



West Virginia Purchasing Division

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Header 1

List View

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

Procurement Folder: 1523821	SO Doc Code: CEOI
Procurement Type: Central Purchase Order	SO Dept: 0313
Vendor ID: 000000160928	SO Doc ID: DEP2500000001
Legal Name: CIVIL & ENVIRONMENTAL CONSULTANTS INC	Published Date: 10/8/24
Alias/DBA:	Close Date: 10/29/24
Total Bid: \$0.00	Close Time: 13:30
Response Date: 10/29/2024	Status: Closed
Response Time: 12:54	Solicitation Description: AML - EOI Morgantown Airport Subsidence Phase II
Responded By User ID: kevinhanks	Total of Header Attachments: 1
First Name: Kevin	Total of All Attachments: 1
Last Name: Hanks	
Email: khanks@cecinc.com	
Phone: 2676885593	



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

**State of West Virginia
 Solicitation Response**

Proc Folder: 1523821
Solicitation Description: AML - EOI Morgantown Airport Subsidence Phase II
Proc Type: Central Purchase Order

Solicitation Closes	Solicitation Response	Version
2024-10-29 13:30	SR 0313 ESR10292400000003132	1

VENDOR
 000000160928
 CIVIL & ENVIRONMENTAL CONSULTANTS INC

Solicitation Number: CEOI 0313 DEP2500000001
Total Bid: 0
Response Date: 2024-10-29
Response Time: 12:54:57
Comments:

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

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

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

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	EOI Engineering Design Services				0.00

Comm Code	Manufacturer	Specification	Model #
81100000			

Commodity Line Comments:

Extended Description:

EOI Engineering Design Services



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

State of West Virginia
 Centralized Expression of Interest
 Architect/Engr

Proc Folder: 1523821			Reason for Modification:
Doc Description: AML - EOI Morgantown Airport Subsidence Phase II			
Proc Type: Central Purchase Order			
Date Issued	Solicitation Closes	Solicitation No	Version
2024-10-08	2024-10-29 13:30	CEOI 0313 DEP2500000001	1

BID RECEIVING LOCATION

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

VENDOR

Vendor Customer Code: 000000160928
Vendor Name : Civil & Environmental Consultants, Inc.
Address : 120 Genesis Boulevard
Street :
City : Bridgeport
State : WV **Country :** USA **Zip :** 26330
Principal Contact : Joseph Robinson
Vendor Contact Phone: 304-933-3119 **Extension:**

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

Vendor Signature X  **FEIN#** 25-1599565 **DATE** 10/29/2024

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



Civil & Environmental Consultants, Inc.



WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

**MORGANTOWN AIRPORT SUBSIDENCE PHASE II
CEOI 0313 DEP250000001**

CEC | BRIDGEPORT
Project 346-727
October 29, 2024



October 29, 2024

Mr. Joseph E. Hager III
Department of Administration
Purchasing Division
2019 Washington Street East
Charleston, West Virginia 25305-0130

Dear Mr. Hager:

Subject: Proposal for Professional Engineering Services
Solicitation No. CEOI 0313 DEP2500000001
EOI Morgantown Airport Subsidence Phase II
CEC Project: 346-727

Civil & Environmental Consultants, Inc. (CEC) is pleased to submit this Expression of Interest (EOI) to West Virginia Department of Environmental Protection (WVDEP) for the EOI Morgantown Airport Subsidence Phase II project located in Monongalia County, West Virginia. Our preparation of this proposal is based the Expression of Interest (EOI) dated October 8, 2024.

The civil engineering services representing **CEC's Bridgeport, West Virginia location** include surveying/geo-spatial, civil engineering and geotechnical engineering, transportation engineering, ecological, and environmental services. Also within CEC Bridgeport's footprint can be found landscape architecture and planning, and other specialty services. The management and delivery of this project will be performed through our local Bridgeport, West Virginia office, with assistance from our Pittsburgh, PA office. Our office is built with experts in the region, and currently has over 130 staff comprised of engineers, surveyors, geochemists, hydrologists, permitting specialists, construction technicians, and more. The employees comprising our project team have extensive and varied experience specializing in the aspects of engineering necessary for the completion of this project. We are confident that the enclosed materials highlight our team and our capabilities.

This document presents an overview of CEC's qualifications and experience. We have included a diversified group of successful past projects to display our depth of experience and ability to be responsive to your needs. CEC is a national firm with a footprint of over **34 offices** across the country from which we can pull in a very wide range of experts in the variety of needs the WVDEP may have. We take pride in being integrated into our communities. The people you will be working and communicating with throughout the project are local experts that are based out of our Bridgeport, West Virginia office. The project will be fully managed through our office which is staffed with **130 employees including: engineers, surveyors, permitting experts, and scientists** that call West Virginia their home and work hard to improve our community and the state. We also maintain a working relationship with local materials testing and drilling firms to provide a broader scope of services and allow our clients to enjoy the benefits of one primary project consultant.

CEC is committed to providing the technical expertise and resources necessary for a multitude of tasks, our commitment goes beyond technical services as we are driven by quality deliverables that meet the scope, schedule, budget and goal of projects. CEC understands the funding mechanism associated with AML projects and we will treat your resources like our own resources, upholding the highest level of fiscal responsibility. In support of the current WVDEP AML program and potential future projects, CEC continues to mentor and prepare multiple teams of qualified managers, designers, and engineers to support the efforts of the WVDEP for the successful completion of current and future projects.

Thank you for providing CEC the opportunity to present our qualifications to the West Virginia Department of Environmental Protection. We look forward to the opportunity to communicate directly with the WVDEP and discuss our approach to this project in a shortlist interview. Should you have any questions, please do not hesitate to reach out to Joseph D. Robinson at (443) 366-2606 or Kow O. Eshun at (310) 774-1716.

Respectfully submitted,
CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

Joseph D. Robinson, PE
Vice President

Kow O. Eshun, PE
Vice President



PROFESSIONAL ENGINEERING & CONSULTING SERVICES FOR MORGANTOWN AIRPORT SUBSIDENCE PHASE II

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1.0 Firm Overview

In 1989, four engineers and scientists came together with a singular vision: to be a people-first company, one that promotes a culture where clients and employees enjoy working together, and that is responsive to client needs with integrated services and high-quality work for projects both complex and routine. More than 35 years later, Civil & Environmental Consultants, Inc. (CEC) has 1,500+ team members in offices nationwide. Headquartered in Pittsburgh, Pennsylvania, we are consistently ranked on Engineering News-Record's annual lists of the Top Design Firms and Top Environmental Firms in the nation.

A culture of accountability. We own it. At CEC, every member of our team has a personal stake in ensuring the success of our clients. Because their success is our success. As employee-owners of the firm, we are all personally accountable for building lasting relationships and delivering outstanding results. Because we don't just work at CEC. We own it.

Being easy to work with. We own it. At other firms, you may find one person you work well with. Here, our clients tell us they work well with all of us. It's because all of us are invested in your success. We're accessible, responsive, and operate with integrity.

Putting people first. We own it. At CEC, people come first. Always. Whether that's our clients, our employees, or our community. It's why we listen more and work harder to understand the unique needs of our clients. And it's why we prioritize the career development of every individual on our team. People are why we do this, and why we love what we do.

Teamwork. We own it. We are at our best when we work together. That means bringing together a diverse team of talented, passionate, multidisciplinary experts to work closely alongside clients to craft comprehensive solutions to complex problems. We believe that by working together, no problem is insurmountable.

Safety excellence. We own it. We believe all accidents are preventable and are committed to creating an accident- and incident-free workplace for employees and subcontractors through training, safe workplace practices, and processes for assessing project hazards. CEC strives for safety excellence throughout our entire organization and holds all individuals accountable for the safe performance of their work.



CEC is an expanding, multi-disciplined company that is home to:

- Civil Engineers
- Geotechnical Engineers
- Transportation Engineers
- Structural Engineers
- Environmental Scientists
- Environmental Engineers
- Chemical Engineers
- Geologists
- Hydrogeologists
- Hydrologists
- Ecologists
- Biologists
- Wetland Scientists
- Threatened & Endangered Species Experts
- Agronomists/Soil Scientists
- Emissions Testing Professionals
- Meteorologists
- Chemists
- Archaeologists
- Construction Managers and Inspectors
- Environmental Technicians
- Treatment Plant Operators
- Land Surveyors
- Landscape Architects
- GIS Analysts and Programmers

CEC Bridgeport

CEC's Bridgeport office is comprised of senior leaders, engineers, project managers and support staff all with significant private and public infrastructure planning, design and engineering experience. The Bridgeport office is adequately staffed with a variety of professionals to ensure appropriate staff is assigned to any task.

The Bridgeport office enjoys a positive relationship with local, regional and state regulatory officials. These relationships are critical to navigating the permitting process through the increasingly difficult regulatory environment. CEC understands the length of time required for permitting tasks and can assist the client in developing accurate project schedules. CEC also has significant experience working with local contractors on similar development, roadway, and utility projects throughout

West Virginia. This knowledge of local construction techniques and a thorough understanding of the design and operation/maintenance of public infrastructure provide a technical advantage to CEC.

CEC's team provides a balance of public and private sector experience that allows us to offer an exceptional perspective to our consulting services. Our team has proven experience in both private and public sector projects throughout West Virginia, meeting intensive schedules for projects and locally funded projects while maintaining quality work. We understand the balance and collaboration required between private site development projects and the public development process which will be critical in the success of this development.



1.1 Commitment to Safety

CEC is committed to conducting its business in a manner that sustains and protects the safety and health of its employees. CEC strives for continuous improvement in the effectiveness of its safety and health programs. We affirm that:

- Working safely is a key corporate value and a condition of employment.
- All workplace hazards can be safeguarded against by using proactive measures and actions.
- Occupational safety and health is part of every employee's total job performance.
- Each CEC employee is responsible, and is held accountable for establishing safe workplace conditions to prevent injuries and occupational illnesses.
- Training employees to work safely is essential and is the responsibility of CEC Managers and Supervisors.
- Creating and maintaining a safe workplace, combined with the prevention of personal injuries and accidents, is good business.
- An effective Safety Program is part of CEC's vision and mission.

1.2 Attention to Quality

CEC performs our professional services under our corporate Quality Assurance Plan (QAP). This QAP was developed to verify the engineering, design, plans and other deliverables prepared by the project team and the various disciplines are supported by comprehensive studies and sound engineering judgment, in compliance with established policies, guidelines and standards, and contain appropriate design flexibility and cost saving measures. This QAP entails a comprehensive listing of CEC quality policies and standard operating procedures that are available on CEC's internal network. It is consistently reviewed and updated by a multi-office team of experienced professionals to ensure "Best Quality Control Practices" are uniformly applied. In support of this QAP, CEC is committed to the application of established design policies, guidelines, and processes developed and published by review and resource agencies. From a quality standpoint, technical personnel review the technical quality, accuracy and completeness of all designs, analyses, drawings, estimates, and report text. Peer-level personnel are responsible for the performance of an independent check of all calculations and project deliverables prior to each project milestone submission.

As part of the QAP, reviews will be performed for the appropriate element throughout the design/construction process. These reviews will be completed prior to submitting reports, plans, construction documentation, or other deliverables. These reviews will verify the adequacy of the information presented and compliance with established guidance documents. The QAP also documents procedures for work procedure and equipment use, employee and project safety, project management and records and communications. The goal and objective of the QA/QC Policy is to provide a safe and consistent delivery of quality services to the WVDEP.

1.3 Controlling Costs and Maintaining Schedules

CEC has written quality policies that are provided to all employees; these policies define critical work quality and internal control procedures. Employees are instructed and required to record hours worked daily in the Deltek system and each employee-prepared time sheet is reviewed and approved by a system defined supervisor. Project management personnel have online access to project budgets, project cost and hours, billing and accounts receivable information. In addition to online access, each month the Accounting Department distributes to the project manager and principal-in-charge copies of a summary project status report showing budget and actual project information.

Project cost controls are provided by our fully integrated accounting system. The management information system is used to compile and control costs by project and by task, independent of personnel used, or their office location. Costs specific to the project are consolidated by accounting and verified by the CEC project manager for accuracy. Further accounting control is provided for monthly reviews of all projects. The costs incurred are compared to progress on the projects to confirm that the expenditures of budgeted funds correlate to the overall progress on the projects.

1.4 Staff Availability

CEC regularly reviews workload by office and by Practice through a series of regularly scheduled meetings/reviews. Each office holds a weekly meeting to review new and upcoming proposal activity and reports shared opportunities. Additional practice meetings/ reviews are held to review workload, schedule manpower and anticipate schedule changes. CEC regularly monitors our workload and backlog against staff availability and adds personnel, as necessary, to meet client and project requirements and has the ability to augment staff from our 34 office locations and over 1,500 personnel.

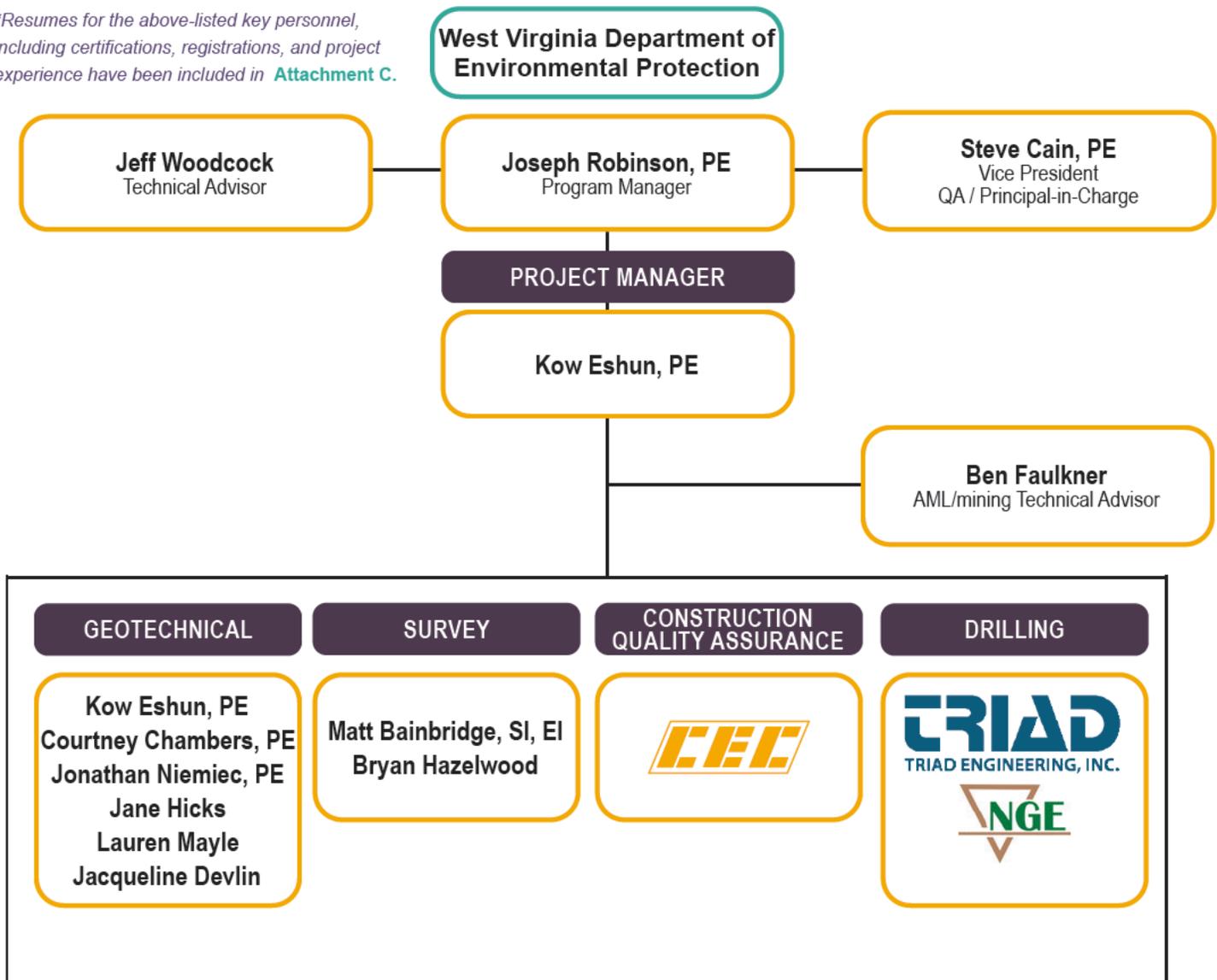
2.0 Key Personnel & Sub-consultants

The following key personnel will assist in the Morgantown Airport Subsidence project. CEC's project team is comprised of individuals that have the technical knowledge, professional experience and project understanding to support the West Virginia Department of Environmental Protection, Division of Land Restoration, Office of Abandoned Mine Lands and Reclamation (WVDEP-DLR-AML) with geotechnical investigation and design of mine grouting

The project team identified to work with the WVDEP has extensive experience in full service design solutions for performing site assessments and design services throughout West Virginia.

In addition to the key personnel noted in the organizational chart below, CEC's Bridgeport, WV office has more than 100 technical and managerial personnel who can provide a wide range of services, including but not limited to Construction Field Services.

