west virginia

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EXPRESSION OF INTEREST
ENGINEERING SERVICES REQUIRED
FOR THE MALLORY (GIBSON) PORTALS DESIGN PROJECT
RFQ NUMBER DEP15587

WEST VIRGINIA DEPARMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF ABANDONED MINE LANDS AND RECLAMATION
CHARLESTON, WEST VIRGINIA

TRIAD ENGINEERING, INC.
ST. ALBANS & MORGANTOWN
WEST VIRGINIA

RECEIVED
2014 NOV 14 P 3:17
PURCHASING DIVISION
STATE OF WV

TRIAD
Triad Engineering, Inc.

November 15, 2011

Purchasing Division
2019 Washington Street, East
Post Office Box 50130
Charleston, West Virginia 25305-0130

Subject: WVDEP Expression of Interest – DEP15587
Mallory (Gibson) Portals Design
Professional Engineering Design Services
Logan County, West Virginia
Triad Proposal No. 04-11-8247

Dear Evaluation Committee:

Triad Engineering, Inc., (TRIAD) is pleased to submit the attached "Consultant Qualification Questionnaire (CQQ)" and "Related Project Experience Matrix (RPEM)" in response to the Office of Abandoned Lands & Reclamation's Expression of Interest for professional engineering design services for the referenced project located in Logan County. We understand "full-service" design services are to be performed and will include civil, structural, geological and hydrological services. The services required will result in the development of engineering drawings, contract specifications and other contract documents required for the letting of construction.

TRIAD has provided engineering and related services required for the successful completion of AML projects since the WVDEP gained primacy of the Program from the Office of Surface Mining. As of this date, TRIAD has completed over 400 AML projects. These projects have involved all problem types encountered on abandoned mine lands projects.

As always, TRIAD will commit the necessary resources to meet the needs of the project. TRIAD continues to maintain and invest in staff and equipment necessary to provide comprehensive services for the successful completion of this project. We firmly believe the in-house resources available provide the State with the most favorable terms from a technical and cost standpoint.

We highly value our working relationship with AML personnel, and will continue to strive for excellence in all we do. We look forward to the next phase of the evaluation.

Sincerely,
Triad Engineering, Inc.

Dane H. Ryan
Marketing Coordinator

L. Lee McCoy, P.E.
Department Manager, Civil Engineering

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RELATED SERVICES

PAST ABANDONED MINE LAND PROJECTS

TRIAD

Triad Engineering, Inc.

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

Request for Quotation

RFQ NUMBER	PAGE
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ADDRESS CORRESPONDENCE TO ATTENTION OF:
CHUCK BOWMAN
304-558-2157

VENDOR
RFQ COPY
TYPE NAME/ADDRESS HERE

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

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
10/11/2011				

BID OPENING DATE: 11/15/2011 BID OPENING TIME 01:30PM

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

MALLORY (GIBSON) PORTALS DESIGN

EXPRESSION OF INTEREST

THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, IS SOLICITING EXPRESSIONS OF INTEREST FOR PROFESSIONAL ENGINEERING DESIGN SERVICES AND CONSTRUCTION MONITORING SERVICES AT THE MALLORY (GIBSON) PORTALS PROJECT IN LOGAN COUNTY, WEST VIRGINIA PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS.

BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THE STATE MAY DEEM THIS CONTRACT NULL AND VOID, AND TERMINATE SUCH CONTRACT WITHOUT FURTHER ORDER.

****** THIS IS THE END OF RFQ DEP15587 ****** TOTAL:

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE [signature] TELEPHONE 304-755-0721 DATE 11/15/11

TITLE BUSINESS DEVELOPMENT FEIN 550592364 ADDRESS CHANGES TO BE NOTED ABOVE

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

RFQ No. DEP 15587

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owned is an amount greater than one thousand dollars in the aggregate

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

"Debtor" means any individual, corporation, partnership, association, Limited Liability Company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

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

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

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: TRIAD ENGINEERING, INC

Authorized Signature: _____ Date: 11/15/11

State of West Virginia

County of Putnam, to-wit:

Taken, subscribed, and sworn to before me this 15th day of November 20 11

My Commission expires March 10, 20 19

AFFIX SEAL HERE

NOTORY PUBLIC Pamela E. Dosier

Official Seal
Notary Public, State of West Virginia
Pamela E. Dosier
105 Valley Bend
Scott Depot, WV 25560
My Commission Expires March 10, 2019

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

AML CONSULTANT QUALIFICATION QUESTIONNAIRE

PROJECT NAME	DATE (DAY, MONTH, YEAR)	FEIN
Mallory (Gibson) Portals Design DEP15587	November 15, 2011	550592364

1. FIRM NAME	2. HOME OFFICE BUSINESS ADDRESS	3. FORMER FIRM NAME
Triad Engineering, Inc.	4980 Teays Valley Road Scott Depot, WV 25560	N/A

4. HOME OFFICE TELEPHONE	5. ESTABLISHED (YEAR)	6. TYPE OWNERSHIP	6a. WV REGISTERED DBE (Disadvantaged Business Enterprise)
304.755.0721	1975	Individual Corporation Partnership Joint-Venture	YES NO

7. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE
4980 Teays Valley Road, Scott Depot, WV 25560 / (304) 755-0721 / John Meeks, P.G., L.R.S. - Branch Manager / 20
219 Hartman Run Road, Morgantown, WV 26505 / (304) 296-2562 / Lydia Work, L.R.S. - Branch Manager / 15

8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM	8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS
John M. Meeks, RPG, LRS - President 304.755.0721	William Gardner - Vice President 304.296.2562
Randy L. Moulton, P.E. Vice President 540.667.9300	Mark H. Reger, - Vice President 304.755.0721

9. PERSONNEL BY DISCIPLINE

14 ADMINISTRATIVE	__ ECOLOGISTS	2 LANDSCAPE ARCHITECTS	__ STRUCTURAL ENGINEERS
__ ARCHITECTS	__ ECONOMISTS	__ MECHANICAL ENGINEERS	34 SURVEYORS
__ BIOLOGIST	__ ELECTRICAL ENGINEERS	3 MINING ENGINEERS	18 DRILLERS & HELPERS
8 CADD OPERATORS	11 ENVIRONMENTALISTS	__ PHOTOGRAMMETRISTS	10 LABORATORY TECHS.
1 CHEMICAL ENGINEERS	3 ESTIMATORS	__ PLANNERS: URBAN/REGIONAL	7 LIC. REMEDIATION SPECS
16 CIVIL ENGINEERS	11 GEOLOGISTS	1 SANITARY ENGINEERS	
38 CONSTRUCTION INSPECTORS	__ HISTORIANS	15 SOILS ENGINEERS	
7 DESIGNERS	2 HYDROLOGISTS	__ SPECIFICATION WRITERS	201 TOTAL PERSONNELL
__ DRAFTSMEN			

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 7 Scott Depot / 2 Morgantown / 16 Triad

***RPEs other than Civil and Mining must provide supporting documentation that qualifies them to supervise and perform this type of work.**

10. HAS THIS JOINT-VENTURE WORKED TOGETHER BEFORE? ☐ YES ☐ NO **N/A**

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

NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE
N/A	N/A	____ Yes ____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE ____ Yes ____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE ____ Yes ____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE ____ Yes ____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE ____ Yes ____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE ____ Yes ____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE ____ Yes ____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE ____ Yes ____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE ____ Yes ____ No

12. A. Is your firm experienced in Abandoned Mine Lands Remediation/Mine Reclamation Engineering?

YES Description and Number of Projects: Triad has provided engineering and related services required for the successful completion of over 400 AML projects since the WVDEP gained primacy of the Program from the Office of Surface Mining. These projects have involved all problem types encountered on abandoned mine lands projects.

NO

B. Is your firm experienced in Soil Analysis?

YES Description and Number of Projects: Thousands of projects involving soil analysis have been performed since our inception in 1975. Our geotechnical materials testing labs are certified by the WVDOT/ DOH.

NO

C. Is your firm experienced in hydrology and hydraulics?

YES Description and Number of Projects: Triad has completed hundreds of projects in the areas of hydrology and hydraulics since our inception. Clients include the U.S. Army Corps of Engineers, WVDEP, and WVDNR.

NO

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

YES Description and Number of Projects: Triad typically subcontracts the aerial photography. However, Triad lays out the targets in the field and conducts the survey for establishment of horizontal and vertical control used to develop the final contour mapping. It is estimated that we have completed several hundred of these types of mapping projects since the inception of the firm in 1975.

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: Our firm has completed a total of 10 waterline design projects including: Norton Harding Jimtown, Alkol Phase 1 and 2, 14 Mile, 10 Mile, 9 Mile, 6 Mile, Gatlin Coal Waterline Extension, Mason Phase 1 and 2, and Moorefield. Numerous Phase I and Phase II water feasibility studies have also been conducted.

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:
McCoy, Larry L., Jr., P.E. Civil Department Manager/ Senior Engineer	2	11	3

Brief Explanation of Responsibilities

Mr. McCoy is the responsible engineer for numerous projects including civil site, utilities, roadways, and AML remediation. Mr. McCoy has performed design tasks related to these projects which have included: stream restoration, portal/shaft closure, hydraulic/hydrologic analysis, grading, project specifications, project plans, and other related tasks. Mr. McCoy also served as project manager on these and several related projects

EDUCATION (Degree, Year, Specialization)

BS/ 1996/ Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
ASCE, SAME	Registered Professional Engineer/2001/ WV

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:
Maurin, James (Jim) **Environmental Services Manager** **Northwestern Region**	0	30	0

Brief Explanation of Responsibilities: Mr. Maurin has joined Triad Engineering after more than 30 years of service with the WV Department of Environmental Protection. For Triad, Mr. Maurin will serve as Environmental Services Manager in the Morgantown, WV office. Mr. Maurin has extensive experience in environmental inspection and assessment, including more than 10 years of experience managing surface mine reclamation activities for the WVDEP.

