PARKER, JR., P.E. — **VICE PRESIDENT**

SUMMARY

Ten years of civil engineering projects including water, wastewater, storm sewers, drainage calculations, grading plans, inspections, payment request approvals, quantity & cost estimates, having worked with Contractors, City & PSD personnel, private sector, regulatory and funding agencies, he is able to move the project in a professional, cost-effective and timely manner.

EXPERIENCE WITH FIRM

S & S Engineers, Inc.
Vice President

Experience includes planning, design, and construction management for a variety of environmental and civil engineering projects. This encompasses preliminary engineering reports, line layout, hydraulic analysis, pump and booster station designs, plant layout and design, process design, specification writing, permitting, storm water and drainage control, and cost estimating, as well as management of all phases and details of the projects. He works closely with all involved parties to ensure timely, cost efficient, and successful projects. He has also written several and environmental reports.

ACADEMIC BACKGROUND

WVU Institute of Technology, Montgomery, WV
B. S. Civil Engineering - December 2002

Marshall University, South Charleston, WV
M.S. Engineering - May 2006

PROFESSIONAL REGISTRATION

Registered Professional Engineer, West Virginia

PROFESSIONAL AFFILIATIONS

Member, Water Environment Federation

Member, American Society of Civil Engineers
Member, American Water Works Association