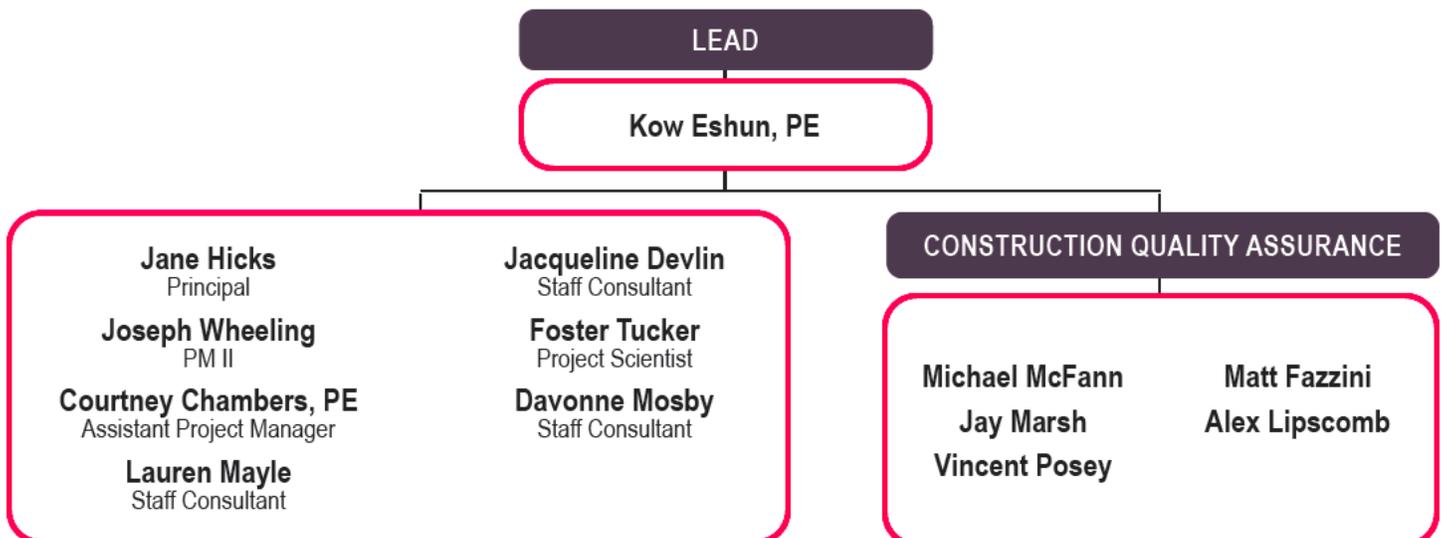
**Resumes for the above-listed key personnel, including certifications, registrations, and project experience have been included in Attachment C.*





Name	Role	Years of Experience	Education	Registrations
Joseph Robinson, PE	Program Manager	20	B.S., Civil Engineering, West Virginia University	Professional Engineer (WV, OH, PA, TX, VA, MD)
Steve Cain, PE	Quality Manager/ Principal-in-Charge	31	B.S., Engineering Technology - (Civil Emphasis), Fairmont State University	Professional Engineer (WV, PA, MD)
Jeff Woodcock	Technical Advisor	42	B.S., Civil Engineering, The Pennsylvania State University	Professional Engineer (PA, OH)
Kow Eshun, PE	Project Manager	19	M.S., Geotechnical Engineering, The University of Akron B.S., Civil Engineering, Kwame Nkrumah University of Science and Technology	Professional Engineer (WV, VA, TX, TN, PA, OH, NC, NY, NJ, NV, MS, MI, MD, KY, IN, FL, DC, AZ)
Ben Faulkner	AML/Mining Technical Advisor	45	Certificate, Environmental Studies, WV College of Graduate Studies B.S., Biology, Concord University	
Courtney Chambers, PE	Geotechnical	8	B.S., Civil and Environmental Engineering, West Virginia University	Professional Engineer (WV)
Jonathan Niemiec, PE	Geotechnical	19	M.S., Civil Engineering, West Virginia University B.S., Civil Engineering, West Virginia University	Professional Engineer (WV, OH, PA)
Jane Hicks	Geotechnical	26	M.A., Education, West Virginia University B.S., Mining Engineering, West Virginia University	
Lauren Mayle	Geotechnical	4	B.S., Civil Engineering Technology, Fairmont State University B.S., Survey Technology, Fairmont State University	
Jacqueline Devlin	Geotechnical	1	B.S., Civil and Environmental Engineering, West Virginia University	
Matthew Bainbridge, SI, EI	Survey	20	B.S., Civil Engineering Technology, Fairmont State University B.S., Mathematics, Fairmont State University	Survey Intern (WV) Engineer in Training (WV)
Bryan Hazelwood	Aerial Mapping	27	A.A.S., Professional Pilot, Community College of Beaver County	

2.1 Bridgeport Geotechnical Group





2.2 Sub Consultants

Triad Engineering Inc. will assist CEC with their geotechnical investigation by performing subsurface drilling. Since the 1990s, Triad has performed geotechnical drilling and/or geotechnical engineering services on 100s of West Virginia DEP AML&R projects. Triad has maintained open-ended drilling contracts from 2014 to 2017 and 2019 to present. Drilling services include the following:

- Soil Drilling and Sampling using hollow stem augers and split spoon sampling
- Rock coring using NQ coring tools to collect core samples of the underlying bedrock
- Installation of piezometers into mine voids to allow for water level determination and water sampling
- Installation of slope inclinometers and other instrumentation to monitor slope movements.

NAICS CODE: 541330 | SERVICE(S): ENGINEERING SERVICES | CERTIFICATION: Current SBA Small Business Status for 541330

CEC will use **Novel Geo-Environmental, LLC (NGE)** to assist in performing additional geotechnical investigation by performing the subsurface drilling. Since inception in 2003, NGE has performed geotechnical engineering and/or geotechnical drilling services on over 110 West Virginia DEP AML projects. Geotechnical drilling services for AML projects have included the following services:

- Soil drilling and sampling using hollow-stem augers and split-spoon sampling.
- Rock coring using a NQ-wireline system to collect continuous samples of bedrock.
- Installation of piezometers into mine voids to allow for water level determination and water sampling.
- Installation of inclinometers to allow for prolonged monitoring of slope movements.

Minority Business Enterprise Program:
CERTIFICATION: MBE/DBE/SBE
NAICS CODE: 541330
SERVICE(S): ENGINEERING SERVICES
CERTIFICATION: MBE/DBE/SBE
NAICS CODE: 541620
SERVICE(S): ENVIRONMENTAL CONSULTING SERVICES

3.0 Project Overview

For the project, our approach considers effective stakeholder engagement, prioritization of elements such as safety planning, constructability, and grout design based on geotechnical data. This approach will ensure a detailed understanding of the site's geology, subsurface hazards, and an effective, customized mine grouting strategy while minimizing impact to airport operations and the environment. Key components include:

Project Initiation and Coordination

- **Stakeholder Coordination:** Upon project award, CEC will work closely with project stakeholders, including the AML team and the FAA, to align objectives and ensure compliance with regulatory and safety standards, drawing on our experience with airport-related projects.

Temporary Batch Plant Location and Access Routes

- **Site Selection:** Identify potential batch plant locations that are convenient to the site, comply with zoning and environmental requirements, and maintain operational efficiency.
- **Traffic Management:** Develop safe access routes to minimize local disruptions and adhere to traffic regulations.
- **Environmental Compliance:** Conduct impact assessments to control noise and dust levels, reducing environmental impacts.
- **Community Engagement:** Inform nearby communities about the plant and potential traffic changes to maintain transparency and reduce disruptions.

Federal and Other Agency Coordination and Permitting

- **Regulatory Compliance:** Identify and prepare necessary permits from federal, state, and local agencies, covering areas like air and water quality, traffic disruption and waste management.
- **Agency Communication:** Maintain consistent communication with federal and local agencies to ensure a smooth permitting process and address requirements promptly.
- **Monitoring and Reporting:** Track and document all permit communications and status updates, ensuring a clear record for stakeholder review.

Safety Plans, Scheduling, and FAA Requirements

- **FAA Compliance and Protocols:** Develop an FAA-compliant safety plan, addressing specific risks at airfield construction sites, including emergency response and risk mitigation.

- **Scheduling:** Plan a timeline that accommodates airport operations, coordinating with peak hours and mandated construction windows to minimize disruption.
- **Training and Safety Audits:** Conduct worker training in airport-specific protocols and perform regular safety audits to maintain compliance with FAA and OSHA standards during construction.

Geotechnical Site Assessment and Analysis

- **Site Evaluation:** Review geological data, historic mine records, and previous geotechnical studies to identify potential subsurface voids and risks related to former mining activities. CEC has already performed a research of the mine information for the Morgantown Airport area on other existing projects.
- **Field Investigation:** Initiate a drilling program, utilizing core drilling and exploratory borings, as well as geophysical methods (such as seismic surveys) to locate voids, assess subsidence risks, and determine the condition of mine workings.
- **Laboratory Testing:** Perform soil and rock testing to evaluate properties like strength, porosity, and permeability, which influence grouting performance and inform the selection of grout materials.

Grouting Design and Implementation

- **Grouting Material Selection:** Choose grout materials (e.g., cementitious, polyurethane) based on site geology and stabilization needs.
- **Grouting Zones and Injection Planning:** Define grouting zones, establish injection points, and calculate volumes to achieve full void filling and stabilization.
- **Grouting Techniques:** Tailor grouting methods, such as permeation or compaction grouting, to address subsurface conditions effectively and mitigate potential subsidence.

Monitoring and Quality Assurance

- **Grouting Process Monitoring:** Establish a monitoring plan during grouting operations to ensure the injection process meets design specifications and achieves intended stabilization.
- **Post-Grouting Verification:** Conduct surveys after grouting to confirm grout distribution and stability improvements.

CEC believes that this approach provides a systematic and data-driven method to mitigate mine-related subsurface risks, ensuring long-term safety and stability for airport operations.

4.0 References

We encourage WVDEP to contact the following client contacts to discuss our previous performance on similar projects.

Mr. Lee Kaplan, PG, MPH

Posillico, Inc.
Project Executive
1750 New Highway
Farmingdale, NY 11735
Phone: 917-868-5472
Email: lkaplan@posillico.com

Mr. Tim Miller

Maryland Department of the Environment
Regulatory & Compliance Engineer Senior - Abandoned Mine
Land Division
160 South Water Street
Frostburg, MD 21532
Phone: 304-689-1465
Email: tim.miller@maryland.gov

Mr. Arik Way

Howard Concrete Pumping
Project Manager
2327 Hill Church Houston Road
Cannonsburg, PA 15317
Phone: 412-257-1800
Email: away@howardconcretepumping.com





A. AML Consultant Qualification Questionnaire



**WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
AML CONSULTANT QUALIFICATION QUESTIONNAIRE**

Attachment "B"

PROJECT NAME Morgantown Airport Subsidence Phase II		DATE (DAY, MONTH, YEAR) October 29, 2024		FEIN 25-1599565			
1. FIRM NAME Civil & Environmental Consultants, Inc.		2. HOME OFFICE BUSINESS ADDRESS 700 Cherrington Parkway Moon Township, PA 15108		3. FORMER FIRM NAME N/A			
4. HOME OFFICE TELEPHONE 412.429.2324	5. ESTABLISHED (YEAR) 1989	6. TYPE OWNERSHIP <input type="checkbox"/> Individual <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Joint-Venture		6a. WV REGISTERED DBE Disadvantaged Business Enterprise) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
7. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE Bridgeport Office 120 Genesis Boulevard, Bridgeport, WV 26330 304.933.3119 Joseph D. Robinson, PE 23							
8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM Dustin Kuhlman PE CEO Harry Dravecky PE COO			8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS Steven Cain PE Vice President & Office Lead				
9. PERSONNEL BY DISCIPLINE							
61	ADMINISTRATIVE	112	ECOLOGISTS	13	LANDSCAPE ARCHITECTS	16	STRUCTURAL ENGINEERS
2	ARCHITECTS		ECONOMISTS	18	MECHANICAL ENGINEERS	180	SURVEYORS
8	BIOLOGIST	18	ELECTRICAL ENGINEERS		MINING ENGINEERS	9	TRANSPORTATION ENGINEERS
80	CADD OPERATORS	211	ENVIRONMENTALISTS		PHOTOGRAMMETRISTS	355	OTHER
6	CHEMICAL ENGINEERS		ESTIMATORS		PLANNERS: URBAN/REGIONAL		
387	CIVIL ENGINEERS	26	GEOLOGISTS	1	SANITARY ENGINEERS		
8	CONSTRUCTION INSPECTORS		HISTORIANS	3	SOILS ENGINEERS		
	DESIGNERS		HYDROLOGISTS		SPECIFICATION WRITER		
						1514	TOTAL PERSONNEL
TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 10 WV Professional Engineers in Bridgeport (57 companywide)							
*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? <input type="checkbox"/> Yes <input type="checkbox"/> No							

12. Experience

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

YES Description and Number of Projects: CEC personnel have 90 years of direct Abandoned Mine Lands Remediation/Mine Reclamation Engineering experience. In 2018, CEC was awarded the Excellence in Construction Award for the Shinns Run Portals Reclamation Design Project by the Associated Builders and Contractors, Inc. CEC personnel have also designed the Ohio Abandoned Mine Lands Project - Flint Run Acid Mine Drainage that received a national award. The list below is some of the project that CEC personnel have designed in the past.

1. Francis Treatment - Evaluation of the existing treatment facility and make recommendations for re-design while reducing the overall treatment footprint
2. Stollings (White) Portals, three mine seals, sediment and erosion control
3. Norton Highwall #1 reclamation design to eliminate 8,900 LF of highwall with 11,145 LF of drainage ditches
4. Virginia DMME AMD Passive Treatment System (non-BFS) - sulfate reducing bioreactor, settling pond, aerobic wetlands
5. Tub Run Highwall and Refuse Phase II, reclamation design to eliminate 12,500 LF of highwall with 11,400 LF of drainage ditch design and roadway design
6. Tub Run Highwall and Refuse Phase I, reclamation design to eliminate 10,000 LF of highwall with 9,900 LF of drainage ditch design with a large box culvert
7. Greenbrier Hollow Refuse, reclamation design removal of cast over the hill coal refuse pile, 2 mine seals and 1,015 LF of drainage ditch design.
8. Island AMD Passive Treatment System (non-BFS) - iron oxidation, acid neutralization, metal precipitation/collection, hydrologic conveyances
9. Sauls Run Strip and Landslide "Emergency AML Project" This project was completed from start to finish in (4) weeks including field survey, design, subsurface investigation plan, design and removal of three slips behind house on Sauls Run.
10. North Taylor AMD Passive Treatment System (non-BFS) - acid neutralization, mixing basin, aerobic wetlands, hydrologic conveyances, revegetation

CEC personnel have successfully completed 20+ acid mine drainage evaluation and abatement design projects.

NO

B. Is your firm experienced in Soil Analysis?

YES Description and Number of Projects: CEC has routinely completed soil analysis and acid base accounting for mining impacted properties including the West Virginia Department of Environmental Protection Office of Abandoned Mine Lands. On all of our past AML reclamation design projects, CEC performed soil analysis or had the analysis performed by subconsultants. CEC has routinely completed soil analysis on AML for stream restoration focusing on ABA, Pyritic Sulfur, and Nutrient Content. CEC has also performed soil analysis for the Oil & Gas Industry focusing on VOCs, PAHs, Phthalate Esters, Petroleum Compounds, Metals, Anion, and Radionuclides. CEC has completed soil analysis on approximately 50 projects.

C. Is your firm experienced in hydrology and hydraulics?

YES Description and Number of Projects: CEC personnel have successfully completed numerous hydrology and hydraulics projects associated with bridges, box culverts, piping, ditchwork, and sediment ponds. CEC personnel have completed 60 AML related hydrology and hydraulics projects. Swastik Bhandari from the Bridgeport CEC office has Master's Degree in Water Resources (hydrology and hydraulics, proficient with Flowmaster- Storm Drainage Design - Storm Drainage Modeling - Stormwater BMP Research and Design - Surface Water Hydraulics/Hydrology - HydroCad v8.0, have been published numerous times and a licensed Professional Engineering. CEC has local industry experts as noted above in hydrology and hydraulics.

1. Shinns Run Portals (WVDEP) - field surveying, subsurface investigations of impounded mine pools, records review, HEC-RAS hydrologic evaluation, streambed seals, ditchwork, piping, subsurface drains, stream bank protection, roadbed protection, soil testing, preliminary and final designs / construction plans, dewatering operation, mine drainage treatment, opinion of cost, bid schedule, calculation brief, meeting attendance
2. Pageton (Lambert) Portals (WVDEP) - Reclamation design of coal refuse pile with 51,000 cubic yards of excavation, 24 wet mine seals, 13,700 L.F. sediment control, 1,600 L.F. ditchwork, piping, streambank protection, 24 acres revegetation, topographic surveying, construction mapping, soil testing, hydraulic studies and design, preliminary and final design, construction plans and specifications, engineers cost estimate, bid schedule, calculations brief, onsite preliminary design/pre-bid/pre-construction meetings, reporting and invoicing
3. Birds Creek Number 4 (WVDEP) - Reclamation design of coal refuse pile with 35,000 cubic yards of excavation, 8 wet mine seals, 5 bat gate designs, 18 acres revegetation, topographic surveying, construction mapping, soil testing, hydraulic studies and design, preliminary and final design, construction plans and specifications, engineers cost estimate, bid schedule, calculations brief, onsite preliminary design/pre-bid/pre-construction meetings, reporting and invoicing.

NO

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

YES Description and Number of Projects: CEC routinely collects LiDAR topographic data and aerial imagery with more than 250 projects successfully delivered for various state, federal and private clients. Typical resolution of contour mapping is suitable to produce 1ft contours. Also CEC personnel managed the North and South mapping contract for several years for the West Virginia Department of Environmental Protection, Division of Land Restoration, Office of Abandoned Mine Lands. The contract consisted of a 3 year assignment with the WVDEP and involved surveying and mapping services to be used for the design and construction of Abandoned mine lands projects located throughout the northern counties of West Virginia.

NO

E. Is your firm experienced in domestic waterline design? (Include any experience your firm has in evaluation of aquifer degradation as a result of mining.)