EDUCATION (Degree, Year, Specialization)

B.S., 1975, Forest Resources Management

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
	OSHA Health & Safety Training (with annual 8 hour refresher courses); National Association of Corrosion Engineers (NACE) Certified Technician.

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:
Jalali, Parviz J., P.E. Geotechnical Services Manager/ Senior Engineer	16	29	0

Brief Explanation of Responsibilities

Mr. Jalali is responsible for geotechnical engineering analysis and design, preparation of geotechnical engineering reports, and is responsible for oversight of field geotechnical engineers and geologists. He has been the lead geotechnical engineer on projects involving hundreds of boreholes and thousands of feet of drilling. Mr. Jalali operates our in-house computers for slope stability analysis, quantity determinations, and computer aided design drafting (CADD).

EDUCATION (Degree, Year, Specialization)

BSCE/ 1973/ Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
WVACE WVSPE NSPE ASPE	Registered Professional Engineer/ 1987/ WV

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:
Spradling, Steven R., P.E. Senior Engineer	17	29	0

Brief Explanation of Responsibilities

Mr. Spradling has formulated and implemented subsurface investigations on landfills, roadway/bridges, and structures for coal mining facilities. Mr. Spradling's responsibilities include design and preparation of drawings and specifications. Mr. Spradling's strong background in the construction industry provides Triad with a reliable source in preparing bid documents and evaluating construction bids.

EDUCATION (Degree, Year, Specialization)

BSCE/ 1974/ Civil Engineering
MSCE/ 1992/ Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
WVSPE ASCE	Registered Professional Engineer/ 1993/ WV

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:
Krabill, Karen L., P.E. Geotechnical Services Manager/ Senior Engineer	15	15	0

Brief Explanation of Responsibilities

Ms. Krabill is responsible for the set-up and supervision of all aspects of geotechnical projects. Her specialties include design of safe and stable fill and excavated slopes. She is proficient in performing stability evaluations, hydraulic and hydrologic analysis and design, and coordination of subsurface explorations. Ms. Krabill's responsibilities on this project will include coordination of geotechnical team and final review of all stability related aspects of the project.

EDUCATION (Degree, Year, Specialization)
BS/ 1984/ Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
ASDA NSPE WVSPE	Registered Professional Engineer/ 1984/ WV MSHA Annual Certification, Surface Coal Mine Operations

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:
James R. "Bo" Criniti	2	2	2

Brief Explanation of Responsibilities
Mr. Criniti works under the supervision of a registered professional engineer in performing all facets of civil design and specification preparation including site development design, parking lot layouts, grading and drainage design and drainage studies. Other duties include permit application, retaining wall design.

EDUCATION (Degree, Year, Specialization)
B.A./ 1995 / Chemistry
B.S. / 2008 / Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
ASCE	E.I.T. / 2009 / WV

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:
Steven A. Clark	19	19	19

Brief Explanation of Responsibilities
Mr. Clark is currently the Survey Supervisor of the Surveying Department for the St. Albans office of Triad. Having managed and completed a wide variety of projects including cadastral boundary surveys, boundary records research, conventional horizontal and vertical control networks, geodetic control surveys, topographic surveys, hydrographic surveys and photogrammetry control surveys.

EDUCATION (Degree, Year, Specialization)
Survey and Mapping Course / 1972

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
WV Society of Professional Surveyors	P.S. / 2003 /WV Certified Black Hat Coal Miner / 1985 / WV 40 hr OSHA Hazwoper / OSHA / 2001

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		
NAME & TITLE (Last, First, Middle Int.) **Murphy, Steve L.** **ACADD Drafting Manager / Senior Designer**	YEARS OF EXPERIENCE	NAME & TITLE (Last, First, Middle Int.) **Murphy, Steve L.** **ACADD Drafting Manager / Senior Designer**	YEARS OF EXPERIENCE

Brief Explanation of Responsibilities: Mr. Murphy has over 20 years of experience in surveying with an emphasis in Computer Aided Design Drafting (CADD), and currently serves as a Senior Designer for Triad's Civil Engineering Department. He has been involved in many aspects of surveying, mapping, photo control, property survey, construction layout, and deep mine surveys. Mr. Murphy has also been responsible for the preparation of numerous site grading plans of varying size and magnitude, which routinely include earthwork volume calculations, drainage control plans and portal closure, and has served as the Senior Designer for a number of WVDEP - AML projects.

EDUCATION (Degree, Year, Specialization)

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:
Reger, Mark H. Drilling Services Manager	20	20	0

Brief Explanation of Responsibilities

Mark manages the drilling department in the St. Albans, WV office. He has over 20 years of experience relating to AML and related projects. Provides input to the civil design department regarding subsurface investigations for reclamation design. Provides administrative and management support for all AML projects. Mark has also managed the drilling contract for providing subsurface investigation for the AML in-house design team.

EDUCATION (Degree, Year, Specialization)
BA / 1974 / Education

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
AIA-WV Associate Member SAME CAWV	

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:
John Haynes Drilling Services Manager/ Civil Engineer / Mechanical Eng.	15	15	15

Brief Explanation of Responsibilities

Mr. Gardner has over 20 years of experience with Triad and 14 years experience as a Civil Engineer. Mr. Haynes has managed Triad's St. Albans and Morgantown drilling operations since 2008. His career has included drilling at numerous mining sites, many of them AML. His experience has included horizontal drilling and sampling in coal seams; deep mine mineral reserve projects; installation of monitoring wells and piezometers; core borings in sensitive environmental conditions such as streams and wetlands; mine floor evaluations; deep mine grout evaluations; along with geotechnical, environmental, and construction related projects.

EDUCATION (Degree, Year, Specialization)
BS/ 1996 / Mechanical Engineering
BS / 2006 / Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
	Certified Monitoring Well Driller, 2008, Professional Engineer / 2008 / WV

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:
Meeks, John M., P.G., L.R.S. Senior Geologist/Branch Manager Vice President	10	10	6

Mr. Meeks involvement with AML projects primarily has to do with AMD abatement and wetland design. He has provided environmental expertise on all water study feasibility projects. He has supervised field crews and assigned and evaluated analytical analysis. Mr. Meeks served as environmental geologist on the Chief Logan Park AMD project.

EDUCATION (Degree, Year, Specialization)
BS/ 1980/ Geology

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
West Virginia Chamber of Commerce Environmental Committee	Registered Professional Geologist/ 1992/ KY Registered Professional Geologist/ 1999/ WV

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:
Talkington, Ronald A. Survey Supervisor	0	26	0

Brief Explanation of Responsibilities

Mr. Talkington's field responsibilities associated with abandoned mine lands and reclamation mapping and design projects include construction and property surveys. He has experience in a wide range of survey-related project/client applications, including construction layout, pay item quantity calculation / verification, record research, property surveys and preparation of property plats and legal descriptions.

EDUCATION (Degree, Year, Specialization)
Various Surveying Courses

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
N/A	Professional Surveyor/ ????/ West Virginia MSHA Certified, Surface Coal Mine Operations

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:
Work, Lydia M., LRS Branch Manager/ Environmental Department Manager	0	5	0

Brief Explanation of Responsibilities

Brief Explanation of Responsibilities Ms. Work is currently Branch Manager of the Morgantown Office of Triad Engineering, Inc. In this capacity Ms. Work is responsible for managing staff and contract administration of projects undertaken by the office. She will also direct environmental work on this project, and use her significant background in water chemistry and environmental assessment to provide senior management and oversight.

EDUCATION (Degree, Year, Specialization)
BS (Honors)/ 1989/ Chemistry

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
Management Association West Virginia Manufacturers Association	Licensed Remediation Specialist, No. 148, WV OSHA 40 hour Certification MSHA Certified, Surface Coal Mine Operations

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:
Sutphin, Amanda M., P.E. Project Engineer	1	3	3

Brief Explanation of Responsibilities
Ms. Suthpin assists the Project Manager on wastewater and potable water projects, as well as general civil engineering projects. In this capacity, Ms. Sutphin facilitates planning, design and construction of civil and sanitary engineering projects in coordination with the client's expectations. Her duties have included design calculations and infrastructure modeling, estimating, pipeline design and permitting activities.

EDUCATION (Degree, Year, Specialization)
BS / 2004 / Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
	Registered Professional Engineer/ 2009/ WV

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:
Chambers, Harold W. (Chip) Survey Department Manager/Project	16	29	16

Brief Explanation of Responsibilities

Mr. Chambers has performed engineering, surveying and management services for numerous civil design, mine development, commercial, industrial, transportation and mine reclamation projects. Mr. Chambers office duties associated with AML reclamation projects involve mine map review and the planning, coordination, supervision, survey data processing and cost estimation for surveying services on design and mapping projects.

EDUCATION (Degree, Year, Specialization)

BS/ 1981/ Mining Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
WVALS	MSHA Annual Certification, Surface Coal Mine Operations

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		

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

Equipment Listing

Drilling Equipment:

Track Mounted Drill Rigs	1- Simco 5000 2- Davey DK 90 1- Davey DK 50 1- CME 55 1- CME 45
All Terrain Drill Rigs	1- CME 55 1- Mobile B53
Truck Mounted Rigs	3- Mobile B53 1- Mobile B52 1- Mobile B61 HDX
Skid Mounted Rigs	1- Diedrich 25
Transport Vehicles	4- Peterbilt Tandem Axle Tiltbeds 1- Mack Tandem Axle Tiltbed 2- Tractor Trailers Truck with Lowboy Trailers 4- Flatbed Trucks 1- Box Truck 15- 4WD ¾ Ton Support Trucks
Portable Drilling Equipment	2- Motorized Cathead / Tripod Units 2- Handheld Sampling Equipment 1- Pontoon Boat 1- Portable Barge

Miscellaneous equipment includes Dutch cone Penetrometer, Mobile Grout Pump (Chem-Grout), Steam Jenny (Whitco), Steam Jenny (Hotsy), 600 CFM Air Compressor (Sullair), various size utility trailers.