YES Description and Number of Projects: CEC's Bridgeport office has a water resources group which has 10 staff members and has over 100 years of experience with domestic waterline design and construction. This group has also performed design and construction of several AML waterline projects including Terra Alta, Masontown, Tunnelton and 2 projects in Lewis County. CEC completes extensive water transfer projects for the oil & gas industry and municipal water supplies on approximately 50 projects. CEC personnel have also worked on over 8 waterline feasibility studies with the West Virginia Department of Environmental Protection office of Abandoned Mine Lands.

CEC staff members have extensive experience in the evaluation of aquifer degradation as a result of mining to determine if abandoned mine lands impact to groundwater and surface water. In the Town of Newburg, WV CEC looked at impact for 96 homes. Correspondence from the Newburg PSD indicated past mining operations may contribute to their water quantity and quality problems. The Project involved a Preliminary Investigation to determine the impact pre-law mining had on the water resources within the study area. The investigation included project mapping, public and private record search and surface, ground water sampling along with resident interviews, geologic and hydraulic investigations and review and identification of historic mining operations in or near the project area. Mining has impacted potable water supplies and a further determination was made if the mining occurred before or after the Surface Mining and Reclamation Control Act of August 3, 1977 (pre-law mining). Pre-law impacts qualify for assistance from the Abandoned Mine Lands program. The investigation concluded all seven (7) resident's water supplies have been impacted by abandoned pre-law deep mines and qualify for AML funding. Alternatives investigated for mediation included No Action, Individual Well and Water Treatment Systems, and extension of the Norton Harding Jintown PSD distribution system to the affected 7 residents at an estimated cost of \$378,000.

Another project involved extending approximately 15 miles of waterline to serve 103 residents whose water supply had been diminished or contaminated. The project involved a preliminary investigation to determine the impact pre-law mining had on the water resources within the study area. This study included surface and ground water sampling and reporting; public and private record search to determine if residents potable water supply have been impacted by mining; and secondly, if the mining that impacted potable water supplies occurred prior to the Surface Mining and Reclamation Control Act of August 3, 1977. Pre-law impacts qualify for assistance from the Abandoned Mine Lands (AML) Program. The preliminary investigation included a complete hydrologic and geologic investigation of the study area and development of supporting documents and maps to apply for the AML&R Grant for the waterline extension. The study determined that residents water supplies have not been impacted by abandoned mine lands.

NO



F. Is your firm experienced in Acid Mine Drainage
Evaluation and Abatement Design?

YES Description and Number of Projects: CEC routinely assesses AMD and designs passive and active treatment management practices for treatment of acid mine drainage. CEC has completed approximately 20 AMD remediation projects. CEC employs mining geochemists with nearly 30 AMD remediation projects in prior and current employment.

Ben Faulkner, LRS has 45 years of experience working in West Virginia on Acid Mine Drainage projects and is on the Acid Mine Drainage Task Force. Timothy Denicola, PG CFM has 7 years of experience with 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:
Eshun, Kow, O Bridgeport, WV Office	11	11	3
Brief Explanation of Responsibilities Mr. Eshun will provide project management expertise and oversight with regard to all aspects of the project. His start to end project delivery experience and history of research in environmental matters will aid the project team to deliver a successful project tailored to the needs of the WV DEP.			
EDUCATION (Degree, Year, Specialization) 2013: M.S., Geotechnical Engineering, The University of Akron 2005: B.S., Civil Engineering, Kwame Nkrumah University of Science and Technology			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS o American Society of Civil Engineers o Project Management Institute o Deep Foundations Institute		REGISTRATION (Type, Year, State) Professional Engineer- AZ, DC, FL, KY, MD, MI, MS, NV, NJ, NY, NC, OH, PA, TN, TX, VA, WV	
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:
Cain, Steve, A. Bridgeport, WV Office	N/A	31	25 Domestic 0 AML
Brief Explanation of Responsibilities Mr. Cain will be the Principal in Charge for these projects. Of his 30 years of experience, 24 have been spent working on water and wastewater projects with the West Virginia Department of Environmental Protection, WDTRF and SRF utility design and construction programs. Mr. Cain has performed preliminary design and facilities planning, surveying and mapping, design plan preparation, construction monitoring and post design/construction projects. Mr. Cain also has been the principal in charge and civil practice lead for several large civil engineering and construction projects. Over the past year Mr. Cain has served as the office lead and COA for all engineering projects in WV.			
EDUCATION (Degree, Year, Specialization) B.S., Engineering Technology - (Civil Emphasis), Fairmont State University, 1992			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS Fairmont State University Technology Advisory Board West Virginia Rural Water Association American Society of Highway Engineers		REGISTRATION (Type, Year, State) Professional Engineer, WV, MD, PA SafeLand USA - Basic Orientation, PEC Safety 10-hour Construction Safety, Occupational Safety & Health Administration	



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:
Robinson, Joseph, D. Bridgeport, WV Office	1	19	5
<p>Brief Explanation of Responsibilities Mr. Robinson will be the overall CEC/AML program manager acting as a main point of contact and coordinating the managers and professional staff for the planned projects. Mr. Robinson has nineteen years of diverse experience in civil, geotechnical, water resources, structural engineering, Oil & Gas site & pipeline design and residential/commercial site design. Mr. Robinson has designed various projects including site layouts, grading plans, sanitary sewer, storm water management, impoundments, roads, sediment control measures, segmental retaining walls, flood plain analyses and concrete design projects. Mr. Robinson has currently been responsible for the Bridgeport civil practice, construction management of WVDNR and Oil & Gas Sites, design lead on AMLER funded developments, actively managing the AML Contract 8 and Special Inspector of Record for the Texas border wall projects.</p>			
<p>EDUCATION (Degree, Year, Specialization) B.S., Civil Engineering, West Virginia University, 2004</p>			
<p>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS American Concrete Institute American Society of Civil Engineers National Council of Examiners for Engineers and Surveyors Ohio Oil & Gas Association West Virginia Oil and Natural Gas Association</p>		<p>REGISTRATION (Type, Year, State) Professional Engineer, WV, OH, PA, MD, VA, TX</p>	
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:
Woodcock, Jeff Pittsburgh, PA Office	0	42	
<p>Brief Explanation of Responsibilities Mr. Woodcock is a Vice President in CEC's Pittsburgh Office and will provide technical oversight for geotechnical aspects and monitor project progress.</p>			
<p>EDUCATION (Degree, Year, Specialization) 1982: B.S., Civil Engineering, The Pennsylvania State University</p>			
<p>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS Appalachian Basin Gas Processors Association Appalachian Pipeliners Association American Society of Civil Engineers</p>		<p>REGISTRATION (Type, Year, State) Professional Engineer - PA, OH</p>	



14. PROVIDE A LIST OF SOFTWARE AND EQUIPMENT AVAILABLE IN THE PRIMARY OFFICE WHICH WILL BE USED TO COMPLETE AML DESIGN SERVICES
1. AutoCAD Civil 3D
2. ESRI ArcGIS
3. Topcon, Nikon, and Trimble Robotic Total Stations
4. Topcon, Trimble RTK-GPS
5. Leica Terrestrial LIDAR 3D Scanner
6. Velodyne Mobile LIDAR (ground and aerial based)
7. DJI small unmanned aircraft system (sUAS)
8. Topcon, Nikon automatic levels
9. Trimble GeoExplorer 6000 Series
10. YSI ProPlus Multi-parameter Probe
11. Marsh McBirney Flow Meter
12. Hanna HI 98703 Turbidity Meter
13. Hanna HI 99121 Direct Soil pH Meter
14. Submersible and Peristaltic Pumps
15. Mini RAE 3000 Portable Handheld VOC Monitor
16. Corel 98 Suite
17. Microsoft Office Suite
18. North American Green Erosion Control Blanket Software
19. KY Pipe Water and Sewer Line Software
20. Bentley MicroStation with InRoads



PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
Francis Drainage Maintenance Harrison County, West Virginia	West Virginia Department of Environmental Protection - Abandoned Mine Lands, 101 Cambridge Place Bridgeport, WV 26330	Surveying, Geotechnical and Subsurface Investigation, AMD Evaluation and Passive Treatment Design, Drainage and Stormwater Design, and earthwork	\$4,700,000	95%
Border Wall RGV 08 and RGV 09 Design Build - Civil, Structural, H&H, Electrical Rio Grande Valley, Texas	United States Army Corps of Engineers, 819 Taylor St, Fort Worth, TX 76102	Border wall structural design and layout, new road design, site grading, stormwater systems, surveying/mapping, construction stakeout and inspection	\$541,000,000	Design: 100% Construction: 20%
Sand Spring Run - Stream Sealing and Restoration Frostburg, Maryland	Maryland Department of the Environment - Abandoned Mine Land Division 160 South Water St, Frostburg, Maryland 21532	Stream restoration design and Geosynthetic liner design and sealing, sanitary sewer relocation.	\$491,000	Design: 100% Construction start: Spring 2022
Lyons Run AMD Remediation Project and Mitigation Bank Westmoreland County, PA	Lyons Run Watershed Association 2500 Eldo Road Monroeville, PA	Historic water quality review, water quality sampling, remediation design, development of mitigation banking prospectus, ecological delineation, survey.	\$1,800,000	Design: 90% Construction Start: Spring 2022
Export/Delmont AMD Remediation Westmoreland County, PA	Lyons Run Watershed Association 2500 Eldo Road Monroeville, PA	Historic water quality review and sampling, Ecological delineation, chemical loading and treatment calculations, engineering design of an automated calcium oxide slurry treatment system and development of solids handling practices.	\$5,500,000	Design: 30% Construction Start: 2023
MND 9 Landslide Stabilization, Moundsville, WV	HG Energy, LLC 5260 Dupont Road Parkersburg WV	Site survey, ecological delineations, permitting, geotechnical engineering design of the landslide remediation and stabilization, construction inspection and compaction testing.	\$350,000	Design: 100% Construction: 80%



Kirk Pad Landslide Remediation Salem, WV	Antero Resources Corporation 535 White Oaks Blvd Bridgeport WV	Site assessment, topographic survey, permitting, Geotechnical investigation and remediation design.	\$300,000	Design: 100% Construction: 80%
River Road Slips Landslide and Road Repair Monongalia County, WV	WVDOH District Four 2460 Murhyps Run Road Bridgeport, WV 26330	Complete surveying, permitting, right of way, utility coordination, and geotechnical investigation/design of pile and lag walls, soil nail walls, and tieback walls for 20 landslides along County Route 45 (River Road) in Morgantown.	\$4,250,000	Design: 100% Construction start: Spring 2022
Moose Lake subsidence mitigation and construction inspection for multiple panels Cameron, WV	MarkWest Energy Partners, LP 4600 J. Barry Court Suite 500 Canonsburg, PA	Engineering, survey, geotechnical, permitting, and construction engineering and inspection in support of subsidence mitigation around sensitive infrastructure during long wall mining operations.	\$3,000,000	Design: 100% Construction: 50%
Monongah Precast Mine Grouting Plan and Bridge Replacement, Monongah, WV	WVDOH District Four 2460 Murhyps Run Road Bridgeport, WV 26330	Mine subsidence evaluation, mine subsidence grouting and stabilization plan, survey, ecological delineations and permitting, geotechnical investigation and design, bridge replacement design, roadway improvements and staged construction design.	\$2,500,000	Design: 100% Construction start: Summer 2022
Buffalo Creek Mine Subsidence Bridge Replacement, Mannington, WV	EQT Production Company 400 Woodcliff Drive Canonsburg PA WVDOH District Four 2460 Murhyps Run Road Bridgeport, WV 26330	Mine subsidence evaluation, survey, ecological delineations and permitting, geotechnical investigation and design, bridge replacement design, roadway improvements and temporary traffic control plans.	\$2,500,000	Design: 90% Construction start: November 2021
TOTAL NUMBER OF PROJECTS: 10 (CEC has many more projects running concurrently. These are the most applicable			TOTAL ESTIMATED CONSTRUCTION COSTS: \$561,691,000	



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
Border Wall RGV 08 and RGV 09 Design Build - Civil, Structural, H&H, Electrical Rio Grande Valley, Texas	Border wall structural design and layout, new road design, site grading, stormwater systems, surveying/mapping, construction stakeout and inspection.	United States Army Corps of Engineers, 819 Taylor St, Fort Worth, TX 76102	2023	\$541,000,000	\$35,000,000
Guyan Creek Bridge Construction Engineering Mount Olive, WV	Demolition Plan, Erection Plan, Shoring Design, Temporary Bridge Design	West Virginia Division of Highways, Engineering Division, Capitol Complex, Building 5, 1900 Kanawha Blvd., East, Charleston, WV	2021	\$751,306	\$751,306
Marshall County Airport Extension NPDES Permitting Marshall County, WV	NDPES permitting and construction services	Ohio-West Virginia Excavating, Co. 56461 Ferry Landing Road Shadyside OH	2023	\$3,000,000	\$15,000
Exelon Clearsight TX Power 1 Surveying Lubbock, TX	Right-of-way mapping, vegetation analysis, power line compliance reporting	South Plains Electric Cooperative Incorporated	December 2021	Undisclosed	\$60,000
Cubby's Daycare Site Development Bridgeport, WV	Water/sewer line design, Surveying, Construction Inspection, Geotechnical and Civil Engineering	CUBBY'S CHILD CARE CENTER, INC 801 Genesis Blvd Bridgeport, WV 26330	Summer 2022	\$3,000,000	\$300,000
Hawk's Nest State Park Improvements Ansted, WV	Civil Site design, ADA Pathways, Construction Administration	West Virginia Division of Natural Resources 324 4 th Avenue South Charleston, WV 25303	Spring 2022	Undisclosed	\$200,000



PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
Beaver Creek Passive AMD Treatment Preston County, WV	Friend of the Cheat, Inc. 119 South Price Street Suite 206 Kingwood, WV 26537	\$296,000	2020	Yes
Shinns Run Portals Subsidence and Portal Sealing Shinnston, WV	WVDEP, Office of Abandoned Mine Lands 601 57th St. SE, Box 20 Charleston, WV 25340	\$1,617,796	2016	Yes
Mcalpin Portals and Drainage Mine portal sealing and drainage structure maintenance Bridgeport, WV	WVDEP, Office of Abandoned Mine Lands 601 57th St. SE, Box 20 Charleston, WV 25340	\$1,351,743	2018	Yes
Charles Pointe Development Commercial site development and mass earthwork with complete infrastructure design Bridgeport, WV	Genesis Partners, LP P.O. box 1000 Bridgeport, WV 26330	\$20,000,000	2018	Yes
Lower Dempsey Stream Restoration highwall grading on AML Logan, WV	Ecosystem Investment Partners, LLC 5550 Newbury St, Ste B Baltimore, MD 21209 Canaan Valley Institute, Inc. 494 Riverstone Rd Davis, WV 26260	\$5,200,000	2016	Yes
Georges Creek Shaft Stream restoration and sealing and mine portal closure Frostburg, WV	Maryland Department of the Environment - Abandoned Mine Land Division 160 South Water St, Frostburg, Maryland 21532	\$5,216,206	2018	No
Dulaney Subsidence Damage Complaint Mine Subsidence Evaluation and Report for Structure Damage Colliers, WV	State of West Virginia Board of Risk and Insurance Management 1124 Smith Street Suite 4300 Charleston, WV 25301	undetermined	2020	N/A
St. Clair Subsidence Damage Complaint Mine Subsidence Evaluation and Report for Structure Damage Brenton, WV	State of West Virginia Board of Risk and Insurance Management 1124 Smith Street Suite 4300 Charleston, WV 25301	undetermined	2019	N/A



17. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM HAS BEEN A SUB-CONSULTANT TO OTHER FIRMS (INDICATE PHASE OF WORK 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
Corduroy Inn at Snowshoe	Omni Associates 207 Jefferson St. Fairmont, WV 26554	\$21,000	2019	Yes	Omni Associates
MCPARC Wave Pool Improvements	Omni Associates 207 Jefferson St. Fairmont, WV 26554	\$24,000	2018	Yes	Omni Associates
Elkins Mon General	Omni Associates 207 Jefferson St. Fairmont, WV 26554	\$24,000	2018	Yes	Omni Associates
East Side Fire Station	Omni Associates 207 Jefferson St. Fairmont, WV 26554	\$22,000	2019	Yes	Omni Associates
Bridgeport Rec Center, Site Development	City of Bridgeport 515 West Main St. Bridgeport, WV 265330	\$600,000	2019	Yes	Omni Associates
First Exchange Bank	Omni Associates 207 Jefferson St. Fairmont, WV 26554	\$23,000	2019	Yes	Omni Associates
Pike Fork Bridge Construction Engineering Webster Springs, WV	WVDOH, District 7 131 Highland Drive West, WV 26452	\$1,600,000	2019	Yes	Bear Contracting, LLC



18. 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.