Protective Clothing & Equipment-Complying with EPA & OSHA Regulations
Air Purifying Respirators & Supplied Air Respirators

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

Equipment Listing

Continued – page 2

Drilling Tools:

- Hollow Stem Augers (2 ¼ " I.D., 3 ¼" I.D., 4 ¼" I.D., 6 ¼" I.D.)
- Continuous Flight Augers
- NQ Core Equipment
- AW Core Equipment
- Pressure Testing Equipment
- Water Pumps, Trucks and Tanks
- Shelby-Tube Samplers (2", 3" and 5" Diameter)
- Split-Spoon Samplers (2" and 3" Diameter)
- CME Continuous 5.0' Length Samplers
- Longyear Casing Advancer (HQ)
- Downhole Hammer

Laboratory Equipment:

- Triaxial Compression Machine
- Manual Proctor Devices (standard and modified)
- Automatic Proctor Hammer
- Turbidimeter
- Hydrometer
- pH Tester (soil & water)
- Electronic Scales
- Unconfined Compression Machine
- Atterberg Limits Devices
- California Bearing Ratio Devices
- Electrical Resistivity Devices
- Specific Gravity Devices (soils & aggregates)
- 2000 Degree Fahrenheit Oven
- Permeability Cells & Panels
- Consolidometers

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

Equipment Listing

Continued – page 3

- Electronic Manometers
- Concrete Compressive Strength Equipment
- Aggregate Shakers
- Sieve Shakers
- Sample Splitters
- Unit Weight Buckets
- Slake Durability Machine
- Gradation Sieves
- L.A. Abrasion Test Equipment
- Soiltest Loading Devices
- Sodium Sulfate Soundness Test Equipment
- Asphalt Test Equipment
- Relative Density Determination Device

Field Testing Equipment:

Soil

- Nuclear Moisture/Density Gauges
- Sand Cone Equipment
- Support Compaction Testing Equipment
- Digitilt Slope Indicator
- Pocket Penetrometers
- Hand Augers
- Static Cone Penetrometers

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

Equipment Listing

Continued – page 4

Concrete

- Air Meters (pressure & volumetric)
- Slump Cones & Accessories
- Windsor Probes
- Rebound Hammers
- Concrete Core Drills & Accessories
- Concrete Slab Profiler

Water

- Pressure Transducer / Data Logger & Associated Software
- pH Meters
- Turbidity Meters
- Iron Test Kits
- Dissolved Oxygen Meter
- Water Test Kits

Structural Steel, Bolt, and Paint

- Torque Wrenches
- Magnetice Gauges
- Tooke Gauges
- Wet File Gauges
- Sling Psychrometers
- Dye Test Kits

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

Equipment Listing

Continued – page 5

Environmental Testing

- OVA Meters (Trace Gas Analyzer by Flame Ionization)
- HNU Meters (Trace Gas Analyzer by Photoionization)
- Air-Stripping Unit for Water Treatment
- LEL/Oxygen Meter
- Draeger Pump and Assorted Tubes
- pH/ Conductivity/ Temperature Meters
- Hammer Drill and Associated Sampling Equipment

Field Laboratory Trailer

- Equipped as Required for Specific Projects

Surveying and Mapping Equipment

- Total Station Survey Instruments (Topcon, Lietz, Hewlett Packard, various models, 25 total)
- Wild T2 Precise Theodolite
- 2 Trimble 4000ssi Total Station GPS Recievers
  L1/ L2 dual frequency capability
  OTF (On The Fly) Initialization
  1.0MB static memory
- 2 Compact L1/ L2 frequency GPS Antenna w/ detachable geodetic groundplane
- 1 Pacific Crest 35w Data Transmitter
- 1 Pacific Crest 2w Data Reciever
- Trimble GPSurvey Software (v2.30b)
- Trimble TRIMNET Software (v92.11c)
- Dell Dimension XPS-D333 Computer w/ Dell Trinitron Monitor

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

Equipment Listing

Continued – page 6

- CTX – 300 MHz Laptop Computer
- Toshiba – 200 MHz Laptop Computer
- Thodolites (Dietzgen, 2 total)
- Engineer's Transits
- Data Collectors (SMJ – Construction V, HP 48 GX, Topcon, Leitz, various models, 20 total)
- Wild N3 Precise Level
- Automatic Levels (Lietz, Pentax, Wild, various models, 25 totall)
- Planimeters (4)
- Various Lengths of Engineer Chains, Precision Leveling Rods
- 12 ft. Boat with Trolling Motor
- Pontoon Boat

Computer Equipment:

Software

- MicroStation J
- MicroStation SE
- MicroStation V8 – (2) Network Administered
- Bentley View (41) Network Administered
- InRoads v8.3 – Network Administered
  - InRoads Bridge
  - InRoads Site
  - InRoads Storm & Sanitary
  - InRoads Survey

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

Equipment Listing

Continued – page 7

- AutoCAD 2005 Land Development Desktop – (2) Network Administered
- AutoCAD Civil Engineering Desktop – Network Administered
- AutoCAD 2005 – (2) Network Administered
- Site SelectCAD Package
- SurvCADD 2000 (2)
- Corel WordPerfect 2000 (21)
- Corel WordPerfect 2002 (20)
- Microsoft Office 97 Professional (21)
- Microsoft Office 2000 Premium (3)
- Microsoft Office XP Professional (8)
- Microsoft Office Professional 2003 (9)
- Microsoft Windows 98SE (21)
- Microsoft Windows 2000 Professional (3)
- Microsoft Windows XP Professional (17)
- Adobe Photoshop 7 (2)
- Adobe PageMaker 7 (2)
- Adobe Acrobat 6 Pro (21)
- Adobe PageMill (2)
- Adobe Illustrator 7 (2)
- Adobe InDesign 2 (2)
- Adobe GoLive 6 (2)
- Macromedia Studio MX (2)
- PCSTABL6/STED – Slope Stability
- UTEXAS2 – Slope Stability
- COGOPC+ - Surveying and Mapping

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

Equipment Listing

Continued – page 8

- CONTOUR+ - Surveying and Mapping
- HEC1 – Flood Hydrograph Package
- HEC2 – Water Surface Profiles
- DAMS2 – SCS Structure Site Analysis
- PONDPACK – Urban Hydrology and Detention Pond Design
- GEOPRO – Geotechnical Engineering Software
- LPILE Plus 4.0 for Windows – Pile Design
- SHAFT 4.0 for Windows – Caisson Design
- HELPMODEL – Hydrologic Evaluation of Landfill Performance
- FLOWMASTER 7.0 - Network Administered Pipe and Ditch Sizing
- WaterCAD for AutoCAD – 6.5 – Network Administered
- StormCAD for Windows
- CULVERTMASTER – Culvert Design and Analysis
- EXXON I – Pavement and Subbase Thickness Design
- Trimble GPSurvey Software (v2.30b)
- Trimble TRIMNET Software (v92.11c)
- Q & A Database
- Peachtree Accounting (time & billing)
- Protrax Axium accounting
- Laboratory Test Data Reduction Programs
- GeoSystems – Geotech Engineering Materials Testing
- gINT 6 – (7)
- Lotus 123 Spreadsheet

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

Equipment Listing

Continued – page 9

- HWY – Asphalt Pavement Thickness for Streets and Overlays
- HWLOAD – Asphalt Pavement Thickness for Heavy Wheel Loads
- Government Forms Software '98 (SF 254/255)
- Deed Plotter for Windows
- HEC-HMS
- HEC-RAS
- HEC-Storm Sewers
- Hydraflow Hydrographs
- Hydraflow Storm Sewers
- CP-4 Asphalt
- Server Software
    - Windows 2000 Professional Server
    - Microsoft Exchange 2000 Server
    - Symantec Anti-virus Server
    - Symantec Mail Security AVF filter for MS Exchange
    - Symantec Web Security
    - Veritas Backup Exec 9.1 for Windows Servers
    - TripLite Power Alert

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

Equipment Listing

Continued – page 10

Hardware

- PIII (400MHz – 1 GHz), 21 Stations total, up to 40GB Hard Drives
- P4 (1 GHz – 2 GHz) (14)
- P4 (2 GHz – 3.4 GHz) (5)
- Notebook Computers (6)
- Digital Cameras (3)
- Printers
  - HP Color LaserJet 4500
  - HP LaserJet 4100 (2)
  - HP LaserJet 4000
  - HP LaserJet 1300 (3)
  - HP LaserJet v4
- Plotters
  - HP DesignJet 1050C
  - HP DesignJet 750C (2)
- Fax Machines
  - HP 3100
  - Brother MFC4600
- Copiers
  - Xerox 5343C
  - Xerox Document Centre 440 DC
  - K&E CADD Copier
- Firewall
  - Cisco PIX 506E Security Appliance
- Compaq Proliant ML370 G2 Server
- TripLite UPS

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

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
Richardson Branch Complex Raleigh County, WV	WVDEP - AML&R 601 57th Street Charleston, WV 25304	Engineering Design	N/A	90%
Coaldale Refuse & Portals McDowell County, WV	WVDEP - AML&R 601 57th Street Charleston, WV 25304	Engineering Design	N/A	100%
Mullens Portals Project Wyoming County, WV	WVDEP - AML&R 601 57th Street Charleston, WV 25304	Engineering Design	N/A	10%
Elk Creek Portals Mingo County, WV	WVDEP - AML&R 601 57th Street Charleston, WV 25304	Engineering Design & Mapping - Deep Mine Reclamation, Portal Closure, Project Specifications, Water Quality/Treatment, Construction Monitoring	N/A	100%
Rumble (Stevens) Refuse & Portals Boone County, WV	WVDEP - AML&R 601 57th Street Charleston, WV 25304	Engineering Design - Surface/Deep Mine Reclamation, Portal Closures, Project Specifications, Geotechnical Evaluations, Construction Monitoring	N/A	100%
Belington Portals & Drainage Logan County, WV	WVDEP - AML&R 601 57th Street Charleston, WV 25304	Engineering Design - Surface/Deep Mine Reclamation, Portal Closure, Project Specifications, Water Quality/Treatment, Geotechnical Evaluations, Construction Monitoring	N/A	100%