Civil & Environmental Consultants, Inc. (CEC) personnel have experience with esoteric aspects of mine land reclamation and mine water remediation. CEC does not employ generic remediation strategies but assesses and evaluates critical details of water chemistry, reaction dynamics, soil properties, hydrologic properties, regional geology, and client and landowner needs. CEC personnel have decades of experience in the reclamation community, familiarity with modern reclamation techniques, and access to a suite of engineering design/geotechnical software. Site grading, volumetric analysis, and hydraulic assessments constitute a bulk of work completed by CEC Bridgeport. CEC presents an interdisciplinary team utilizing a data and client-driven approach to mine land reclamation and mine water remediation:

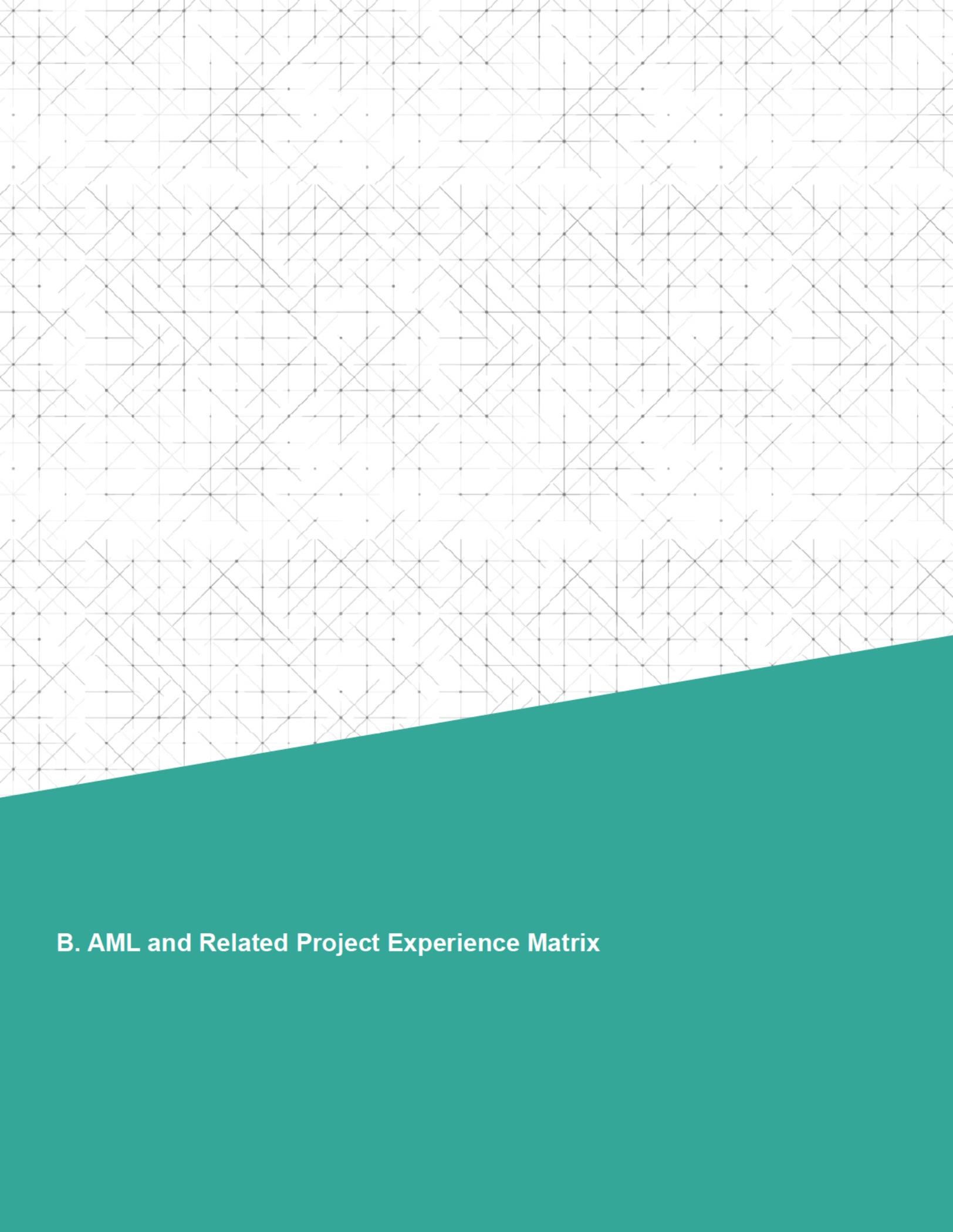
19. The foregoing is a statement of facts.

Signature: Joseph D. Robinson

Title: VICE PRESIDENT

Date: 10-29-2024

Printed Name: JOSEPH D. ROBINSON



B. AML and Related Project Experience Matrix



AML and RELATED PROJECT EXPERIENCE MATRIX																				
PROJECT	Exp. Basis C=Corp. P=Personnel*	Additional Info Provided in Section (8) =	PROJECT EXPERIENCE REQUIREMENTS														PRIMARY STAFF PARTICIPATION/CAF *** M=Management P=Professor			
			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	Timothy Denicola, PG AMD Design	Steve Cain, P.E. QA/QC Manager	Ben Faulkner, LRS Technical Advisor
Francis Drainage Maintenance	P		X			X					X	X		X		X	P	M	P	P
McAlpin Portals and Drainage	P		X	X	X	X				X	X	X	X		X	X				P
Lyons Run AMD Remediation	P		X			X					X	X		X		X	P		P	P
Export AMD Assessment	P		X			X					X	X		X		X	P		P	P
Hodgesville (Wright) Mine Blowout	C		X	X	X	X				X	X	X	X							P
Arlington (Gain) Highwall	C		X			X					X							P		P
Camden (Hartley) Dangerous Landslide*	C		X			X					X	X				X				P
Shinns Run Portals	P			X	X	X				X	X		X		X			P		P
Special Rec. Multiple Projects	C		X	X	X	X				X	X		X			X				P
Norton Highwall #1	P		X	X	X	X					X			X	X			P		P
Tub Run Highwall and Refuse Phase II	P		X	X	X	X				X	X		X	X						P
Tub Run Highwall and Refuse Phase I	P		X			X					X			X						P
Newburg Waterline Feasibility Study	P					X					X		X							
Point Mtn. Waterline Feasibility Study	P					X					X		X							
Greenbrier Hollow Refuse	P		X	X	X	X					X		X	X						P
Sauls Run (Carpenter) Landslide	P		X	X	X	X					X		X	X		X		M		P
Pageton (Lambert) Portals	P		X	X	X	X					X		X	X						P
Birds Creek #4	P		X	X	X	X					X		X	X						P
Church Creek/Manown Highwall	P		X		X	X					X			X	X					P
Racine (Bradshaw) Portals	P			X	X	X					X			X	X					P
Hampton #4 Maintenance	P		X			X					X	X			X	X		M		P
Howesville Sites	P		X	X	X	X				X	X	X		X	X	X				P
Sandy Run Highwall and Portals	P		X	X	X	X				X	X	X		X	X	X				P
Wilsie-Rosedale Waterline Feasibility I.D. # 324	P					X					X		X			X				
Laurel Valley (Daniels) Landslide	P		X			X					X					X		M		P
Price Hill Airshaft/Buildings	P			X	X	X					X	X		X	X	X		M		P
Glady Fork AMD Trmt. Plant.	P			X		X					X	X	X	X		X		M		P



AML and RELATED PROJECT EXPERIENCE MATRIX																					
PROJECT	Exp. Basis C=Corp. P=Personnel*	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	Timothy Denicola, PG AMD Design	Steve Cain, PE QA/QC Manager	Ben Faulkner, LRS Technical Advisor	4 Survey Crews
Weaver Portals, Ph. I & II	P		X	X	X	X					X		X	X	X	X		M		P	P
Nixon Run AMD	P		X	X	X	X						X	X	X	X	X		M		P	P
Taylor Waterline Feasibility, I.D. # 309	P					X						X	X								P
Poplar Ridge Waterline Feasibility, I.D. # 298	P					X						X	X								P
Summit Park Waterline Feasibility I.D. # 288	P					X						X	X								P
Fairmont (Hendrickson) Subsidence	P			X		X				X	X					X		M		P	P
Tunnelton (Dillsworth) Landslide	P			X		X			X	X	X			X		X		M		P	P
Arlington (Cox) Drainage	P			X	X	X			X		X				X			M		P	P
Sauls Run Strip and Landslide	P		X			X				X		X			X	X		M		P	P
Hodgesville Waterline Feasibility I.D. # 275	P					X						X	X								P
McElwain Waterline Feasibility I.D. # 271	P					X						X	X								P
Old Bridgeport Hill Mine Drainage, Ph II	P		X	X	X	X			X		X	X	X	X	X	X		M		P	P
Flint Run East Acid Mine Drainage	P		X			X			X	X	X		X	X	X	X			P	P	P
Murray City AMD and Art Project	P			X	X	X				X	X		X							P	P
Danehart Acid Mine Drainage	P		X			X			X		X		X			X		M		P	P
Nutters Tipple Bond Forfeiture	P		X			X			X	X			X	X	X			M		P	P
Lake Milton Acid Mine Drainage	P		X			X				X	X		X	X	X					P	P

* 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.



C. Key Personnel Qualifications & Resumes

Joseph D. Robinson, P.E.

Vice President



20 YEARS OF EXPERIENCE

EDUCATION

B.S., Civil Engineering, West Virginia University, 2004

Mr. Robinson is a Vice President with twenty years of diverse experience in civil, geotechnical, water resources, structural engineering, Oil & Gas site & pipeline design and residential/commercial site design. He has designed various projects including site layouts, grading plans, sanitary sewer, storm water management, impoundments, roads, sediment control measures, segmental retaining walls, flood plain analyses and concrete design projects. Mr. Robinson has currently been responsible for civil design including site developments, WV 6A well sites, distribution and transmission pipelines, AML/AMLER projects, WVDNR site developments, construction testing/management and permitting and management associated with these projects with the oversight of West Virginia projects for CEC.

PROJECT EXPERIENCE

Federal/State Tactical Infrastructure Projects

TFC, Texas Facilities Commission, Texas

Role: Special Inspector of Record (SIOR)

Provided oversight of Construction Quality Assurance for Quality Control (QC) and Special Inspections (SI) for approximately 3 miles of border wall infrastructure. Includes daily coordination/reporting with field team and weekly correspondence with TFC.

DESIGN-BUILD OF RGV 08 & RGV 09, FENCE SEGMENT, Starr and Hidalgo Counties, TX

Role: Design Manager/Special Inspector of Record

Responsible for site quality control/assurance and special inspections including soil compaction, concrete/grout testing, full penetration welds, welding shop compliance and compliance with specifications for design plans and tactical infrastructure standards. Construction of approximate 40 miles of border wall, roads, drainage, and lighting for providing border security.

AML/AMLER Projects

Shiloh Development, Anmoore, WV

Role: Engineer of Record and funding advisor

Responsible for site design/construction documents, geotechnical investigation, utility coordination, state and federal permitting, WVDOH permitting and design, bidding/construction conferences and construction inspection/management. Phase I site includes approximately 90 acres of property remediation and site development of a 28+ acre pad for economic development in the region with over \$9M AMLER funds with future phase potential to develop 90+ acres of usable pad area.

Brownton Refuse #2, WV

Role: Engineer of Record and program manager

Responsible for management of Agency coordination, Federal and State permitting, phase 2 presence/absence portal survey, survey/mapping, reality coordination for exploratory/construction, geotechnical investigation, water quality checks, civil site design, bidding/construction conferences and construction inspection/management. Project includes 9200LF of access road, 6100LF of priority 2 high walls, 565,000CY of grading, dry/wet mine seals, clogged stream drainage remediation, and 31,000CY of refuse remediation with approximate \$13-14M construction cost.

EXPERTISE

Project planning, permitting and coordination of projects in WV

Diverse experience in civil, geotechnical, water resources, structural engineering, site design, construction management and construction QA/QC

REGISTRATIONS

Professional Engineer



Joseph D. Robinson, P.E.

Vice President

Civil Site Design Experience

Field Office and Warehouse Projects, Antero Resources, WV

Role: Engineer of Record and construction advisor/manager

Responsible for field office and warehouse for the Antero Midstream group for operations. Project included corporate leadership coordination, site development, utilities, permitting, 6,583 SF field office, 20,490 SF warehouse, quality control testing and construction oversight. Responsible for field office and site development for the Antero Production group for operations. Project included site development, permitting, utilities, 8,385 SF field office, 3,200 SF warehouse, quality control testing and construction management.

Coopers Rock State Forest, WVDNR, WV

Role: Engineer of Record and construction manager

Responsible for site development and construction management of 25 new RV locations with site improvements and 20 A-frame cabins with site improvements and sewage pump station with the project kicking off West Virginia tourism's dark sky initiative.

Site Development Projects, Mon General*

Segmental Retaining Wall Redesign Project Responsible for segmental retaining wall design, design plan production and construction. The site location was in an area of previous segmental retaining wall failures.

Health Care Facility Design*

UHC Project - Jerry Dove Drive, Bridgeport, WV Responsible for final site grading, drafting and segmental retaining wall design & construction. Physicians Office Building - Jerry Dove Drive, Bridgeport, WV Responsible for final site grading, drafting and construction oversight.

City development Projects, Clarksburg*

Clarksburg Safe Routes Project. Responsible for design layout, quantities, plan production and construction. Clarksburg Streetscape Project 2010 Responsible for site layout, quantities, design plan production and survey stakeout.

Natural Gas Development Experience

6A Well Site Projects, Antero Resources, WV

Professional Engineer and Project Manager with project experience for several design aspects including 50+ well site designs, 3 pit closures, several site NOV improvement projects, facility design, slip repairs, facility geotechnical design and construction oversight. Project management of these sites include civil site design, ecological impacts, surveying and geotechnical investigation. *Professional Engineer for 21 well sites and 2 freshwater impoundment designs in Doddridge, Harrison, Ritchie and Tyler counties, West Virginia. Design elements for the site included associated impoundments (fracture pits), freshwater impoundments, well pad, manifold pad, offload pad, staging pad, production pads, water truck turnaround pad, spoil pads and access roads. Design tasks included design grading, erosion & sediment controls, site balancing & quantities and design plan production.

Eastern Panhandle Expansion Project, Mountaineer Gas Company, WV

Role: Engineer of Record

Planning and permitting support for the 21.5 mile long Eastern Panhandle Expansion project. Services included routing assistance, alignment plans, survey, aerial mapping, aquatic resource delineations, bat habitat survey, subsurface exploration, HDD evaluation, ESC design and permitting, and environmental inspection.

ACP, Dominion Energy, VA

Role: Engineer of Record

Engineering, construction and stormwater compliance. Design of temporary access roads for spreads 3A, 4A, and 4. Preparation of permit/construction plans, stormwater management calculation packages, and associated relevant documentation for each temporary access road in compliance with Dominion's Annual Standards and Specifications for review by DEQ. Collaboration with project prime consultant and third-party reviewer to complete full deliverable packages and compliance documentation. Coordination with Dominion's permitting group to provide compliance with aquatic features and karst areas, and to resolve connections with ESC and water conveyance on pipeline ROW.

* Work performed prior to joining CEC



Kow O. Eshun, P.E.

Vice President and Martinsburg Operations Lead



19 YEARS OF EXPERIENCE

EDUCATION

B.S., Civil Engineering, Kwame Nkrumah University of Science and Technology, 2005

M.S., Geotechnical Engineering, The University of Akron, 2013

Mr. Eshun has many years of experience and serves as the Martinsburg Office Lead. He is responsible for overseeing daily operations, project reviews, promoting a safe working environment, staff development, project management and client development. Since 2015, Mr. Eshun has served as the Geotechnical principal and pavement engineer on over 80 roadway improvement projects including roadway widening, roadway slip repair projects, and bridge replacement projects across West Virginia. Mr. Eshun has worked on both private and public sectors and has noteworthy experience in the policies and procedures within WVDOT.

PROJECT EXPERIENCE

Transportation/Aviation

Patterson Creek Bridge Replacement, West Virginia Department of Transportation, Grant County, WV

Role: Geotechnical Engineer

CEC prepared the design and construction plans for the replacement of the existing concrete bridge with a three-span, curved girder bridge supported on stub abutment and hammerhead piers. The substructure units were supported on deep foundations using drilled shafts. In addition, CEC designed a soldier pile retaining wall along the alignment and adjacent to the abutment to minimize ROW impacts.

Charleston Interstate Roadway Lighting Renovation, WVDOH, Charleston Kanawha, WV*

Overall project manager for the geotechnical exploration and design of foundations for the high mast lighting poles for the I-64 in Charleston. Kow managed a 4-week drilling schedule on a busy interstate road working night shift to minimize the interruption to traffic. Project involved the design of over 25 drilled caissons. Managed and coordinated the structural design of the caissons with our subcontractor (Michael Baker Jr., Inc.)

East Burke Bridge Replacement, WVDOH, Martinsburg Berkeley, WV*

Served as staff engineer for this project which consisted of the replacement of the existing bridge. He managed subsurface exploration, laboratory testing and was involved with the preparation of recommendations for the foundation of the bridge abutments

Mingo County Regional Airport, Chapman Technical Group, Williamson Mingo, WV*

The project involved the construction of airport on a post mine land. Mr. Eshun coordinated and managed the soil improvement aspect of the site for the hangar and fuel farm. The improvement technique for the project was deep dynamic compaction. Managed field work and also the post improvement testing for the site.

REGISTRATIONS

Professional Engineer



CERTIFICATIONS

Project Management Professional (PMP), Project Management Institute

10-Hour OSHA Construction Safety (Occupational Safety & Health Administration), OSHA

Construction Quality Management for Contractors, United States Army Corps of Engineers



Civil & Environmental Consultants, Inc.

Kow O. Eshun, P.E.

Vice President and Martinsburg Operations Lead

Tabler Station Connector Roadway, WVDOH, Martinsburg Berkeley, WV*

Managed and coordinated the subsurface exploration, laboratory testing and geotechnical analyses for the proposed roadway. Prepared both preliminary and final recommendations for earthwork, construction, karst treatment and cut/fill slope stability and construction for the proposed roadway

Upshur County Regional Airport, Chapman Technical Group, Buckhannon Upshur, WV

Managed and coordinated the subsurface exploration, laboratory testing and geotechnical analyses. Prepared both preliminary and final recommendations for earthwork, pavement design for the rehabilitation of the apron and taxiway.

WVDOH Thomas Buford Pugh Bridge, Orders Construction Company, Prince Fayette, WV*

Project involved the replacement of the existing bridge with a new one. Managed the drilling and laboratory testing services for the preinstallation borings. Information from the borings was used to provide design recommendations for the caissons for the foundations

Site Development

Charles Point Crossing, Genesis Partners, Limited Partnership, Bridgeport, West Virginia

Role: Geotechnical Design of Record

Kow was the geotechnical design manager and engineer of record for Charles Pointe Crossing which involved moving 3.5 million cubic yards of earth and rock to create 100+ acres of development sites along I-79. His responsibilities included planning, managing the geotechnical investigations and design for the project.

Bridgeport Indoor Sports & Recreation Complex, City of Bridgeport, Bridgeport, West Virginia

Role: Geotechnical Engineer on Record

This project involved the design for a 125 acre indoor/outdoor sports and recreation complex. Mr. Eshun was responsible for managing this project from geotechnical engineering and construction management/administration. His responsibilities included planning, managing the geotechnical investigations and design for the project.

Federal Projects

RGV08 & RGV 09 Border Fence Project, Southern Border Constructors, Rio Grande Valley, TX

Role: Geotechnical Design Manager

Lead a team of geotechnical engineers to manage, coordinate and perform geotechnical engineering for approximately 40 miles of border fence and associated access roads. Kow oversaw 4 design teams consisting of 5 members each responsible for approximately 8 miles of border wall and associated roadway for the US/Mexico Border infrastructure in Texas. Project involved the planning and scheduling of geotechnical investigations, slope stability analysis, design of pavement, finite element analyses of fence structure, design of deep caissons for towers, light poles and gate systems. The design of the project was performed in strict adherence with the standards and specifications set forth from AASHTO, the Texas Department of Transportation, USACE, and CBP. This design-build project started construction in Summer of 2020 and was involved with providing quality assurance during the construction.

** Work performed prior to joining CEC*

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers

Project Management Institute

Deep Foundations Institute



Jeffrey C. Woodcock, P.E.

Principal Engineer



42 YEARS OF EXPERIENCE

EDUCATION

B.S., Civil Engineering, The Pennsylvania State University, 1982

REGISTRATIONS

Professional Engineer



Mr. Woodcock has over 42 years of consulting civil, and geotechnical engineering experience. Mr. Woodcock has managed numerous large projects from initial design through construction. He has managed the permitting, surveying, civil design, and geotechnical engineering for several large natural gas treatment plants in Pennsylvania and West Virginia and over 300 geotechnical investigations for commercial, industrial and institutional clients. He has provided geotechnical services to numerous clients with property or facilities in areas of past mining. Services have included investigating the presence, extent and degree, of past deep coal mining; assessing the risk of subsidence due to unconsolidated surface mine deposits or deep mine voids; assessing the risk of structural damage due to mine subsidence; and providing site development recommendations and mine stabilization plans. Mr. Woodcock has also assessed, investigated, and developed remedial plans for numerous landslides on rights-of-way in Ohio, West Virginia, and Pennsylvania. Many of the landslides were located in areas of difficult terrain requiring unique and extensive remedial measures to repair the slopes.

Mr. Woodcock has made presentations on landslides and mitigation at the Marcellus Shale Coalition, Interstate Natural Gas Association of America, Appalachian Pipeliners Association and others. He has managed design-build engineer-led geotechnical construction projects such as mine grouting, deep foundation installation, landslide repairs, retaining wall construction and soil remediation. Mr. Woodcock is responsible for the geotechnical engineering and construction monitoring services provided by CEC.

PROJECT EXPERIENCE

WIN Waste Innovations, Tunnel Hill Reclamation Mine Investigation, New Lexington, Ohio

Principal In Charge of the investigation to the presence of auger mine voids and a surface mine highwall in an area of proposed landfill expansion. The investigation included air rotary borings to mine level, cross-hole seismic logging, downhole video, and downhole sonar scanning. The findings were used to prepare an analysis to estimate the stability factor of the existing auger mine pillars.

Morgantown Airport Mine Grouting Proposal, Morgantown, WV

Assisted Howard Concrete Pumping Co., Inc. with the preparation of a design-build proposal to grout below the Morgantown Airport runway. A past airport mine grouting plan and test borings drilled at the airport were reviewed as well as available mine maps to develop an estimate of the number and depths of grout holes.

Allegheny County Airport Authority Coal Assessment, Moon Township, PA

Managed the Assessment of Coal-Related Issues for the Allegheny County Airport Authority. The project involved the research of available mining information, reviewing aerial photography and topographic maps and observing field conditions. The information was compiled into a bound document containing maps of the airport property showing mining with respect to developable areas.

Marriott International, Inc., Marriott Hotel Mine Grouting, Morgantown, WV

Principal In Charge of the preparation of a mine grouting plan to stabilize the proposed new Morgantown, WV Marriott hotel site. Howard Concrete Pumping Co., Inc. (Howard) was contracted to grout the site. Howard retained CEC to develop the mine grouting plan and provide construction monitoring services during the grouting. At the conclusion of the project, CEC prepared a



Civil & Environmental Consultants, Inc.

Jeffrey C. Woodcock, P.E.

Principal Engineer

report discussing the work performed, laboratory testing, summary of grouting, and including an as-built drawing and confirmation that the work was completed in accordance with the plans and specifications.

University of Pittsburgh, Dammond Drive Relocation, Pittsburgh, PA

Principal In Charge of the geotechnical investigation and engineering to relocate Dammond Drive on the Pitt campus. The presence of an undocumented historic deep mine was confirmed during test drilling. A mine grouting plan was developed to protect the proposed roadway and associated retaining walls and reinforced soil slope from future mine subsidence. Grouting of bedrock within the zone of soil nails for the retaining walls was also performed.

Excella Square Design-Build Mine Grouting, Connellsville, PA

Principal in Charge of the preparation of a mine grouting plan and construction quality control inspections. Howard Concrete Pumping Co., Inc. (Howard) was awarded the mine grouting of the Excella Square site. Howard retained CEC to prepare the mine grouting plan, specifications and to provide construction quality control inspections during grouting. At the conclusion of the project, CEC prepared a report discussing the work performed, laboratory testing, summary of grouting, and including an as-built drawing and confirmation that the work was completed in accordance with the plans and specifications.

Peoria Landfill Peer Review of Historic Coal Mining, Peoria County, OH

Lead geotechnical reviewer for the project. CEC was retained by GFL Environmental Inc. to review the conclusions developed by others regarding past surface and deep mining at a proposal landfill expansion site. Mine maps, mine permit information, historic aerial photographs and other materials were reviewed. Additional research was also performed. A detailed report was prepared summarizing the information and CEC's conclusions.

Robert Morris University, Yorktown Hall Subsidence, Moon Township, PA

Principal In Charge of the assessment of historic mine data to provide guidance to Robert Morris University regarding the additional work needed to make the parking lot safe. After two sinkholes developed in the Yorktown Hall parking lot, CEC was retained to review available data and a subsurface investigation performed. CEC provided verbal guidance to Robert Morris University and prepared a cost estimate to further investigate the extent of mining and stabilize the parking lot, if desired.

Industrial Scientific, New Headquarters Building Geotechnical Investigation and Mine Grouting, Robinson Township, PA

Principal In Charge of the geotechnical investigation, mine stabilization and geotechnical construction quality assurance inspections for the new Industrial Scientific office constructed along the I 376 in Robinson Township, PA. The project included numerous challenges including sloping topography, expansive bedrock, and abandoned deep mines below the site. Consultation and managing construction monitoring for the Newbury site development in Bridgeville, Pennsylvania. After grouting to stabilize the mine, the building was supported on a combination of shallow foundations and drilled piers bearing on bedrock.

Drury Hotel Geotechnical Investigation and Mine Grouting, Robinson Township, PA

Principal In Charge of the geotechnical investigation for the Drury Hotel constructed along I 376 in Robinson Township, PA. The hotel and adjacent commercial parcel included providing recommendations for the design and construction of site earthwork, deep foundations, and mine stabilization. CEC also designed a large retaining wall for the commercial parcel. As a result of comments from Robinson Township, a mine stabilization plan was also developed to protect utilities to be assumed by the township.

Starpoint Business Park, Phase 1B Expansion, Hanover Township, PA

Principal-in-Charge of the geotechnical engineering for the Starpoint Business Park, Phase 1B in Hanover Township, Washington County. The project involved providing grading recommendations to develop the previously surface-mined site. Recommendations developed for grading the site saved the county over a million dollars.

High School Additions, Central Greene School District, Waynesburg, PA

Managed the geotechnical and construction phase services provided to the Central Greene School District. The geotechnical services included an investigation for proposed additions to the high school. During the investigation, it was discovered that deep mining had occurred below the school. A mine investigation was performed to determine the limits of mining and a mine stabilization program was developed. During construction of the additions, CEC was retained to provide construction monitoring and special inspections during the mine grouting and construction of the additions.



Jeffrey C. Woodcock, P.E.

Principal Engineer

Indian Creek School District Middle School, Mingo Junction, OH

Managed the geotechnical for a new middle school for the Indian Creek School District. The investigation included researching the status of surface and deep mining in the area, developing a mine grouting plan, and addressing potentially expansive carbonaceous shale at the floor level of the proposed building. CEC was retained to provide construction quality assurance during mine grouting, earthwork construction, and deep foundation installation.

Natural Gas Processing Plant and Rail Yard, Houston, PA

Principal-in-Charge of the subsurface investigation, mine stabilization design, and construction quality assurance during grouting for a large natural gas processing and fractionation facility in the Marcellus Shale basin. Mine grouting was also designed and grouting completed under CEC's oversight for a rail yard at and abandoned underground coal mine facility.

Mine Subsidence Risk Assessment for Commercial Development, South Park Township, PA

Managed an assessment to evaluate the risks associated with commercially developing a 26-acre site that was previously deep mined. The project included developing methods to reduce the risks associated with construction over the abandoned deep mine workings and associated cost estimates.

Condensate Plant, Cadiz, OH

Principal –in-charge of the site design, permitting and geotechnical engineering for a natural gas condensate plant constructed over an abandoned surface coal mine.

Marriott Hotel, Robinson Township, PA

Geotechnical engineer of record for the geotechnical investigation and deep mine stabilization for a new Marriott hotel near Pittsburgh, PA.

Schenley Gardens Assisted Living Center & Marriott Hotel, City of Pittsburgh, PA

Managed the geotechnical investigation, preparation of technical specifications and field oversight of a combined 8-story hotel, parking garage, and 3-story assisted living center in Pittsburgh, Pennsylvania. Construction of the complex included grouting of coal mine voids and extensive use of soil nail retaining walls to develop the hillside site.

Seneca Valley High School, Jackson Township, PA

Managed the geotechnical investigation and construction monitoring for the new Seneca Valley High School. During the geotechnical investigation for the new high school an unmapped deep mine was encountered. CEC expanded the investigation to delineate the extent of the mining at the site. After the test drilling was completed CEC prepared a geotechnical report that included a design and specifications to grout the mine. Construction monitoring included monitoring earthwork, mine grouting, and foundation construction.

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers

GPA Midstream Appalachian Basin Chapter



Ben B. Faulkner Senior Consultant



45 YEARS OF EXPERIENCE

EDUCATION

Certificate, Environmental Studies, WV College of Graduate Studies, 1986

B.S., Biology, Concord University, 1979

Ben Faulkner is experienced in all environmental aspects of mining with over 40 years of experience in environmental matters. He has enjoyed diverse perspectives as environmental permit manager, regulator, preparer, researcher, and consultant. His focus has been on environmental compliance and characterization of mined properties, with 5 years of mine law enforcement and over 35 years as industry manager, academic research associate, and private consultant to the coal, hard rock, and aggregate mining industries. His experience spans working in state mining programs in IL, OH, KY, PA, SC, TN, TX, VA and WV and CERCLA projects in GA, TN and OH. International projects include USVI, Canada, and Wales. He is recognized as a Federal Court expert witness in characterization and chemical/passive treatment of mine drainage as well as land reclamation and aquatic restoration/evaluation of dramatically disturbed lands. He is the only person to serve on both editorial committees of the Office of Surface Mining's Acid Drainage Technical Initiative for coal and metal mining sectors. He is also qualified through ASTM as an Environmental Professional for the purpose of conducting Environmental Site Assessments, Environmental Compliance Audits, and Due Diligence Inquiries. Recent work with USDoE grant took him to over 140 mine sites in 5 states for characterization of drainage treatment and precipitates potential for Rare Earth Elements recovery.

PROJECT EXPERIENCE

EIP SWV Stream Mitigation Bank CQA, Ecosystem Investment Partners, Davy McDowell, WV

2016. Served as Senior Consultant when this Stream Restoration Project encountered deep mine drainage that manifested as visible red seepage in the restored stream channel. High iron concentrations and copious staining and precipitation compromised water uses and the macroinvertebrate assemblage. Mr. Faulkner characterized the drainage and outlined/critiqued several proposed alternatives for remedy. He designed and field supervised an alternative involving careful excavation of the deep mine outcrop to divert the pooled mine water into a design diversion away from problematic spoil. He also designed passive treatment systems to mitigate the impacts of several localized drainage influences at the project.

Environmental Site Assessment for US Food & Drug Administration, AquaBounty Technologies, Lindsie Monroe, WV*

2011. Mr. Faulkner prepared this Site Assessment for an aquaculture grow-out facility to satisfy USFDA concerns about genetically modified Atlantic Salmon. The assessment was patterned after an international study involving egg production and culture in Prince Edward Island, Canada and grow-out in Panama, Central America. Mr. Faulkner was responsible for surveying and mapping the facility, and evaluating the potential for

EXPERTISE

Experienced wheel loader and track excavator operator

REGISTRATIONS

Licensed Remediation Specialist
• WV ■

CERTIFICATIONS

Certified Blaster, West Virginia Department of Environmental Protection Office of Explosives and Blasting

Class 32 Safety Sensitive Personnel, West Virginia Office of Miner's Health, Safety & Training

MSHA Surface Miner, Mine Safety And Health Administration

8-hour HAZWOPER Refresher Training, Safety Unlimited, Inc.

Hydrogen Sulfide Awareness Training, Safety Unlimited, Inc.

40-Hour OSHA HAZWOPER, Occupational Safety & Health Administration

Environmental Professional, ASTM

Approved Person - Surface Mine/Quarry Permit Applications, West Virginia Department of Environmental Protection Mines and Minerals

Heartsaver CPR AED, American Heart Association

SafeLand USA - Basic Orientation, PEC Safety

West Virginia Scientific Collecting Permit, Division of Natural Resources

10-Hour OSHA Construction Safety (Occupational Safety & Health Administration), OSHA

ATV Safety Institute Training, ATV Safety Institute

Recreational Off-Highway Vehicle Training, Recreational Off-Highway Vehicle Association

Phase I and II Environmental Site Assessment, ASTM

E1527 Standard Practice for Phase I Environmental Site Assessment, ASTM



Civil & Environmental Consultants, Inc.

Ben B. Faulkner

Senior Consultant

native species impact should the fish escape from the facility. He evaluated water quality and fish habitat/assemblage downstream in Rich Creek and in the New River in two states.

Acid Mine Drainage Bond Forfeiture Project, WVDEP, statewide, WV*

1987-2002. When coal operations fail to meet their reclamation and water quality obligations under their environmental permits, the regulatory authority revokes their permits and they forfeit their performance bonds. For 14 years, Mr. Faulkner was the Project Principal for a contract to evaluate the water quality impacts from 890 revoked sites. He either personally sampled or supervised the extended water sampling effort for these sites in 39 counties, and maintained a database of site information and water quality. He represented WVDEP in negotiations with US Department of Interior Office of Surface Mining, Reclamation and Enforcement in developing policy and a program for dealing with water quality at revoked sites, including the characterization and prioritization of the sties, designing and implementing chemical and passive treatment systems, evaluations of the treatment, and policy refinement. Mr. Faulkner worked closely with the Stream Restoration Group and Abandoned Mine Lands (AML) offices of WVDEP to coordinate mitigation efforts and served as special consultant to the WVDEP Director for special projects. He regularly assessed stream impacts for the State by macroinvertebrate monitoring using EPA's Rapid Bioassessment Protocol.

Problematic Active Mine Drainage Inventory, WVDEP, statewide, WV*

1984-2001. Beginning in 1994, the WV Legislature ordered an inventory of problematic drainage at active coal mine sites that threatened the solvency of the Special Reclamation Fund. The fund is generated through taxes on the coal industry and used by WVDEP to address delinquent land reclamation and water quality issues. Mr. Faulkner served as Project Principal under a personal services contract with WVDEP to work closely with reclamation inspectors to sample and inventory raw water sources that required treatment to meet effluent limits. This field work was repeated in 1996, 1998, and 2000 and remains the most comprehensive study of mine water quality in the state. Mr. Faulkner coordinated the identification, sampling, laboratory contracts and data management, and prepared detailed GIS analysis of the occurrence, source, chemical loading, and treatment technology from the over 600 sources of drainage identified in the study.

Special Selenium and Raw Water study for major Appalachian Coal concern, Confidential, WV*

2012-2018. Mr. Faulkner has been the project principal for a special study of a major idled coal property in West Virginia where the company was under a consent decree to characterize and reduce selenium concentrations in their multiple discharges from surface, underground and refuse operations. He led teams collecting water samples and maintained a comprehensive water quality database for over 3 years. The study included real time flow monitoring employing pressure transducers at over 30 surface water weirs. The project matured to including raw water sampling to facilitate application for post-mining effluent limits. Faulkner helped design, construct, maintain, and monitor several very large bioreactors for selenium removal.

Richard Mine Drainage AML Project, WV Conservation Agency through GAI Consultants, Morgantown Monongalia, WV*

2007-2008. Mr. Faulkner was commissioned by GAI to characterize the Richard Mine Drainage and its effects on Decker's Creek. Faulkner collected samples based on extensive mine mapping reconnaissance, and performed field testing and detailed laboratory bench scale chemical treatment studies at the facilities of REIC Laboratories, Inc. From this, he developed a feasibility study involving several chemical treatment alternatives strategies that could be employed by WVCA and its partners in the AMD treatment project.