Mine Subsidence Investigations, Engineering Throughout WV	WV Board of Risk & Insurance Management 4501 MacCorkle Avenue South Charleston, WV 25309	Mine Subsidence Investigations, Engineering Consulting Services	N/A	Ongoing Contract
Asbestos Inspections, Throughout WV	WVDOT / DOH 1900 Kanawha Blvd., East Charleston, WV 25305	Asbestos Inspections	N/A	Ongoing Contract
WVDOT / DOH Testing & Inspection, Throughout WV	WVDOT / DOH 1900 Kanawha Blvd., East Charleston, WV 25305	Testing and inspection services for WVDOT/DOH projects	N/A	Ongoing Contract
WVDOT / DOH Geotechnical & Drilling Services, Throughout WV	WVDOT / DOH 1900 Kanawha Blvd., East Charleston, WV 25305	Geotechnical engineering and drilling services for WVDOT/DOH projects	N/A	Ongoing Contract
WVDOT / DOH Environmental & Drilling Services, Throughout WV	WVDOT / DOH 1900 Kanawha Blvd., East Charleston, WV 25305	Environmental consulting services and/or related drilling services for WVDOT/DOH projects	N/A	Ongoing Contract
Indefinite Delivery / Indefinite Quantity Contract - Surveying & Mapping, Various Locations	US Army Corps of Engineers Huntington District 502 Eighth Street Huntington, WV 25701	On-call surveying and mapping services for USACE - Huntington District projects	N/A	Ongoing Contract
Probable Hydrologic Consequences of Mining, Various Sites in WV and PA.	Various Mining Clients in WV and PA	Determine the potential impacts of mining-related activities on the hydrologic balance. Evaluate hydrologic and geochemical data; determination of potential for adverse hydrologic consequences; and recommendations for avoidance of adverse impacts.	N/A	Ongoing

America Church Bridge Replacement, Mingo County, WV	WVDOT / DOH 1900 Kanawha Blvd., East Charleston, WV 25305	Highway / Bridge Design	N/A	100%
FAA Improvement Projects (Various), Charleston, WV	Central WV Regional Airport Authority 100 Airport Road Charleston, WV 25311	Civil Engineering / Surveying	$3-5M	90%
New Haven Water / Sewer Line Extension, New Haven, WV	Town of New Haven PO Box 217 New Haven, WV 25265	Water / Sewer Line Extension Design	$1-3M	90%
Roaring River Development, Fayette County, WV	Land Resources Co. 2000 River Edge Pkwy. Atlanta, GA 30328	Civil Engineering, Site Design, Geotechnical Engineering, Drilling	N/A	20%
Mammoth Coal Handling Facility, Kanawha County, WV	Mammoth Coal Company PO Box 150 Cannelton, WV 25036	Geotechnical Engineering, Drilling, QA/QC, Laboratory Testing Services	N/A	70%
Justice Mine Exploration, Boone County, WV	Independence Coal HC78, Box 1800 Madison, WV 25130	Drilling & Geological services	N/A	90%
Marion County Landfill Marion County, WV	WVDEP / DLR / LCAP 601 57th Street, SE Charleston, WV 25304	Landfill Closure Design - Site Characterization study, leachate management, closure cap design and QA/QC. Environmental / Geological services, Drilling, Surveying & Mapping, Geotechnical & Civil Engineering & Design, QA/QC, Laboratory Testing	N/A	30%

Morgan County Landfill, Morgan County, WV	WVDEP / DLR / LCAP 601 57th Street, SE Charleston, WV 25304	Landfill Closure Design - Site Characterization study, leachate management, closure cap design and QA/QC. Environmental / Geological services, Drilling, Surveying & Mapping, Geotechnical & Civil Engineering & Design, QA/QC, Laboratory Testing	N/A	30%
Heartland Facility Additions Kingwood, Keyser & Rainelle, WV	Healthcare & Retirement Corporation of America, Inc. 7361 Calhoun Place, Suite 300 Rockville, MD 20855	Civil Engineering Site Design, Geotechnical / Subsurface Drilling & Exploration, Environmental assessment, Surveying & Mapping, QA/QC/Testing for additions to healthcare facilities	N/A	95%
TOTAL NUMBER OF PROJECTS:		TOTAL ESTIMATED CONSTRUCTION COSTS: $		

16. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS SERVING AS A SUB-CONSULTANT TO OTHERS					
PROJECT NAME, TYPE AND LOCATION	NATURE OF FIRMS RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CONSTRUCTION COST	
				ENTIRE PROJECT	YOUR FIRMS RESPONSIBILITY
502 Junction Substation, Mt. Morris, PA & PREXY Substation, Cannonsburg, PA	Preparation of an ALTA/ACSM Land Title Survey for Kenny Construction Co.	Allegheny Energy Service Co. 800 Cabin Hill Dr., Greensburg, PA 15601	2011	N/A	On-going project
Longview Power Plant Monongalia County, WV	Geotechnical / Subsurface Investigations, Drilling & Sampling, Surveying & Mapping, QA/QC, Laboratory Testing for Siemens Power Generation and Aker Construction	GenPower Holdings, L.P. 1040 Great Plain Ave., Needham, MA 02492	2010	$1,820,000,000	Ongoing; $750,000+
Raleigh Street Extension Berkeley County, WV	Geotechnical Engineering, Drilling & Sampling, Surveying & Mapping Services for PB Americas, Inc.	WVDOT / DOH 1900 Kanawha Blvd., East Charleston, WV 25305	2009 - 2010	N/A	Ongoing project
Nuttallburg Mine Complex, New River Gorge, WV	Geotechnical Engineering, Drilling, Lab Testing, Surveying & Construction Management	National Park Service PO Box 246 Glen Jean, WV 25846	2010	N/A	$100,000
Sawmill Village Snowshoe, WV	Drilling & Sampling, Geological Services	Snowshoe Mountain Resort 10 Snowshoe Drive Snowshoe, WV 26209	2009	N/A	$12,000

17. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM WAS THE DESIGNATED ENGINEER OF RECORD				
PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	YEAR	CONSTRUCTED (YES OR NO)
Tibbs Run (Perine) Landslide Remediation Project (Drilling, remedial design package, relocation of utilities, erosion control, construction documentation, revegetation)	WVDEP - AML&R 105 South Railroad St. Philippi, WV 26416	N/A	2008	Yes
Fairmont (Smith) Subsidence (Mining assessment, site reconnaissance, field & subsurface investigations, drilling, field surveying & mapping, remedial design package, construction documentation, pre/post construction meetings, construction monitoring)	WVDEP - AML&R 105 South Railroad St. Philippi, WV 26416 WV Board of Risk & Insurance Management 4501 MacCorkle Avenue South Charleston, WV 25309	N/A	2009	Yes
Jessop Portals Jessop, WV	Friends of the Cheat 109 South Price Street Kingwood, WV 26537	N/A	2007	Yes
Federal No. 2 Mine Refuse Area Refuse Sampling & Vegetation Analysis Bula, WV	Peabody Energy Miracle Run Road Bula, WV	N/A	2008	Yes
Grafton Coal Company Mt. Storm, WV	NedPower II, LLC Chantilly, VA 20151	N/A	2008	Yes
HIGHLANDS AT BLACKWATER LAND DEVELOPMENT PROJECT TUCKER COUNTY, WV	BLACKWATER INVESTMENT GROUP 2615 WINDRIDGE DRIVE DOYLESTOWN, PA 18902	N/A	2007	Yes
Jimtown Tipple Lumberport, WV Geotechnical Evaluation	WVDEP AML & R 105 S. Railroad St. Suite 201 Philippi, WV	N/A	2004	Yes

Vens Run Landslide #2 Jane Lew, WV Geotech/Drilling/Surveying	WVDEP AML & R 105 S. Railroad St. Suite 201 Philippi, WV	N/A	2004	Yes
Mettiki Coal, Test Drilling for Monitoring Well Development over a Proposed Deep Mine,Garrett County, MD	Mettiki Coal Company 293 Table Rock Road Oakland, MD 21550	N/A	2004	Yes
Coastal Coal, Environmental Assessment of Brooks Run Mining Properties, Braxton County, WV	Coastal Coal Company 25 Little Birch Road Sutton, WV 26601	N/A	2003	Yes
Mettiki Coal, Rock Coring & Piezometer Installation Over Longwall Mine in Grant Co, WV	Mettiki Coal Company 293 Table Rock Road Oakland, MD 21550	N/A	2005	Yes
Fairmont General Hospital Wellness Center Marion County, WV Geotech./Mining Assessment	Fairmont General Hospital Locust Avenue Fairmont, WV	N/A	2006	Yes
WVU Alumni Center Monongalia County, WV Geotechnical Evaluation	West Virginia Alumni Assoc. Erickson Alumni Center Morgantown, WV	N/A	2004	Yes
Rosemont Highwall & Portals Barbour County, WV Design Regrading & Drainage	WVDEP AML & R 105 S. Railroad Street Suite 201 Philippi, WV	N/A	2002	Yes
Duffy St./Van Rufus Drive Subsidence Project Shinnston, WV Reclamation Design	WVDEP AML & R 105 S. Railroad Street Suite 201 Philippi, WV	N/A	2003	Yes
Suncrest Towne Centre Monongalia County, WV Geotechnical Eval./QA/QC	705 Development Group Suncrest Village Morgantown, WV	N/A	2004	On-Going

Westwood & Cass Elementary Schools, Morgantown High, Clay Batelle High, Mason-Dixon Elementary Monongalia County, WV Geotechnical/Surveying	Monongalia County Board of Education 13 S. High Street Morgantown, WV	N/A	2004	Yes