Preservati Special Projects, Met Coal and Land Development Construction Sites, Princeton Mercer, WV*

2002-2013. Mr. Faulkner has assisted this coal company with stormwater permits and drainage studies at its land development interests for more than a decade. His work included runoff analysis and designing diversion and sediment control structures. He has also assisted with re-vegetation issues in a recent large-scale Lepidopteran-based issue at their surface mining operations.

Coalfields Expressway Mine Drainage Issue, Marshall Miller & Associates, Maxie Buckhannon, VA*

2001-2002. Coal bearing strata and abandoned coal refuse areas lay in the path of the proposed Coalfields Expressway. MMA was commissioned by the VA Dept. of Transportation to perform the geotechnical and environmental work for the design of the project. MMA contracted Mr. Faulkner to assist with the chemical stabilization of the coal refuse associated with the project. The work was accomplished to ensure minimal impact to the environment and involved water and soils sampling and Acid Base Accounting analysis.



Ben B. Faulkner

Senior Consultant

Mine Complex Management - Permitting & Compliance, Island Creek Coal, Holden Logan, WV*

1985-1988. Mr. Faulkner worked as an in-house consultant for Island Creek Coal. His work involved preparing mining and NPDES permits and ensuring environmental compliance at seven mine complexes in WV and Kentucky. He dealt with prospect, underground, surface and preparation issues and conducted numerous Probable Hydrologic Consequences Studies and prepared all necessary permitting and compliance duties associated with a major corporate mining interest.

Mine Management - Permitting and Environmental Compliance, Leckie Smokeless Coal Co., Anjean Greenbrier, WV*

1983-1990. Mr. Faulkner was the Environmental Compliance Manager for this coal operation on 30,000 acres in a native trout watershed. In addition to managing daily environmental compliance at the many surface preparation/refuse and deep mine operations, he obtained permits and handled public relations. During his tenure, the company was awarded a number of WV Surface Mine & Reclamation Association Reclamation Awards. Mr. Faulkner departed the firm but continued to perform consulting services for them for many years.

Helvetia Artesian Mine Drainage Project, Carter Roag Coal Co. (United Coal Co.), Helvetia Randolph, WV*

2012. This completed deep mine allowed mine water with high iron concentrations to discharge through an existing bore hole to a sensitive trout stream. Mr. Faulkner was contracted to characterize the drainage and make recommendations as to improve treatment. His work involved drainage characterization, aeration and oxidizer efforts, and addition of polymers and flocculants.

Penn Virginia Special Projects, Penn Coal Corporation, Charleston, WV*

2000-2011. Penn Virginia contracted Mr. Faulkner to conduct stream characterization at its many operations in Boone and Kanawha Counties. This involved macroinvertebrate collection and stream habitat evaluation utilizing USEPA Rapid Bioassessment Protocol. Mr. Faulkner also assisted Penn Virginia with the design, construction and evaluation of a number of passive treatment systems.

West Virginia DNR Surface Mine Reclamation Inspector, WVDNR, predecessor to WVDoE and WVDEP, statewide, WV*

1979-1984. Mr. Faulkner began his environmental career as a State Mine Inspector in McDowell and Wyoming Counties. There he inspected over 100 deep mine operations, 30 surface mine operations, and a number of coal preparation facilities and refuse areas. He received training in coal refuse site inspection, hydrology and drainage control, and best management practices. He transferred to Greenbrier/Fayette/Nicholas/Summers Counties where he inspected a dozen limestone quarries and over 100 mine sites. In this capacity, he reviewed mine permit applications, oversaw the permit application process, and ensured environmental compliance of the permits when issues. He had statewide responsibilities with special drainage projects

Dominion Gas Phase I ESA Glade Creek Industrial Park, Dominion, Summersville Nicholas, WV

Performed Environmental Site Assessment for new warehouse and maintenance facility under ASTM standards.

WVU Emergency UST, West Virginia University, Beckley Raleigh, WV

WVU purchased the campus of Mountain State University and encountered subsurface UST issues associated with a residence hall. Investigated the issue with Ground Penetrating Radar and subsequent excavation.

V&S Enterprises Phase I ESA, V&S Land, Clarksburg Harrison, WV

V&S leases property with commercial structures for the oil & gas industries. Two properties (one in Clarksburg, WV and another in Bealsville, OH (project 185-865 in 2018) were characterized under ASTM standards.

Williams Threedubs Compressor Facility Coal Mining Incidental to Land Development, Williams Company, West Liberty, WV

Role: Senior Consultant

In developing its multi-million dollar compressor facility near West Liberty, WV, Williams encountered coal that complicated the stability of the pad. Under WV law, coal removal incidental to land development is required to obtain a special surface mining permit. Requirements for this permit satisfy the requirements of federal and state mining laws with respect to all major environmental and legal issues. This involved characterization of soils, overburden, coal, drainage, safety, and property issues. Similar characterization efforts were conducted for another Compressor Facility in Brooke County to the northeast in 2018 where coal removal was also necessary. Faulkner reported on the permit preparation at the 2019 International SME Conference in Denver, CO.



Ben B. Faulkner

Senior Consultant

Buckeye Selenium Compliance Plan, Greer Industries, Inc, Cheat Lake, WV

Role: Senior Consultant

Designed and helped client install, maintain, and monitor a V-notch weir with recording pressure transducer. The pressure transducer measures the height of water in the weir, and when compensated against a nearby atmospheric pressure transducer and calibrated against a regularly read staff gauge, returns a log of accurate flow through the weir. The values are used to produce selenium and other parameter loadings.

Eastern Panhandle Pipeline Expansion , Mountaineer Gas, WV Eastern Panhandle

Role: Senior Consultant

Reviewed available mapping and imagery to prepare Phase I Environmental Site Assessment for new 20 mile pipeline to Martinsburg from Berkeley Springs, WV.

Inventory of Rare Earth Elements from Coal Mine Drainage , WVU Research Corporation - US Department of Energy Grants, Appalachian Coal Region*

2017. Faulkner contacted major coal producers in WV,VA,OH,PA,MD and made arrangements for confidential sampling of acidic mine drainage and precipitates at over 140 treatment facilities. He collected the samples and inventoried the reserves and potential for extracting strategic rare earth elements from the drainage.

Environmental Audits for Real Estate Transactions for Industrial Properties, various, northern and central WV*

Role: Principal Investigator

A consulting firm to which Ben Faulkner sub-contracted was responsible for performing environmental audits for the potential purchaser of hundreds of tracts of land with a history of timbering and coal mining operations. Faulkner led a team that inventoried and characterized over 400 tracts and 10,000 acres in six counties. The process included aerial reconnaissance and videotaping from a helicopter in 1984. Global Positioning Systems (GPS) technology was in its infancy and advance mission planning and post-mission correction was necessary. Faulkner's databases of this and statewide (39 counties) public projects commissioned by WVDEP were selected by WVU faculty for use in early ESRI courses taught at the university.

** Work performed prior to joining CEC*

TRAINING

HazWOPER Annual General Site Worker Refresher 2022-02-21

PROFESSIONAL AFFILIATIONS

Society of Environmental Toxicology and Chemistry

West Virginia Mine Drainage Task Force

Society for Freshwater Science

West Virginia Coal Association, Inc.

International Mine Water Association

American Society of Mining and Reclamation

Society for Mining, Metallurgy, and Exploration, Inc.

Air & Waste Management Association

American Society of Reclamation Sciences

Metallurgical Coal Producers Association



Courtney M. Chambers, P.E.

Assistant Project Manager



8 YEARS OF EXPERIENCE

EDUCATION

B.S., Civil and Environmental Engineering, West Virginia University, 2016

REGISTRATIONS

Professional Engineer
• WV [REDACTED]

CERTIFICATIONS

10-hour Construction Safety,
Occupational Safety & Health
Administration

Transportation Engineering Technician,
West Virginia

SafeLand USA - Basic Orientation,
PEC Safety

Ms. Chambers is a registered professional engineer in West Virginia who has worked on various civil and geotechnical engineering projects. She has skills in civil/site design, geotechnical engineering, and construction quality assurance. She has been involved in geotechnical site development for commercial and oil & gas sectors, landslide repair and remediation, retaining wall design, construction monitoring, and bridge/roadway drafting.

PROJECT EXPERIENCE

Public Sector

Rymer Bridge, EQT Production Company, Brink Road, Marion County, West Virginia

Drafted WVDOH bridge design plans using AutoCAD software.

Patterson Creek Bridge, West Virginia Department of Transportation - West Virginia Division of Highways, Williamsport, Grant County, West Virginia

Drafted WVDOH bridge and pile and lagging wall design plans using Open Roads Designer.

WV Route 279 Improvements, West Virginia Department of Transportation - West Virginia Division of Highways, Bridgeport, Harrison County, West Virginia

Drafted WVDOH roadway design plans using AutoCAD software and prepared a cost estimate.

TransCanada Mountaineer Xpress Pipeline, TransCanada USA Operations, Inc, West Virginia

Drafted multiple WVDOH pile and lagging wall design plans with associated quantities.

Bridgeport City Park Trail Landslide, City of Bridgeport, WV

Developed landslide remediation plans that involved a gabion basket retaining wall.

Oil & Gas

Cedar Well Site Design, Antero Resources Corporation, Pine Grove, West Virginia

Designed reinforced soil slopes for a well pad and developed the geotechnical construction drawings for the project with associated quantities.

Willow Fork/Badger Run Roadway Improvements, Antero Resources Corporation, Tyler County, West Virginia

Drafted roadway design plans. Designed multiple retaining walls including a gabion basket and pile and lagging wall and prepared the construction drawings with associated quantities.

Canton Loop Around BWL 30+30 Slip, Antero Midstream LLC, Smithburg, Doddridge County, West Virginia

Project manager for the landslide repair project. Designed the landslide remediation using standard earthwork methods. Drafted the construction drawings with associated quantities.



Civil & Environmental Consultants, Inc.

Courtney M. Chambers, P.E.

Assistant Project Manager

Blanton Pad Geotechnical Services, Tug Hill Operating, LLC, Cameron, WV

Designed reinforced soil slopes for a well pad and developed the geotechnical construction drawings for the project with associated quantities. Checked daily field reports during construction for quality assurance.

Elijah Well Site, Tug Hill Operating, LLC, Proctor, WV

Designed reinforced soil slopes for a well pad and developed the geotechnical construction drawings for the project with associated quantities. Checked daily field reports during construction for quality assurance.

Ingold Well Pad, Antero Resources Corporation, Porter Falls, WV

Designed reinforced soil slopes for a well pad and developed the geotechnical construction drawings for the project with associated quantities. Provided construction quality assurance during construction. Monitored construction to ensure conformance with plans. Tested soil compaction of fill placement using a nuclear density gauge.

Elmer Well Pad, Tug Hill Operating, LLC, Proctor, WV

Designed reinforced soil slopes for a well pad and developed the geotechnical construction drawings for the project. Checked daily field reports during construction for quality assurance.

Hunters Fork Landslide Repair, Crestwood Midstream Partners, LP, Salem, WV

Developed landslide remediation plans that involved standard earthwork methods. Checked daily field reports during construction for quality assurance.

Hughes to Trent Pipeline Landslide, Crestwood Midstream Partners, LP, New Milton, WV

Role: Project Consultant

Developed multiple landslide remediation plans that involved standard earthwork methods and a gabion basket retaining wall.

County Road Slip Repairs, Antero Resources Corporation, New Milton, WV

Provided quality assurance checks for two bin block walls. Monitored construction activities on site to ensure conformance with design plans.

Hogue Well Site Design, Antero Resources Corporation, WV

Developed the geotechnical construction drawings for the project.

EQT FOL 165, EQT Production Company, Wetzel County

Drilling observation. Gathered subsurface information for use in project design and construction. Assisted in organizing drilling activities on site. Classified and documented soil and rock samples obtained during sampling. Created computer generated boring logs of the subsurface information using gINT software. Assisted team members with the slope stability analysis, geotechnical report, and the geotechnical plan production.

Wetzel and Braxton CR Upgrades, EQT Gathering, LLC, Wetzel County

Developed landslide remediation plans that involved both a soil nail and pile and lagging wall.

Fish Creek Road Landslide, HG Energy, LLC, WV

Developed landslide remediation plans that involved standard earthwork methods.

Hartley East Landslide Repair, Antero Resources Corporation, Pennsboro Tyler, WV

Role: Project Consultant

Developed landslide remediation plans that involved a plug pile wall.

Cashew Well Pad, Antero Resources Corporation, WV, Ritchie & Doddridge

Drilling observation. Gathered subsurface information for use in project design and construction. Assisted in organizing drilling activities on site. Classified and documented soil and rock samples obtained during sampling. Created computer generated boring logs of the subsurface information using gINT software. Assisted team members with the slope stability analysis, geotechnical report, and the geotechnical plan production.



Jonathan M. Niemiec, P.E.

Senior Project Manager



19 YEARS OF EXPERIENCE

EDUCATION

B.S., Civil Engineering, West Virginia University, 2002

M.S., Civil Engineering, West Virginia University, 2005

REGISTRATIONS

Professional Engineer



Jonathan is a geotechnical Project Manager at Civil & Environmental Consultants, Inc. (CEC) with 19 years of engineering and consulting experience. Jonathan has managed geotechnical engineering projects in several different industries such as Natural Gas, Solid Waste, Power, Mining, Manufacturing, Public Sector, and Real Estate. Jonathan's geotechnical engineering experience includes analysis and design of soil and rock slopes, landslide remediation, foundation systems, retaining walls, reinforced soil slopes, dam embankments, ground improvements, landfills, and impoundments. Jonathan has developed and overseen underground mine void investigations. He has performed mine subsidence analyses to estimate the magnitude and extents of settlement at the ground surface due to subsidence at mine level. Jonathan has evaluated the impact of subsidence on structures and landfill liners. He has prepared bidding documents and managed mine grouting for several projects.

Mr. Niemiec has developed, performed, and managed construction quality assurance inspections and testing programs for various projects. He has developed project specifications for various types of projects and construction methods. He is regularly responsible for managing field personnel during construction, reviewing daily field reports, and communicating with contractors and clients on the compliance with project specification, contractor performance, and schedule compliance. Mr. Niemiec also has experience with the development of bid documents and bid review.

PROJECT EXPERIENCE

Mine Subsidence Investigation

Auger Mine Investigation and Subsidence Evaluation, WIN Waste Innovations, Perry County, OH

Project manager for auger mine investigation and subsidence evaluation for a municipal solid waste (MSW) landfill expansion. The investigation was performed utilizing air-rotary drilling and cross-hole seismic logging (CSL) to determine the presence and extents of past surface and auger mining. This work was performed in preparation for a variance request submittal to the Ohio EPA for the construction of the landfill over the auger mine without grouting the existing voids.

Natural Gas Processing Plant, Houston, PA, MarkWest

Assisted in a mine subsidence evaluation at a natural gas processing plant in Washington County. A test boring and laboratory testing program were designed to assess the mine and overburden conditions. The project involved review of detailed coal mine maps and the results of the test borings and laboratory tests to estimate the type and magnitude of subsidence that could occur.

Jonathan M. Niemiec, P.E.

Senior Project Manager

Electric Power Industry

Coal Combustion Residuals Impoundment Closure, Hancock County, WV

Managed the subsurface exploration and laboratory testing program for the closure of a 100-acre coal combustion residuals (CCR) impoundment. The exploration included standard test borings and cone-penetrometer testing (CPT), as well as the installation and measuring of traditional and vibrating wire piezometers. Evaluated the settlement and stability of the proposed cover system based on the results of a model that predicted the post closure rate and magnitude of groundwater drawdown.

Mining

Abandoned Coal Refuse Disposal Site, Morgantown, WV, Unsure

Monitored a subsurface investigation and obtained samples for laboratory testing at an abandoned coal refuse disposal site. A fill surcharge had recently been placed on an abandoned coal refuse pit at the site to improve the subsurface conditions and permit development of the lot. Mr. Niemiec verified that the proper sampling techniques were performed by the drillers and visually identified the mine refuse that was encountered.

Fine Coal Refuse Impoundment Expansion, Monongahalia County, WV

Project consultant for the design of the expansion of the fine coal refuse impoundment. Designed the boring and testing program in accordance with Mine Safety and Health Administration (MSHA) regulations for subsurface investigations of Coal Refuse Impoundments. Monitored the investigation and sampling of soils and bedrock for laboratory testing and prepared test boring logs. Implemented a laboratory testing program designed specifically for this project and performed geotechnical analyses including static and seismic slope stability, finite element seepage, and settlement. Performed hydrologic and hydraulic analyses, which included routing of the design storm through a new outflow system and the design of perimeter diversion channels and culverts. Prepared construction drawings and specifications.

Natural Gas Industry

Natural Gas Processing Plant, PA

Evaluation of mine subsidence at a natural gas processing plant. Development and implementation of subsurface exploration and laboratory testing program. Review of detailed underground coal mine maps and estimation of the type and magnitude of subsidence.

Site Development/Buildings

Hotel and Restaurant Development, Robinson Township, Allegheny County, PA, Drury

Project Manager for geotechnical investigation, report, and construction quality assurance for a multi-story hotel and restaurant development. The investigation was performed for proposed retaining walls, building foundations, and underground mine assessment. Mr. Niemiec managed the design of two segmental block retaining walls, the development of building foundation recommendations, and the slope stability analyses. He managed the construction quality assurance during earthwork, retaining wall construction, building foundation construction. He also developed a mine grouting program and managed field personnel during the implementation.

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers

PUBLICATIONS

Clark, D. M., H. Thomas Walsh, Jonathan M. Niemiec, and Brianne S. Jacoby. "Groundwater Modeling and Settlement Analysis for Closure of the Little Blue Run CCP Disposal Area." World of Coal Ash 2015 - University of Kentucky Center for Applied Energy Research

PRESENTATIONS

Jonathan M. Niemiec, P.E. "Factor of Safety: What Does it Mean and What is Appropriate." Landslide Mitigation and Remediation Workshop: Pads and Pipelines, Pittsburgh, Pennsylvania, January 15, 2020.