18. 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
Lincoln Hall Dormitory, WVU Evansdale Campus Civil, ESA, testing	West Virginia University, Planning Design & Construction Morgantown, WV 26506	Project cost $14,500,000	2006	yes	American Campus Communities, 805 Las Cimas Parkway Ste 400 Austin TX 78746
West Virginia Univ. Admin Bldg & Parking Bldg, Morgantown WV; geotech/drilling/foundation design	West Virginia University, Planning Design & Construction Morgantown, WV 26506	100,000	2004	Yes	March Westin Co., 360 Frontier St., Morgantown WV 26505
Waterfront Hotel & Conf Center, Morgantown WV Geotech/drilling/ testing	Platinum Properties, 990 Elmer Prince Dr Morgantown, WV 26505	Project cost $32,000,000	2004	Yes	March Westin Co., 360 Frontier St., Morgantown WV 26505
University Towne Centre, Retail Shopping Complex, Granville WV; testing, surveying, geotech, drilling	Ideal Co. (Cracker Barrel) 8313 N. Kimmel Rd, Clayton OH 45315; Complete Const.(Olive Garden), 11700 Commonwealth, Louisville KY 40299	Unknown	2007	Various retail stores built; development on-going	CONSOL Energy/CNX Land Resources, 4000 Brownesville Rd., South Park PA 15129
Monongalia General Hospital Addition Surveying Services	Monongalia Health Systems, Inc., 1200 J.D. Anderson Drive, Morgantown, WV 26505	Project Cost: $92,000,000	2008	Yes	Turner Construction Co. Two PNC Place 620 Liberty Avenue, 27th Floor Pittsburgh, PA 15222
Engineering Sciences Building, East Wing Addition Surveying Services	West Virginia University, One Waterfront Place, Morgantown, WV 26506	N/A	2008	Yes	TEDCO Construction Co. TEDCO Place Carnegie, PA 15106
Mon-Fayette Expressway Surveying, QC / Testing Services	WV Dept. of Transportation Building 5, 1900 Kanawha Blvd., East Charleston, WV 25305	N/A	Ongoing	Yes - ongoing	Mosites Construction Co. 4839 Campbells Run Road Pittsburgh, PA

					15205

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

Triad Engineering, Incorporated (TRIAD) is a full service engineering firm specializing in the areas of geotechnical, civil and mining engineering and design, environmental assessment, surveying and mapping, construction monitoring, subsurface exploration, and laboratory testing, among other earth science disciplines. Our current work force includes civil, geotechnical and mining engineers, environmental scientists, geologists, hydrologists, chemists, surveyors, trained Computer Added Design Drafting (CADD) draftsmen, field and laboratory technicians, drillers and support personnel.

TRIAD was founded in Morgantown, West Virginia (WV) in 1975 by three principals who molded the firm based on their belief that if the highest standards were maintained throughout all aspects of the company, they would earn their clients' respect, therefore ensuring the firm's continued growth. Today, TRIAD has a staff of over 200 full-time employees and six office locations in WV, Pennsylvania, Maryland and Virginia. By providing an array of competent services, using modern equipment, and maintaining a well-trained professional staff, TRIAD has maintained the founders' philosophies and proven that customer satisfaction results in good relationships and repeat business.

Furthermore, TRIAD is an employee-owned company with an active Board of Directors. Current Officers and Board Members are:

- Chief Executive Officer (CEO) – John Meeks, PG, LRS
- Senior Vice President – Randy Moulton, PE
- Chief Financial Officer (CFO) – Tina McPhail
- William Gardner
- Dan Hamric, PE
- Robert Holstead, PE
- Parviz Jalali, PE
- David Moore
- Brad Reynolds, PE

TRIAD has successfully performed thousands of projects utilizing its professional expertise. TRIAD employees pride themselves on their ability to provide the firm's clients with top-quality work that is on schedule and within budget. Our company is small enough to be responsive to the needs of our customers and large enough to remain at the forefront of scientific solutions.

We are extremely proud of our performance under past contracts, including those we have held with the WVDEP. As of this date, more than 400 AML&R projects have been undertaken by TRIAD. The vast majority of these projects have been successfully completed on time and within the proposed cost estimate. As always, TRIAD will commit the necessary resources to meet the needs of this project.

20. The foregoing is a statement of facts.

Signature: _____ Title: Marketing Coordinator | Date: 15 November 2011

Printed Name: Dane H. Ryan

TRIAD ENGINEERING, Inc

I. INTRODUCTION

TRIAD ENGINEERING, INC., (TRIAD) proposes to perform surveying, geotechnical and other engineering services in order to develop engineering drawings, contract specifications and other contract documents as may be required for the letting of construction for the Thorpe Refuse Pile Project. Factors that make TRIAD a strong candidate for consideration include:

- Past experience & complete familiarity with AML&R projects
- In-house capabilities
- Experienced professional and support personnel
- Totally employee owned and operated West Virginia firm
- Strong geotechnical background
- Outstanding laboratory facilities
- Expeditious & economical mobilization of drilling rigs, equipment and personnel
- Experience in major design projects

TRIAD has completed over 400 projects for the DEP under various contracts. Each project has involved various areas of expertise and problem types. In addition to DEP related projects, TRIAD has successfully completed major design projects for other government agencies, large coal mining concerns, chemical manufacturers, developers, and various other clients. TRIAD'S direct responsibilities in these projects have included, but were not limited to:

- Permit Applications
- Surveying and Mapping
- Geotechnical Investigations and Analyses
- Hydrology and Hydraulics
- Design Development and Drawings
- Construction Specifications
- Construction Bid Packages
- Construction Observation and Monitoring
- Construction Management

II. General Experience and Capabilities

General Information

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

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

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

TRIAD currently includes a staff of more than 200 personnel located in seven offices. Our personnel include chemical, civil, environmental, geotechnical and mining engineers, as well as geologists and hydrogeologists, biologists, chemists, environmental scientists, planners, landscape architects, natural resource specialists, regulatory compliance specialists, permitting engineers, risk assessors and health and safety specialists. Our technical support and administrative staff includes designers, draftsmen, surveyors, technicians, drillers, construction inspectors and clerical personnel. Most of our professional and technical staff have been with the company for many years. We pride ourselves on a very low turnover rate, which adds to continuity and enhances the level of productivity and experience afforded by TRIAD.

Surveying and Mapping

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

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

TRIAD currently can field up to 15 experienced 2 and 3 man survey parties. Personnel making up these parties consist of licensed land surveyors, experienced instrument persons and rodmen. As can be seen on Block 14 of the WVDEP/AML Consultant

Confidential Qualification Questionnaire (CCQQ), TRIAD possesses the most modern equipment available to perform surveying services to support the engineering design required for this project.

Subsurface Investigation

TRIAD currently maintains fifteen rotary drill rigs outfitted for geotechnical and environmental investigation work. All rigs and support trucks are outfitted for services which may be required on any project. Drilling equipment includes samplers, casing, drill rods, coring bits, piping, pumps and various drilling tools. Most of our rigs are mounted on ATV, tracked and 4WD carriers. Skid mounted rigs are also available to permit gaining access to difficult locations without the need for dozer assistance. Air purifying and supplied air respirators are maintained in-house for drilling programs involving burning refuse where concentrated levels of carbon monoxide may be encountered. Our drill crews, field geologists and support personnel have received OSHA and MSHA safety training for work on hazardous sites, and are certified monitoring well drillers. TRIAD employs a full time corporate safety officer responsible for ensuring the safety of our employees. TRIAD has performed drilling activities on an AML&R project where levels of CO were in excess of 1900 parts per million. Our drilling personnel are experienced in all phases of exploration work which may be required on this project.

Typical types of project for which we have provided drilling services include:

- Highways, bridges and haulroads
- Railways and sidings
- Refuse piles
- Burning refuse investigations
- Dams and impoundments
- Valley fills
- Landslides
- Subsidence investigations
- Mile relatedness investigations
- Coal preparation plants
- Commercial structures
- Residential structures

- Pavement design and evaluations
- Instrumentation installation
- Groundwater monitoring wells & piezometers
- Leaking underground storage tanks
- Landfills
- Hazardous waste investigations
- Special sampling and testing

Laboratory Services

Geotechnical testing and analysis has been a major discipline of TRIAD since our inception. In addition, we have facilities and equipment to perform various chemical and analytical testing. Fully equipped geotechnical testing laboratories are maintained in both our Morgantown and Scott Depot offices. An outline of our in-house laboratory and field testing capabilities is as follows:

Geotechnical and Materials Testing

- Moisture content determinations
- Grain size analysis
- Plastic limit determinations
- Liquid limit determinations
- Shrinkage limit
- Slake durability testing
- Shear strength determinations
- Consolidation characteristics
- Permeability testing
- Compaction testing
- Soundness testing
- Specific gravity determinations
- CBR determinations
- Unit weight determinations

Chemical and Analytical Testing

Soil Analysis

- ph (field)
- ph (lab)

Water Analysis

- Temperature
- ph
- Specific Conductance
- Flow
- Iron Content

Design Engineering and Contract Document Preparation

TRIAD has extensive experience in design engineering and preparation of construction contract drawing on projects for the WVDEP/AML&R, OSMRE as well as similar projects for private concerns.

III. QUALIFICATIONS OF PERSONNEL

TRIAD now maintains a staff of over 200. The professional staff includes over 60 individuals with college degrees in the scientific and technical area of civil/geotechnical engineering, mining engineering, environmental engineering, geology, hydrogeology, and soil science/agronomy. Many of the professional staff have advanced degrees and are registered professional engineers, geologists or surveyors. The technical support and administrative staff includes engineering technicians, draftsman, surveyors, drillers, construction inspectors and clerical personnel. Most of our professional and technical staff have been with the company for many years. We pride ourselves in a very low turnover rate which adds to continuity and enhances the level of productivity and experience afforded by our company.

Since the company was founded in 1975, our personnel have successfully completed increasingly complex and difficult projects. Services include geotechnical engineering and general civil engineering design projects related to abandoned mine lands, mining and environmental engineering.

IV. Corporate Specialized Experience

TRIAD has provided a wide range of services on coal related projects since the firm began operations more that thirty years ago. With this extensive experience in geotechnical, design engineering, surveying and mapping, and contract document preparation, we are expertly qualified to provide these services for the abatement of problems arising from abandoned mine lands. We maintain in-house expertise and capabilities for all phases of the abandoned mine lands program which require services in surveying and mapping, subsurface investigation, drilling, testing and geotechnical engineering, design engineering, construction drawings and specifications, contract document preparation and other related technical and administrative duties associated with the successful completion of a design/construction project.

V. Management Plan, Location of Facilities & Work Approach

MANAGEMENT PLAN

Resource Allocation & Location of Facilities: As indicated in other sections of this response, TRIAD has the staff, equipment and other resources to complete most AML&R projects totally in-house. The location of our offices and laboratories in Scott Depot and Morgantown gives us ready access to both the northern and southern coalfields of West Virginia. TRIAD'S staff of more than 200 individuals, our support equipment and facilities have been assembled to provide geotechnical, design, and other engineering related services to our clients. Our professional staff has extensive experience on AML&R, or similar design projects, and is well qualified to perform the work. If awarded this project, we are committed to allocating the personnel and resources required to complete the work in a timely, competent, and cost effective manner.

Management and Project Team Organization:

TRIAD will assign a project manager who will be responsible for the overall management of the project. The project manager will schedule a site visit with the AML&R Project Manager to familiarize himself with the work requirements and prepare a work plan for review. Our project manager will meet with AML&R personnel, as required, to develop a complete understanding of the work directive and to answer any questions concerning

the proposed work approach. The project manager will review the project requirements and assign team members and allocate resources needed for timely completion of the project.

Upon receipt of authorization to proceed with a project, the project manager will be responsible for daily execution and coordination of all phases of the project. He will supervise other staff members working on a project, and coordinate all field and laboratory activities. The project manager will also be responsible for maintaining liaison with AML&R personnel and, when required, issuing periodic progress reports.

As the project progresses, the project manager will periodically meet with AML&R personnel to review progress, discuss problems, and evaluate various corrective alternatives. Input from AML&R personnel will be actively solicited on each project.

Schedule and Budget Control:

The project manager will be responsible for monitoring and controlling project schedules and budget. As the work progresses, the project manager will evaluate progress on a weekly basis and compare the progress to the established work schedule. If these reviews indicate that a schedule problem is developing, the project manager will meet to discuss the problem and explore options for correcting the situation. If circumstances develop that will make it impossible to maintain the original schedule, AML&R personnel will be immediately informed of the situation and a mutually satisfactory schedule adjustment will be made.

Personnel time and expense charges are maintained and allocated to projects on a weekly basis. Using this data, together with his knowledge of exploration, testing and subcontractor costs, the project manager will review project budget status on a weekly basis. The percent of work completed will be compared to the percent of costs incurred in order to quickly identify any budget problems which may develop. If potential budget problems are identified, they will be evaluated by the project manager. If measures to eliminate potential cost overruns cannot be eliminated, AML&R personnel will be immediately informed of the problems and causes. A mutually agreeable budget will be prepared or the scope of work will be revised to conform to the original budget, based on the nature of the problem.

WORK APPROACH

Work Directive and Initial Planning:

Upon notice to proceed, our project manager will review the work directive, discuss the project with AML&R personnel and visit the site to become familiar with the project and work requirements. Available site information and data, such as results of previous borings, geologic reports, or old mine maps will be reviewed. Based on this information, the project manager will plan the scope of work required including: surveying and mapping, subsurface investigation and laboratory analysis.

Surveying and Mapping:

Prior to undertaking any surveying, our project manager will meet with our surveying staff to determine the extent and required accuracy of the work involved. We will then determine if existing mapping such as U.S.G.S., or Corps of Engineers, Highway Department or other utility mapping is available for the area. Should satisfactory existing mapping be available, we will utilize this (along with such location or "fill-in" surveys as are necessary) in order to minimize the project cost.

Subsurface Investigation:

The project manager will determine the best suited equipment, personnel, and access routes for drilling equipment, such that drilling work can begin as quickly as possible. The results and progress of the drilling work will be monitored on a continuing basis by the project manager to determine that the needed information is being obtained. When necessary, the drilling program will be revised as it progresses to account for unanticipated conditions. The need for special drilling procedures, observation wells, piezometers, slope inclinometers, angle borings, and hand sampling techniques, etc. will be evaluated by the project manager.

Laboratory Testing:

Testing requirements for the project will be developed by our project manager or a designated member of the project team. Since practically all of the testing will be performed in-house, the results can and will be evaluated on an on-going basis. This will permit us to eliminate unneeded tests before they are performed and to revise the

testing program to better provide data which will be useful for project evaluation and design.

Design Development Report:

After the field and laboratory investigations are complete, an engineering report will be prepared and submitted to the DEP for review and comment. The report will contain:

1. Project description
2. Boring location plan and topographic mapping
3. Boring logs
4. Description of subsurface conditions including soil, bedrock and groundwater
5. Laboratory test results
6. Recommended alternative(s)
7. Special recommendations such as potential environmental effects of the design, damage to adjacent property, loss of use, and future effects.

After review and approval, TRIAD will proceed with preparation of construction documents including Drawings, Specifications, and a Detailed Cost Estimate.

Design Drawing and Specifications:

Design drawings and specifications will be prepared to meet the site specific criteria for the project. The drawings will accurately reflect the site conditions and depict the proposed work in a clear and understandable manner. The drawing packages will as a minimum include a site plan, cross sections, and details as necessary to define the scope of work. Detailed technical specifications will be prepared for general working conditions as well as each work item. The specifications will be the contractor's guide to the work and will set the guidelines for quality and materials to be used in the construction. All work will be reviewed and certified by one of our registered professional engineers.

Construction Cost Estimate:

Upon completion of the final plans and specifications, the expected cost of the work will again be evaluated. This cost evaluation will be made using unit cost data from various sources (i.e. previous bids on similar projects, information solicited from contractors,

Departments of Highways, construction cost data, Means unit cost, etc.) The final cost estimate will be discussed with AML&R personnel and, whenever necessary, revisions to the plans and specifications will be made to bring the estimated costs in line with the project budget. We expect to coordinate our efforts with the DEP throughout the project so that the need for final revision will be minimal.

Project Meetings:

Our engineers will meet with AML&R representatives on an as-needed basis during the planning and design phases of the project to assure an understanding of the work scope for that project and to keep the DEP informed of our progress and results. Upon completion of the design phase, our personnel will be available to attend pre-bid and pre-construction meetings to answer questions concerning the design and clarify the intent of the drawings and specifications.

Project team personnel will also be available to make periodic inspections during construction and do make a final inspection upon completion of construction. Summary reports of our inspections will be prepared and submitted to the DEP. These reports will summarize our observations of construction activities and progress and will indicate any problems which are observed. If construction problems or deficiencies are observed, recommended solutions will be presented in the inspection reports.

TRIAD ENGINEERING, Inc

Related Services

QA/QC, Construction Monitoring, Highway Inspection

Construction monitoring services provided by Triad Engineering include soil, concrete, aggregate, asphalt, steel, welding, and paint. Triad maintains a staff of engineering technicians who are certified by state-specific highway and materials departments, ACI, FAA, and others. Triad's engineering technicians work under the close supervision of registered professional engineers.

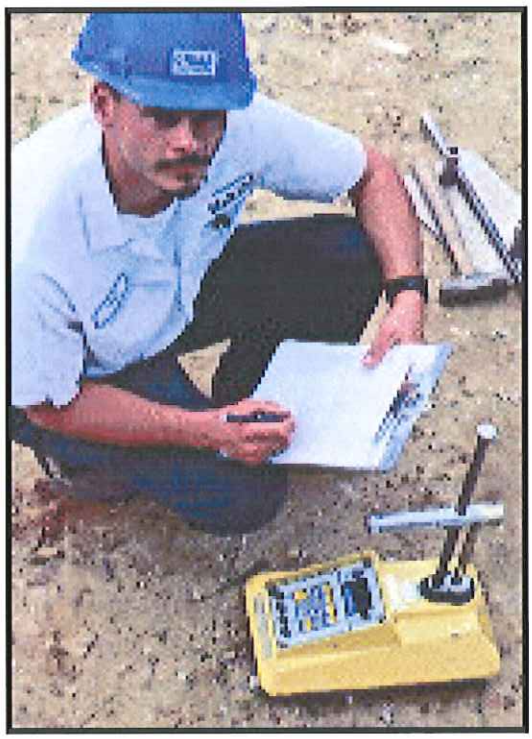
Senior level technicians are skilled in interpreting design drawings, as well as typical construction inspection and testing. Services provided on these projects have included: testing of compacted fill with a nuclear moisture density gauge, documentation of construction personnel hours and equipment utilized, quantity determinations, submittal of daily and weekly reports, interpretation of technical specifications, inspection of liner installation, and construction recommendations. Triad routinely provides technicians with OSHA and/or MSHA certification.