L. Jane Hicks

Principal



27 YEARS OF EXPERIENCE

EDUCATION

B.S., Mining Engineering, West Virginia University, 1981

M.A., Education, West Virginia University, 1989

Ms. Hicks has more than 27 years of engineering experience, with twenty years of project management experience in geotechnical engineering. Ms. Hicks has conducted geotechnical investigations for a myriad of clients including coal companies, power generation facilities, manufacturing plants, municipalities, engineering companies and developers. She routinely develops scope and fees for small to moderate single discipline projects or for the geotechnical aspect of multi-discipline projects. She manages and coordinates the subsurface exploration and laboratory testing, provides geotechnical engineering analysis and design which includes preparation of design calculations and completion of design submission reports and specifications.

Jane's technical skills include development of full depth remediation for roadways, landslide remediation, deep and shallow foundation recommendations, slope stability analysis, fill slope design, reinforced soil slope design, and development of geotechnical recommendations for difficult sites.

PROJECT EXPERIENCE

Morgantown Projects

WVU Coliseum Upgrades and Shell Building Additions, WVU, Morgantown, WV*

Role: Geotechnical Engineer

Geotechnical investigation which included discussion of impacts associated with pyritic sulfur.

Dunkin Donuts, Joe DeFazio Oil Company, Morgantown, WV

Role: Geotechnical Engineer

Geotechnical investigation for the planned structure in the West Ridge Development Park.

I-68 Business Park, Monongalia County Development Authority, Morgantown, WV*

Role: Geotechnical Engineer

Geotechnical evaluation and stability analyses for planned business park in Morgantown. In depth review of deep mines in the Pittsburgh coal.

Eastwood Elementary School, Monongalia County Board of Education, Morgantown, WV*

Role: Geotechnical Engineer

Geotechnical Investigation and deep mine evaluation of WVU farm property for potential school construction.

Dorsey Knob Park Landslide Remediation, BOPARC, Morgantown, WV*

Role: Geotechnical Engineer

Geotechnical investigation, slope stability analyses, landslide remediation plans, and quality control during construction.

WVU Baseball Stadium, WVU, Morgantown, WV*

Role: Geotechnical Engineer

Geotechnical evaluation of proposed baseball stadium at University Town Centre. Part of the evaluation included development of a preliminary grout plan for the field.



L. Jane Hicks

Principal

WVU Erickson Alumni Center, WVU, Morgantown, WV*

Role: Geotechnical Engineer

Geotechnical investigation for the proposed alumni center included deep foundation recommendations due to the presence of thick glacial lake soils.

Deckers Creek Grit Chamber, MUB, Morgantown, WV*

Role: Geotechnical Engineer

Geotechnical investigation for the grit chamber located near the confluence of the Monongahela River.

Morgantown Airport , Alpha and Associates, Morgantown, WV*

Role: Geotechnical Engineer

Ms. Hicks assumed responsibility for preparation of several proposals and detailed reports of geotechnical evaluation for this growing local airport. New facilities for which subsurface Investigations and geotechnical evaluations have been preformed include an administration building, maintenance building, taxi-way extension, and runway extension. Geotechnical evaluation for the proposed Runway South Safety Extension included slope configurations for proposed cut areas and slope stability analyses/evaluation for proposed fill areas, as well as the design of a 70 foot reinforced slope.

Fairmont State University, Fairmont, WV*

Role: Geotechnical Engineer

Conducted geotechnical evaluations and supervision of subsurface investigation for new university facilities, which include a Garage, Student Center, and Dormitory. Subsurface investigations included deep borings to assess the sites for subsidence due to deep mining. Geotechnical evaluation included analysis of different deep and shallow foundation systems and retaining walls.

Radisson Hotel and Conference Center, March-Westin, Morgantown, WV*

Role: Geotechnical Engineer

As Staff Engineer, performed geotechnical evaluation and supervision of subsurface investigation, laboratory testing services, and QA/QC field testing services. Supervision of field services included caisson installation. Geotechnical evaluation included analysis of different deep foundation systems for very heavy loads and retaining walls.

WVU Farm Waste Tank, WVU, Morgantown, WV*

Role: Geotechnical Engineer

Geotechnical investigation for planned placement of waste tanks at the WVU Dairy Farm.

Transportation/Aviation

Arnolds Creek Roadway, Antero Resources Corporation, Doddridge County, West Virginia

Role: Senior Project Manager

CEC planned roadway borings, obtained subsurface information, and developed full depth remediation design for approximately 2.1 miles of Arnolds Creek Road in Doddridge County, West Virginia. Soil cement stabilization recommendations were provided along with asphalt thicknesses. Additional boreholes were obtained at the location of five (5) landslides impacting the roadway, with LPILE analyses performed to determine pile and lagging wall design for remediation of the slides.

8 Mile Road Landslide Repairs, Antero Resources Corporation, Wetzel County, West Virginia

Role: Senior Project Manager

CEC planned borings at the location of four (4) landslides impacting the roadway, with LPILE analyses performed to determine pile and lagging wall design for remediation of the landslides.

Gooseman Road Upgrades, HG Energy, LLC, Harrison County, West Virginia

Role: Senior Project Manager

CEC planned roadway borings, obtained subsurface information, and developed full depth remediation design for approximately 1.6 miles of Gooseman Road in Harrison County, West Virginia. Soil cement stabilization recommendations were provided along with asphalt thicknesses.



L. Jane Hicks

Principal

St. Clara Roadway Improvements, HG Energy, LLC

Role: Senior Project Manager

CEC planned roadway borings, obtained subsurface information, and developed full depth remediation design for approximately 3.0 miles of St. Clara Roadway in Doddridge County, West Virginia. Soil cement stabilization recommendations were provided along with asphalt thicknesses.

Nixon Ridge Road Upgrades, HG Energy, LLC, Marshall County, West Virginia

Role: Senior Project Manager

CEC planned roadway borings, obtained subsurface information, and developed full depth remediation design for approximately 1.7 miles of Nixon Ridge Road in Marshall County, West Virginia. Soil cement stabilization recommendations were provided along with asphalt thicknesses. Additional boreholes were obtained at the location of one (1) landslide impacting the roadway, with LPILE analyses performed to determine pile and lagging wall design for remediation of the slide.

Raleigh Street Extension, Parsons Brinckerhoff, Martinsburg Berkeley, WV*

This WVDOT project included the proposed construction of six new bridges. Ms. Hicks prepared subsurface investigation plans, assisted and supervised the collection of subsurface data in the Karst terrain, and assigned laboratory testing. She prepared design reports which included foundation recommendations, cut and fill slope recommendations, slope stability analyses, LPILE analyses, and pile drivability studies.

Morgantown Airport, Alpha Engineering, Morgantown Monongalia, WV*

Ms. Hicks prepared several proposals and detailed reports of geotechnical evaluation for the growing local airport. Supervised the subsurface investigations and geotechnical evaluations for the proposed administration building, maintenance building, taxi-way extension, and runway extension. Developed a deep mine remediation plan for the administration building with the site stabilized prior to construction activities. Provided a mixed fill slope design for the Runway South Safety Extension which included a steepened slope and reinforced soil slope design.

Landslide Remediation

ABL South Slope Landslide, Northrop Grumman Innovation Systems, Inc., Rocket Center, WV

Role: Project Manager

Jane coordinated the field work for the subsurface investigation at the site and managed the subsequent landslide remediation design effort.

Potomac Drive Landslide, Northrop Grumman Innovation Systems, Inc., Rocket Center, WV

Role: Project Manager

Jane coordinated the subsurface investigation and reviewed the design calculations..

South Gate Road Slope Stabilization Design, WV National Guard, Preston County, Kingwood, West Virginia

Role: Project Manager

Jane coordinated the subsurface investigation, authored the geotechnical report, and assisted with the subsequent retaining wall design for the landslide impacting South Gate Road.

Coal

Shoemaker Raw Coal Facilities, Consol Energy, Moundsville Marshall, WV*

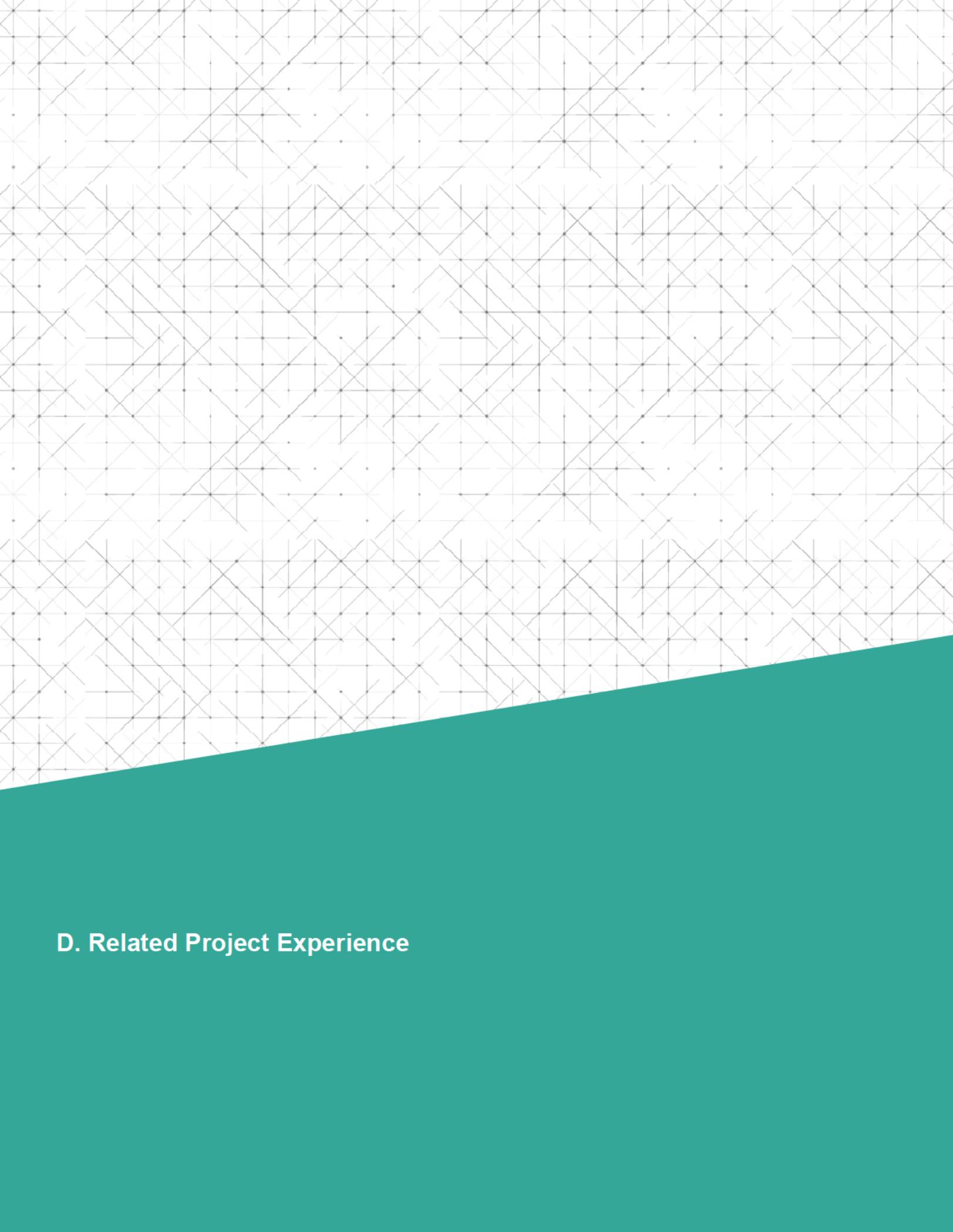
Ms. Hicks supervised the excavation of test pits and compiled additional subsurface information from a drilling program for a proposed conveyor system to serve the Shoemaker Mine. The conveyor and service roadway were to be constructed on a steep, slide prone hillside. In addition, she investigated old landslides and performed stability analyses for different sections of the conveyor system. She also provided earthwork recommendations and deep foundation recommendations for the proposed bent structures.

Upgrades to Bailey Complex, Consol Energy, Enon, PA*

Ms. Hicks supervised the geotechnical evaluation and provided deep foundation recommendations for proposed raw and clean coal silos and conveyor bent supports. Shallow foundation recommendations were also provided for various support structures.

* Work performed prior to joining CEC





D. Related Project Experience

LEMONT EXPANSION FOUNDATION RECOMMENDATIONS AND MINE STABILIZATION

OWNER/CLIENT

Mt. Washington Realty

LOCATION

Pittsburgh, PA

CEC SERVICES

Topographic & Boundary Survey

Subsurface Investigation

Mine Stabilization Plan

Construction Phase Services

OWNER OBJECTIVE

Mt. Washington Realty, the owner of LeMont restaurant located on Grandview Avenue in the Mt. Washington section of the City of Pittsburgh, planned an addition to the restaurant and needed a geotechnical investigation to be performed, as the restaurant is situated on a steep hillside that overlooks the rivers and the City.

CEC APPROACH

CEC was retained by the restaurant owner to perform a geotechnical investigation for the addition to the restaurant. Due to the steep topography, drilling for the addition was challenging. A crane and other specialized equipment was needed to access the location of the addition. The geotechnical investigation also included researching past mining activities in the area.

CEC performed mine map and coal resources data research to investigate the occurrence of deep mining of the Pittsburgh Coal seam below the site. The research confirmed that the coal had been deep mined, and CEC presented recommendations to the owner to reduce the risk of future structural damage to the new addition by grouting the mine. Mine grouting entails drilling 6 to 8 inch-diameter hole to the mine level and pumping a mixture of cement, fly ash and water into the mine to fill the voids and stabilize the mine. The owner elected to undertake a mine stabilization program to reduce the risk of future subsidence, and CEC prepared a mine stabilization plan and specifications for the work, and provided full-time construction monitoring during the project. CEC also performed a site topographic and boundary survey for the project.



GEOTECHNICAL INVESTIGATION FOR FIRST EXCHANGE BANK

OWNER

First Exchange Bank

CLIENT

Omni Associates

LOCATION

Fairmont, WV

CEC SERVICES

Geotechnical Engineering

Deep Mine Stabilization Plan

OWNER OBJECTIVE

First Exchange Bank is a commercial bank with six branch offices in the local region. It was planning a new headquarters building and needed a geotechnical investigation to be performed, as the site is situated on a steeply sloping hillside. First Exchange Bank engaged Omni Associates for the project, and Omni Associates engaged CEC to perform a geotechnical investigation for the proposed structure.

CEC APPROACH

CEC performed a deep mine map and coal research through readily available web sources to investigate the occurrence of deep mining in the area, as nearby structures were known to have had subsidence prevention efforts undertaken prior to construction. Research confirmed that Pittsburgh Coal had outcropped near the front property boundary and that deep mines were present beneath much of the site. CEC planned a boring program to confirm coal seam depths across the site as well as to check for signs of past subsidence events. CEC presented recommendations to First Exchange Bank to reduce the risk of future structural damage to the planned structures (building and retaining walls) by offering an over-excavation and replacement option along with a mine grout option.

First Exchange Bank elected over-excavation and removal for the planned building, as it was to be placed in a location near the coal outcrop where old mine works are shallow. Remaining portions of the site, where the depth to old mines is greater, are to be stabilized by a mine stabilization program. CEC prepared a mine stabilization plan and specifications for the work. The project was constructed and is complete.





HODGESVILLE (WRIGHT) MINE BLOW-OUT

OWNER/CLIENT

West Virginia Department of Environmental Protection

LOCATION

Hodgesville, WV

CEC SERVICES

- Site Grading/Earthwork Analysis
- Stormwater Management/BMP Design
- Hydrogeology and Groundwater Modeling
- Groundwater/Surface Water Remediation Systems
- Topographic Surveys
- Calculation Brief
- Construction Plans and Specifications
- Bid Estimate and Engineer's Cost Estimate

OWNER OBJECTIVE

The West Virginia Department of Environmental Protection (WVDEP), Office of Abandoned Mine Lands oversees and facilitates the resolving of public safety issues as mine fires & subsidence, hazardous highwalls, mining-impacted water supplies, open shafts and portals, and other dangers resulting from mining before 1977. Such practices were established by the Surface Mining and Control Act and the creation of the Office of AML&R in 1981. The Office of Surface Mining provides oversight to the Office of AML&R.

The WVDEP, Office of Abandoned Mine Lands requested proposals to provide design services to mitigate problems associated with an unexpected mine blow-out. This project was deemed an emergency project with a very short time frame for document submittal and awarding of the construction contract. The problem area was located approximately 300 feet behind a residence. On or about March 17, 2015 a mine blowout sent uncontrolled high flows of mine water down an existing ditchline. The uncontrolled flow sent mud, debris, and sediment down the ditchline plugging an existing drop inlet and pipe beneath US Route 20 and submerging US Route 20 beneath 10 inches of water for a period of time causing the road to be closed to traffic. After the initial surge, a 25-foot diameter pool approximately three feet deep developed directly adjacent to US Route 20 with the overflow directed down the east road ditchline. The West Virginia Department of Highways had removed debris from atop the drop inlet and re-established flow through the road pipe. The outlet end of the road pipe is submerged with mud and debris with water conveyed by the road pipe welling-up out of the ground and sheet flowing into nearby ditches.

CEC APPROACH

CEC's reclamation design included 12,500 cubic yards of excavation; two wet mine seals; 1,900 linear feet of sediment control; 531 linear feet of ditches; 116 feet of pipes; 355 linear feet of subsurface drains; one manhole; four acres of revegetation; topographic surveying to develop project mapping; soil testing; hydraulic studies and design for ditches and pipes; sediment control design; revegetation plan; preliminary and final design; construction plans and specifications; dewatering and AMD Treatment Plan; engineers cost estimate, bid schedule, and calculation brief; initial on-site, preliminary design, pre-bid meeting; monthly reports and invoicing.