Services Include:

- Field Quantity Estimates and Verification
- Inspection of Deep Foundations, including Driven Piles, Caissons, and Auger Cast Piles
- Footing Inspection and Bearing Capacity Evaluation
- Field Concrete Testing and Sampling, including Coring, Windsor Probe, and Rebound Hammer Testing

TRIAD ENGINEERING, Inc

QA/QC, Construction Monitoring, Highway Inspection



Services continued:

- Batch Plant Inspection
- Steel Inspection, including Bolt Torque,
- Visual Weld Inspection, and Dye Testing
- Penetrant Testing
- Paint Thickness (Wet and Dry Film)
- Water Testing, including pH, Iron, and Turbidity
- Fireproofing Inspection
- Floor Flatness Testing
- In-place Density Testing
- Grade Checking
- Nuclear Moisture Density Gauge Testing

Abandoned Mine Lands
Completed Projects – 1992 to Present
Triad Engineering
St. Albans and Morgantown, West Virginia

YEAR	PROJECT NAME	LOCATION	SERVICES PROVIDED
1992	Jim's Branch Refuse Piles	Wyoming Co.	Surveying, Mapping, CADD
	Newsome Branch Refuse	McDowell Co.	Surveying, Mapping, CADD
	Red Hollow Burning Refuse	Mercer Co.	Surveying, Mapping, CADD
	Turnhole Branch	McDowell Co.	Surveying, Mapping, CADD
	Newett (Crum) Burning Refuse	Logan Co.	Drilling & Sampling, Temperature Probes
	Campbell's Creek (Hodge) Landslide	Kanawha Co.	Drilling, Geotechnical Analyses
	Decota (Persinger) Landslide	Kanawha Co.	Drilling, Geotechnical Analyses
	Beckley (Long) Subsidence	Raleigh Co.	Drilling, Geotechnical Analyses
	Tuppers Creek (Turley) Drainage	Kanawha Co.	Drilling, Geotechnical Engineering
	Kelly's Creek Portals, Burning Refuse	Kanawha Co.	Surveying, Mapping, CADD
	Welch (Moore) Vertical Opening	McDowell Co.	Drilling, Engineering, Temperature Probes
	Milburn Burning Refuse	Kanawha Co.	Drilling, Surveying, Engineering
	Whitesville (Averson) AML	Boone Co.	Drilling & Sampling
	Kelly's Creek Road Burning Refuse	Kanawha Co.	Drilling, Surveying, Engineering
	Manila Creek (Bryant) Landslide	Putnam Co.	Drilling, Surveying, Engineering
	Hilltop (Logan) Subsidence	Fayette Co.	Drilling, Subsidence Investigation
	Taylorville (Garten) Drainage	Mingo Co.	Drilling & Sampling
	MacArthur Subsidence	Raleigh Co.	Drilling, Subsidence Investigation
	Carbon (Williams) Burning Refuse	Kanawha Co.	Drilling & Sampling, Temperature Probes
	Davis Creek (Larabee) Subsidence	Kanawha Co.	Drilling, Subsidence Investigation
	Chapmanville AML	Logan Co.	Drilling & Sampling
	Dry Branch Burning Refuse	Kanawha Co.	Drilling, Geologic Investigation
	Henline Subsidence	Harrison Co.	Drilling, Subsidence Investigation
	Pauley Burning Coal Seam	Kanawha Co.	Drilling, Subsidence Investigation

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YEAR	PROJECT NAME	LOCATION	SERVICES PROVIDED
1992	Stevenski Subsidence	Marion Co.	Subsidence Investigation
	Albert Highway	Tucker Co.	Investigation, Design, Re-grade, Drainage, Portals
	A.S.&K. Bond Forfeiture	Monongalia Co.	Surface & Deep Mine Drainage Investigation
	F & M Coal	Preston Co.	Surveying, Mapping, CADD
	Moran Subsidence	Marion Co.	Subsidence Investigation
	Monongah (Mayo) subsidence	Marion Co.	Subsidence Investigation
	Mount Claire Refuse	Harrison Co.	Investigation and design, Refuse, Drainage, Re-grade
	Fairmont (Shipco) Subsidence	Marion Co.	Subsidence Investigation
	Farmington (Gum) Subsidence	Marion Co.	Subsidence Investigation
	Rivesville (Straight) Subsidence	Marion Co.	Subsidence Investigation
	Morgantown (Fox) Subsidence	Monongalia Co.	Subsidence Investigation
	Fairmont (Parks) Subsidence	Marion Co.	Subsidence Investigation
1993	Moundsville (Oliver) Subsidence	Marshall Co.	Subsidence Investigation
	Fairmont (Hines) Subsidence	Marion Co.	Subsidence Investigation
	Morgantown (McCabe) Subsidence	Monongalia Co.	Subsidence Investigation
	Ashland (Poca Land) Complex	McDowell Co.	Surveying, Mapping, CADD
	Helen (Lewis) Refuse	Raleigh Co.	Surveying, Mapping, CADD
	Minden Mine Dump	Fayette Co.	Surveying, Mapping, CADD
	Pageton Refuse Pile	McDowell Co.	Surveying, Mapping, CADD
	Eckman Refuse Pile	McDowell Co.	Surveying, Mapping, CADD
	Micco (Elledge) Drainage	Mingo Co.	Drilling, Geotechnical Analyses, Surveying
	Big Creek "C"	Logan Co.	Drilling, Geotechnical Analyses
	MacArthur (Brush) Subsidence	Raleigh Co.	Drilling, Subsidence Investigation
	Davis Creek (Snodgrass) Subsidence	Kanawha Co.	Drilling, Subsidence Investigation

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St. Albans and Morgantown, West Virginia

YEAR	PROJECT NAME	LOCATION	SERVICES PROVIDED
1993	MacArthur (Kinsley) Subsidence	Raleigh Co.	Drilling, Subsidence Investigation
	Taylorville Drainage II	McDowell Co.	Drilling & Sampling, Engineering
	Elbert (Lane)	Mingo Co.	Drilling & Sampling
	Glen Morgan (Lilly) Subsidence	Boone Co.	Drilling, Subsidence Investigation
	Marrowbone Creek (Dingess) Landslide	Mingo Co.	Drilling & Sampling, Engineering
	Black Betsy (Adkins) Landslide	Putnam Co.	Drilling, Surveying, Engineering
	Chief Logan State Park Dam	Logan Co.	Drilling, Surveying & Mapping, Engineering CADD
	Apple Grove (Smith) Subsidence	Mason Co.	Drilling, Subsidence Investigation
	Logan Landslide	Logan Co.	Drilling & Sampling
	Midway (McVey) Subsidence	Raleigh Co.	Drilling, Subsidence Investigation
	Williamson Branch (Warren) Landslide	Mingo Co.	Drilling & Sampling
	Peter Street (McNeely) Drainage	Mingo Co.	Drilling & Sampling
	Hanover (Alley)	McDowell Co.	Drilling, Geologic Investigation
	Kilsyth (Burdette) Drainage	Raleigh Co.	Drilling & Sampling
	Crane Creek Drainage	Logan Co.	Surveying, Mapping, CADD
	Logan (Marcum) Drainage	Logan Co.	Drilling & Sampling
	Chapmanville Landslide	Logan Co.	Drilling & Sampling
	Davis Creek (Oxley) Subsidence II	Kanawha Co.	Drilling & Sampling
	Follansbee (Martino) Subsidence	Brooke Co.	Subsidence Investigation
	Collier (Valero) Subsidence	Collier	Subsidence Investigation
	Philli Lane Subsidence	Harrison Co.	Subsidence Investigation and Stabilization Design
	Wheeling (Naegele) Subsidence	Wheeling	Subsidence Investigation
	Clarksburg (Siebert) Subsidence	Clarksburg	Subsidence Investigation
	Fairmont (Lawson) Subsidence	Fairmont	Subsidence Investigation
	Monongah Filtration Plant	Monongah	Emergency Subsidence Investigation

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YEAR	PROJECT NAME	LOCATION	SERVICES PROVIDED
1993	Estes Landslide II	Harrison Co.	Geotechnical Investigation & Design, Slopes, Drainage
	Warsewich Subsidence	Morgantown	Subsidence Investigation
	Fairmont (Harmon) Subsidence	Fairmont	Subsidence Investigation
	Fairview (Toothman) Subsidence	Fairview	Subsidence Investigation
	Fairmont (Robinson) Subsidence	Fairmont	Subsidence Investigation
	Fairmont (Pizatella) Subsidence	Fairmont	Subsidence Investigation and Emergency Design
	Follansbee (Banfi) Subsidence	Follansbee	Subsidence Investigation
	Shinnston (Vincent) Subsidence	Shinnston	Subsidence Investigation
	Shinnston (Ours) Subsidence	Shinnston	Subsidence Investigation
	Brookhaven (Hearn) Subsidence	Brookhaven	Subsidence Investigation
	Fairmont (Cannon) Subsidence	Fairmont	Subsidence Investigation
	Canyon Road Refuse	Morgantown	Burning Refuse Remediation Design
	West Milford (Deverick) Landslide	Clarksburg	Investigation & Design, Geotechnical, Slopes, Drainage
	Fairview (Abel) Subsidence	Fairview	Subsidence Investigation
	Mannington (Hwakinberry) Subsidence	Fairview	Subsidence Investigation
	Shinnston (Vincent) Subsidence	Shinnston	Subsidence Investigation
	Fairmont (Knoll) Subsidence	Fairmont	Subsidence Investigation
	Clarksburg (Thompson) Subsidence	Clarksburg	Subsidence Investigation
	Shinnston (Hall) Subsidence	Shinnston	Subsidence Investigation
	Clarksburg (Weekly) Subsidence	Clarksburg	Subsidence Investigation
	Colliers (Kiger) Subsidence	Colliers	Subsidence Investigation
	Philippi (Hansford) Subsidence	Philippi	Subsidence Investigation
	Whitman Flats	Randolph Co.	Investigation, Design, Drainage, Refuse Re-grade, Surface Mine

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1994	Marmet (Pauley) Landslide	Kanawha Co.	Drilling & Sampling, Engineering
	Rawl (Russel) Drainage	Mingo Co.	Surveying, Mapping, CADD
	Lefthand Fork (See)	Logan Co.	Surveying, Mapping, CADD
	Algoma Refuse Piles	McDowell Co.	Surveying, Mapping, CADD
	Lorado (Grimmett) Mine Drainage	Logan Co.	Surveying, Mapping, CADD
	Amherstdale (Carter) Landslide	Logan Co.	Surveying, Mapping, CADD
	Chauncey (Sammons) Drainage	Logan Co.	Drilling & Sampling
	Sophia (McKinney) Subsidence	Raleigh Co.	Drilling, Subsidence Investigation
	Beckley (Johnson) Subsidence	Raleigh Co.	Drilling, Subsidence Investigation
	Beckley (Wood) Subsidence	Raleigh Co.	Drilling, Subsidence Investigation
	Pratt (Crookshank) Landslide	Raleigh Co.	Drilling & Sampling
	Kirk (Caperton) Landslide	Mingo Co.	Drilling & Sampling, Engineering
	Crooked Creek Refuse	Logan Co.	Surveying & Mapping
	Branchland Landslide	Lincoln Co.	Drilling & Sampling
	Hanshew Subsidence	Kanawha Co.	Drilling, Subsidence Investigation
	Belle (Turner) Landslide	Kanawha Co.	Drilling, Surveying, Engineering, CADD
	Hugheston Monitoring Well	Kanawha Co.	Drilling, Well Installation
	Delbarton (Spence) Subsidence	Mingo Co.	Drilling, Subsidence Investigation
	Haynes Landslide	Kanawha Co.	Drilling & Sampling
	Campbell's Creek Landslide	Kanawha Co.	Drilling & Sampling
	Shrewsbury Landslide	Kanawha Co.	Drilling & Sampling
	Thurmond Landslide	Fayette Co.	Drilling & Sampling
	Crab Orchard Subsidence	Raleigh Co.	Drilling, Subsidence Investigation
	Crooked Creek Coal Refuse	Logan Co.	Drilling, Engineering