The project was completed in November 2015.

MARRIOTT HOTEL MINE GROUTING

OWNER/CLIENT

Marriott International, Inc.

LOCATION

Morgantown, WV

CEC SERVICES

ADA Accessibility Analysis

Erosion & Sedimentation Control/NPDES Permitting

Landscape Architecture/Land Planning

Predevelopment Site Investigations

Site Grading/Earthwork Analysis

Stormwater Management/BMP Design

Sustainability Planning/Design

Utility Design

NPDES Permitting Support

Low Impact Development Design

Stormwater BMP Design and Inspections

OWNER OBJECTIVE

Marriott International, Inc. is a public, worldwide hospitality corporation with more than 6,500 properties. Marriott was looking to construct a new hotel at the University Town Center in Morgantown, West Virginia. However, since underground coal mining was previously performed beneath the site, Marriott wanted to ensure the site was stable for construction of the new building.

CEC APPROACH

To decrease the risk of mine subsidence, Marriott decided to grout the mine present beneath the site. CEC was selected to provide a mine grouting plan, mine grouting stabilization specifications, and construction quality control services for the grouting operations. CEC's mine grouting plan showed the drilling and grouting locations, and specifications included requirements for the materials, procedures, and testing.

CEC also provided on-site daily inspection of the grouting and testing of the materials used. A summary letter was provided, after the grouting was complete, stating that the project was performed in general accordance with CEC's plans and specifications.

This work was completed in 2015.





Civil & Environmental Consultants, Inc.

PITTSBURGH INTERNATIONAL AIRPORT – ASSESSMENT OF COAL-RELATED ISSUES

OWNER/CLIENT

Allegheny County Airport Authority (ACAA)

LOCATION

Findlay Township, PA

CEC SERVICES

Geotechnical Engineering

Landscape Architecture

GIS Services

Wetland Delineation

OWNER OBJECTIVE

Allegheny County Airport Authority (ACAA) was planning to develop property surrounding the Pittsburgh International Airport, and hoped to recover remaining coal in the process.

CEC APPROACH

CEC was retained by the ACAA to analyze existing coal resources and historic mining near the airport. CEC was retained to define areas of coal resources, to determine potential coal yield from these areas, and to review available sources of government funding for mine reclamation projects. CEC utilized knowledge of the issues related to historic coal mining as well as our experience with GIS mapping technologies on the project.

CEC defined areas of coal resources based on previous studies, field reconnaissance, and historic mine maps provided by the U.S. Department of the Interior Office of Surface Mining (OSM). These data were overlaid in GIS, allowing for spatial analysis of coal contours, detailed mapping based on topographic data, and precise alignment of historic mine maps for use in site development. CEC produced detailed maps overlaying our limits of coal resources with previous studies, ACAA's planned buildable areas, base of coal contours, and detailed historic mine maps from the OSM.

Through discussions with various government agencies, CEC was able to determine available sources of coal recovery funding. CEC provided specific advice to ACAA regarding the best approach to obtaining grant funds for reclaiming previously deep mined and strip mined areas.



TUNNEL HILL AUGER MINE INVESTIGATION & SUBSIDENCE EVALUATION

OWNER/CLIENT

WIN Waste Innovations

LOCATION

New Lexington, OH

CEC SERVICES

Geotechnical Engineering

OWNER OBJECTIVE

WIN Waste Innovations (WIN) delivers essential and sustainable waste and recycling services throughout the Northeast and Ohio. WIN's objective for this project was to delineate the extent of auger mining, if any, within the southeast limits of the proposed Tunnel Hill Reclamation (THR) Landfill Facility expansion area, and, if voids were present, to obtain a variance request from the Ohio EPA for construction of a landfill expansion over the existing auger mine.

CEC APPROACH

CEC was provided with information indicating the area of potential mining and identified the area of concern associated with the facility expansion. CEC investigated the presence and location of auger mine voids and the location of the backfilled surface mine highwall using a combination of air-rotary drilling and cross-hole seismic logging (CSL). CSL is a geophysical technique used to assess subsurface structures, including the identification of voids within bedrock. CEC subcontracted Howard Concrete Pumping Company to drill thirty-four air rotary borings in the area and CSL was performed at eleven locations. The intent of CSL was to attempt to provide data documenting areas that had not been mined. Because the auger mine voids encountered were flooded, attempts to video voids encountered were unsuccessful. Down-hole sonar scanning, therefore, was performed in three of the air-rotary borings where voids were encountered. The intent of the sonar scanning was to map and define the auger mine void orientation.

As an option to grouting the auger mine voids at the site, CEC prepared an analysis to estimate the stability factor of the existing auger mine pillars within the Middle Kittanning (No. 6) Coal underground auger mine beneath the site. As part of this analysis, CEC estimated the potential effects on the proposed landfill expansion liner system if subsidence of the mine occurs. The analysis was performed using an empirical approach with the data obtained from the recent mine investigation and the proposed expansion details.

The subsidence analysis will be presented to the Ohio EPA. This settlement analysis may result in the approval of the variance request for the construction of the landfill expansion over the mine in lieu of grouting existing voids.





YORKTOWN HALL MINE GROUTING

OWNER/CLIENT

Robert Morris University

LOCATION

Moon Township, PA

CEC SERVICES

Geotechnical Engineering

OWNER OBJECTIVE

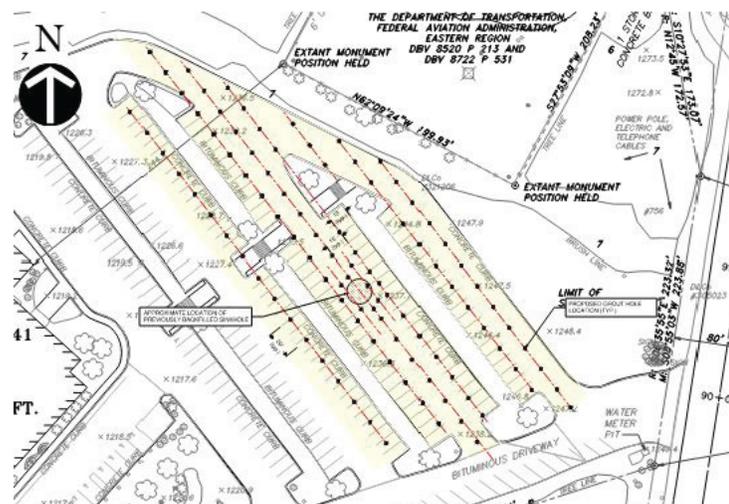
Robert Morris University (RMU) is an accredited university located in Pittsburgh, Pennsylvania that supports a variety of undergraduate, graduate, and doctorate programs. RMU experienced sinkhole occurrences at two locations in the parking areas adjacent to the Yorktown Residence Hall. RMU immediately addressed safety concerns and proceeded to further address the potential for similar issues occurring in the future. CEC was retained by RMU to evaluate available data and provide recommendations to reduce the risk of future subsidence events.

CEC APPROACH

CEC reviewed available site data which included:

- A site plan with topographic information.
- Generalized regional historical deep mine limits.
- Test borings and air rotary borings drilled in the area.
- Geophysical survey results.
- Geotechnical report discussing the elevation of the coal seam and opinion regarding the limits of deep mining.

CEC concluded that much of the available data was not conclusive regarding the presence of mine voids and that many questions remained regarding the extent of deep mining and the magnitude of voids under the parking lot. Due to RMU's conservative request to effectively eliminate the risk of future subsidence, CEC recommended a detailed investigation combined with cement grouting to fill voids encountered. A plan showing initial air rotary holes to be drilled and specifications for the work was prepared. A cost estimate was provided to RMU to drill air rotary holes to investigate the limits of mining and grout voids encountered. A downhole video camera was proposed to assess conditions at mine level in bore holes encountering voids, and to obtain data on the size of voids and direction of mining.



PITTSBURGH–BUTLER REGIONAL AIRPORT PAVEMENT REMEDIATION

OWNER/CLIENT

Butler County Airport Authority

LOCATION

Butler, Pennsylvania

CEC SERVICES

Erosion & Sedimentation Control/NPDES Permitting

Geotechnical Engineering

Pavement Evaluation and Rehabilitation

Site Infrastructure Maintenance/Rehabilitation

Topographic Surveys

OWNER OBJECTIVE

The Butler County Airport Authority (BCAA) was seeking an evaluation and remediation of the existing pavement including a redesign of the tie-down pier layout for a deteriorating aircraft parking apron at the Pittsburgh–Butler Regional Airport. The apron is connected to the main taxiway that parallels the runway. Due to ever-changing FAA regulations, the design was an iterative process to account for recent changes to the Advisory Circulars that direct the layout and pavement design.

The BCAA is also planning a runway expansion that will accommodate larger aircraft, which was also accounted for in the design.

CEC APPROACH

CEC teamed with Mid-Atlantic Environmental Consultants to perform the environmental surveys (asbestos and hazardous material surveys). CEC also prepared the demolition specification and the bid documents to manage the bidding process (pre-bid meeting, response to comments, etc.), and assisted the ACIDC with assessing the bids.

The outcome is the buildings were abated, demolished, and the sites were graded and are pad-ready for future development.





T HANGAR PAVEMENT REHABILITATION, PITTSBURGH–BUTLER REGIONAL AIRPORT

OWNER/CLIENT

Butler County Airport Authority

LOCATION

Butler, PA

CEC SERVICES

Erosion & Sedimentation Control Design
and Inspections/NPDES Permitting

Geotechnical Engineering

Pavement Evaluation and Rehabilitation

Roadway Design

Site Grading/Earthwork Analysis

Stormwater Management/BMP Design and
Inspections

Wetlands & Waters Delineations

As-built Surveys

Topographic Surveys

OWNER OBJECTIVE

The Butler County Airport Authority (BCAA) manages the Pittsburgh–Butler Regional Airport. The airport is expanding its services and footprint at a fast rate mainly due to its proximity to downtown Pittsburgh and the Cranberry/Wexford area. The BCAA sought an evaluation and rehabilitation of the pavements surrounding the T hangars on the south side of the airport. Additionally, BCAA wanted to evaluate solutions to delivery vehicle and other passenger vehicle encroachments to the main south parallel taxiway by way of the T hangar taxiways.

CEC APPROACH

In preliminary discussions regarding the project, CEC and the BCAA initially assumed minor modifications to the south side infiltration basin would be adequate, but it quickly became apparent that the original stormwater system design was both incomplete and incorrect. Infiltration testing data could not be located; because wetland conditions existed within the basin, CEC was required to perform the testing. Due to the lack of ability of the soils to infiltrate runoff, CEC worked with the Butler County Conservation District (BCCD), the Northwest Regional Office of the Pennsylvania Department of Environmental Protection (PADEP), and the Penn Township stormwater reviewer to regrade the basin and to design a Managed Release Concept (MRC). The MRC will minimize the attraction of wildlife through the elimination of the wetland conditions. The modifications to the existing stormwater basin will bring the facility into compliance with current regulations and will facilitate future growth on the south side of the airport.

During CEC's subsurface investigation at the south T hangar, groundwater was encountered at shallow depths in areas where the pavements were in poor condition. The failure of the pavements is indicative of subgrade issues due to the lack of proper drainage, which is a common issue at airports where the surface is generally flat. To provide the most economical pavement design for heavy-duty areas (for delivery vehicle access) and for light-duty areas (for the lighter aircraft and vehicles) using the south T hangar taxiways, CEC performed analysis on the existing pavements and subgrade soils and evaluated several rehabilitation options, including soil-cement, traditional pavement construction, and geogrid-reinforced subbase. CEC designed underdrains to mitigate the high water table encountered in the soil borings. By incorporating trench drains and proper stormwater surficial runoff collection systems, the ability of stormwater to percolate into the subgrade in these areas should be lessened as well. The addition of pavement underdrains and proper stormwater collection will lengthen the life of the pavements in these areas.

Later in 2020, Hangar Lane will be extended and the entrance will be realigned. This will minimize encroachments by delivery trucks and tenant passenger vehicles onto the south parallel taxiway. Additionally, pavement has been added to the plans to allow vehicle staging south of the T hangars to minimize passenger vehicles intermingling with aircraft.

CEC's solution satisfied Penn Township, the BCCD, and the DEP.



E. Certificates of Authorization



CERTIFICATE OF Authorization

STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS

*The West Virginia State Board of Registration for Professional Engineers
having verified the person in responsible charge is registered in
West Virginia as a professional engineer for the noted firm, hereby certifies*

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

C02231-00

Engineer in Responsible Charge: STEVEN A. CAIN - WV PE 015264

*has complied with section §30-13-17 of the West Virginia Code governing
the issuance of a Certificate of Authorization. The Board hereby notifies you of its
certification with issuance of this Certificate of Authorization for the period of:*

January 1, 2024 - December 31, 2025

providing for the practice of engineering services in the State of West Virginia.



IF YOU ARE REQUIRED TO REGISTER WITH THE SECRETARY OF STATE'S OFFICE,
PLEASE SUBMIT THIS CERTIFICATE WITH YOUR APPLICATION.

IN TESTIMONY WHEREOF, THE WEST VIRGINIA STATE BOARD OF
REGISTRATION FOR PROFESSIONAL ENGINEERS HAS ISSUED THIS COA
UNDER ITS SEAL AND SIGNED BY THE PRESIDENT OF SAID BOARD.

BOARD PRESIDENT

WEST VIRGINIA BOARD OF PROFESSIONAL SURVEYORS



Certificate of Authorization

Civil & Environmental Consultants, Inc.
Bridgeport, PA



CERTIFICATE OF AUTHORIZATION # 24-5847

This certificate is issued by the West Virginia Board of Professional Surveyors in accordance with W.Va. Code
§30-13A-20. The person or organization identified on this certificate is licensed to conduct professional surveying and
mapping services in the State of West Virginia for the period

January 01, 2024 through December 31, 2024

This certificate is not transferable and must be displayed at the office location for which issued.

In witness whereof, I have put my hand, this 01 day of January 24

2024

Saffron R. Stewart, P.S., Chairman
Lante G. Rankin, P.S., Member



Douglas C. McElwain, Esq.

James T. Rayburn, P.S., Secretary
Gary Facemyer, P.E., P.S., Member
Public Member



F. Miscellaneous Forms

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

(Printed Name and Title) Joseph Robinson - Vice President

(Address) 120 Genesis Boulevard, Bridgeport, WV 26330

(Phone Number) / (Fax Number) 304-933-3119

(email address) jrobinson@cecinc.com

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through *wvOASIS*, I certify that: I have reviewed this Solicitation/Contract in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation/Contract for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that this bid or offer was made without prior understanding, agreement, or connection with any entity submitting a bid or offer for the same material, supplies, equipment or services; that this bid or offer is in all respects fair and without collusion or fraud; that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; that I am authorized by the Vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on Vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law; and that pursuant to W. Va. Code 5A-3-63, the entity entering into this contract is prohibited from engaging in a boycott against Israel.

Civil & Environmental Consultants, Inc.

(Company) 

(Signature of Authorized Representative)

Steve Cain - Vice President

(Printed Name and Title of Authorized Representative) (Date)

304-933-3119

(Phone Number) (Fax Number)

scain@cecinc.com

(Email Address)

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: CEOI 0313 DEP2500000001

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)

- | | |
|---|--|
| <input type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6 |
| <input type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7 |
| <input type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8 |
| <input type="checkbox"/> Addendum No. 4 | <input type="checkbox"/> Addendum No. 9 |
| <input type="checkbox"/> Addendum No. 5 | <input type="checkbox"/> 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.

Civil & Environmental Consultants, Inc.

Company



Authorized Signature

10/29/2024

Date

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

ABANDONED MINE LANDS (AML) CONTRACTOR INFORMATION FORM

You must complete this form for your AML contracting officer to request an eligibility evaluation from the Office of Surface Mining Reclamation and Enforcement (OSMRE) to determine if you are eligible to receive an AML contract. This requirement can be found under OSMRE's regulations at 30 CFR 874.16. **NOTE:** This form must be signed and **dated within 30 days** of submission to be considered for a current bid.

Part A: General Information

Business Name: Civil & Environmental Consultants, Inc.

Tax ID #: 25-1599565

Address: 120 Genesis Boulevard

City, State, & Zip: Bridgeport, WV 26330

Phone Number: 304-933-3119

Email Address: scain@cecinc.com

Part B: Obtain an Organizational Family Tree (OFT) from the Applicant Violator System (AVS)

If you plan to certify the existing AVS information or submit updates under Part C, you must include an OFT. Instructions for downloading an OFT from the AVS can be found at: <https://www.osmre.gov/sites/default/files/2022-02/OMB%201029-0119%20instructions.pdf>. If you require assistance you may contact the AVS Office by phone at: 800-643-9748, or by email at: avshelp@osmre.gov.

Part C: Certifying and updating information in the AVS

Select one of the options, follow the instructions for the selected option, sign, and date below.

I, Steve Cain, have express authority to certify that:
(Print Name)

1. Our business is listed in the AVS. The information is accurate, complete, and up to date. (If you select this option, you must attach an Entity OFT from the AVS to this form). Do not complete Part D.
2. Our business is in the AVS. The information needs to be updated. (If you select this option, you must attach an Entity OFT from the AVS to this form). Complete Part D to provide the missing or corrected information.
3. Our business is not listed in the AVS. The information needs to be added. Complete Part D to provide the information.

10/29/2024

Date



Signature

Vice President

Title



Civil & Environmental
Consultants, Inc.

120 Genesis Boulevard | Bridgeport, WV 26330 | www.cecinc.com