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YEAR	PROJECT NAME	LOCATION	SERVICES PROVIDED
1994	Campbell's Creek Subsidence	Kanawha Co.	Drilling & Sampling
	Latrobe (Gibson) Landslide	Logan Co.	Drilling & Sampling
	North Charleston (Toon) Landslide	Kanawha Co.	Surveying, Mapping, Drilling, Design
	Wilkinson Landslide	Kanawha Co.	Drilling, Surveying, Mapping, Design
	Sophia (Lucas) Subsidence	Raleigh Co.	Drilling, Subsidence Investigation
	Sophia (Lawrence) Subsidence	Raleigh Co.	Drilling, Subsidence Investigation
	Zickefoose Subsidence	Raleigh Co.	Drilling Subsidence Investigation
	Oak Hill (Huddleston) Subsidence	Oak Hill	Drilling, Subsidence Investigation
	Lumberport (Peterson) Subsidence	Lumberport	Subsidence Investigation
	Farmington (Hefner) Subsidence	Farmington	Subsidence Investigation
	Clarksburg (LeFevre) Subsidence	Clarksburg	Subsidence Investigation
	Fairmont (Hanne) Subsidence	Fairmont	Subsidence Investigation
	AML Surveying & Mapping	Various	Surveying & Mapping
	Moundsville (Frame) Subsidence	Moundsville	Subsidence Investigation
	Wheeling (Roshak) Subsidence	Wheeling	Subsidence Investigation
	Ida May (Heldreth) Subsidence	Ida May	Subsidence Investigation
	Mannington (Brinegar) Subsidence	Mannington	Subsidence Investigation
	Moundsville (Wolfe) Subsidence	Moundsville	Subsidence Investigation
	Follansbee (Turkaly) Subsidence	Follansbee	Subsidence Investigation and Stabilization Design
	Garrett Drainage	Preston Co.	Geotechnical Investigation for In-house Design
	Fairmont (Tims) Subsidence	Fairmont	Subsidence Investigation
	Clarksburg (Walker) Subsidence	Clarksburg	Subsidence Investigation
	Clarksburg (Hall) Subsidence	Clarksburg	Subsidence Investigation
	Kanes Creek Refuse Pile	Preston Co.	Investigation & Design, Refuse, Drainage, Re-grade
	Windsor (Dawson) Subsidence	Winsdor	Subsidence Investigation

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YEAR	PROJECT NAME	LOCATION	SERVICES PROVIDED
1994	Wheeling (Scott) Subsidence	Wheeling	Subsidence Investigation
	Fairmont (Skaggs) Subsidence	Fairmont	Subsidence Investigation
	Harris Drainage	Clarksburg	Subsurface Investigation for In-house Design
	Weston Hospital AML	Weston	Deep Mine (Portal) Drainage Design
	Fairmont (Twyman) Subsidence	Fairmont	Subsidence Investigation
	Wheeling (Innocenti) Subsidence	Wheeling	Subsidence Investigation
	Fairmont (Brown) Subsidence	Fairmont	Subsidence Investigation
	Fairmont (Vincent) Subsidence	Fairmont	Subsidence Investigation
	Moundsville (Parento) Subsidence	Moundsville	Subsidence Investigation
	Follansbee (Mossor) Subsidence	Follansbee	Subsidence Investigation
	Wheeling (Shultz) Subsidence	Wheeling	Subsidence Investigation
	Wellsburg (Hubbard) Subsidence	Wellsburg	Subsidence Investigation
	Moundsville (Oelshalger) Subsidence	Moundsville	Subsidence Investigation
	Fairmont (Sterratt) Subsidence	Fairmont	Subsidence Investigation
	Wheeling (Sprowls) Subsidence	Wheeling	Subsidence Investigation
	Morgantown (Fox) Subsidence	Morgantown	Subsidence Investigation
	Farmington (Goodnight) Subsidence	Farmington	Subsidence Investigation
	Fairmont (Tichenor) Subsidence	Fairmont	Subsidence Investigation
	Fairmont (Ferrise) Subsidence	Fairmont	Subsidence Investigation
	Barrackville (Garlow) Subsidence	Barrackville	Subsidence Investigation
	Kittle Flats	Randolph Co.	Investigation & Design, Re-grade, Surface Mine, Drainage, AMD

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YEAR	PROJECT NAME	LOCATION	SERVICES PROVIDED
1995	Crab Orchard (Mullins) Subsidence	Raleigh Co.	Subsidence Investigation, Drilling
	Welch (Frezier) Subsidence	Welch	Subsidence Investigation, Drilling
	Logan (Browning) Landslide	Logan	Drilling, Surveying & Mapping, Engineering
	Holly Grove "A" Landslide	Kanawha Co.	Surveying, Mapping, CADD
	Big Cub Creek Refuse Pile	Wyoming Co.	Surveying, Mapping, CADD
	Blue Pennant Complex	Boone Co.	Surveying, Mapping, CADD
	Toler Hollow Portals	Wyoming Co.	Surveying, Mapping, CADD
	Rocklick (Beckett) Landslide	Boone Co.	Surveying, Mapping, CADD
	Indian Ridge Refuse Pile	Wyoming Co.	Surveying, Mapping, CADD
	New Haven (Collier) Subsidence	New Haven	Subsidence Investigation, Drilling
	Aracoma (Napier) Drainage	Logan	Drilling & Sampling
	Hansford Landslide	Crown Hill	Drilling & Sampling
	Padgett Subsidence	Whitman	Subsidence Investigation, Drilling
	Dry Branch Drainage	Kanawha Co.	Drilling & Sampling
	Lockhart Subsidence	War	Subsidence Investigation, Drilling
	Burning Refuse	Williamson	Drilling & Sampling
	Cannelton (Miller) Drainage	Fayette Co.	Drilling & Sampling
	Logan (Robinson) Drainage	Logan	Drilling, Engineering, Geologic Investigation
	Beckley (Colacino) Subsidence	Beckley	Subsidence Investigation, Drilling, Surveying
	Holly Grove "A" Landslide	Kanawha Co.	Drilling, Surveying & Mapping, Design
	Campbell's Creek (Stone) Drainage	Kanawha Co.	Surveying & Mapping, Drilling
	Eccles (McGinnis) Subsidence	Eccles	Subsidence Investigation, Drilling
	Whitewater Branch Drainage	Nicholas Co.	Drilling & Sampling, Geologic Investigation
	Jim Branch (Tyree) Landslide	Boone Co.	Drilling & Sampling, Geologic Investigation
	Upper Decker's Creek	Preston Co.	Subsurface Investigation for In-house Design

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1995	Childs Highwall & Portals	Preston Co.	Investigation & Design, Re-grade, Surface Mine, Drainage, AMD
	Martin Creek	Preston Co.	Investigation & Design, Drainage, AMD, Re-grade, Surface & Deep Mine, Hazardous Materials
	AML Surveying & Mapping	Various	Surveying & Mapping, CADD
	Grant Town (Domico) Subsidence	Grant Town	Subsidence Investigation, Drilling
	Fairview (Toothman) Subsidence	Fairview	Subsidence Investigation, Drilling
	Wheeling (Stazenski) Subsidence	Wheeling	Subsidence Investigation, Drilling
	Moundsville (Feiszh) Subsidence	Moundsville	Subsidence Investigation, Drilling
	Weirton (Tingler) Subsidence	Weirton	Subsidence Investigation, Drilling
	Monongah (Eller) Subsidence	Monongah	Subsidence Investigation, Drilling
	Steadman AMD	Monongalia Co.	Investigation & Design, Deep Mine, Drainage, AMD
	Morgantown (Cryster) Subsidence	Morgantown	Subsidence Investigation, Drilling
	Fairmont (Long) Subsidence	Fairmont	Subsidence Investigation, Drilling
	Kiser Subsidence Design	Marion Co.	Investigation & Design of Deep Mine Stabilization
	Fairmont (Kropog) Subsidence	Fairmont	Subsidence Investigation, Drilling
	Glen Dale (Goddard) Subsidence	Glen Dale	Subsidence Investigation, Drilling
	Buckhannon (Swecke) Subsidence	Buckhannon	Subsidence Investigation, Drilling
	Fairmont (King) Subsidence	Fairmont	Subsidence Investigation, Drilling
	Bolyard Well Bond Forfeiture Site	Preston Co.	Well Abandonment, Design & Performance
	Colliers (Stevens) Subsidence	Colliers	Subsidence Investigation, Drilling
	Wheeling (Hanna) Subsidence	Wheeling	Subsidence Investigation, Drilling
	Wheeling (Witsberger) Subsidence	Wheeling	Subsidence Investigation, Drilling
	Fairmont (JHEK) Subsidence	Fairmont	Subsidence Investigation, Drilling
	Fairmont (Greene) Subsidence	Fairmont	Subsidence Investigation, Drilling
	Fairmont (Mercer) Subsidence	Fairmont	Subsidence Investigation, Drilling

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YEAR	PROJECT NAME	LOCATION	SERVICES PROVIDED
1996	Fairmont (Bionti) Subsidence	Fairmont	Subsidence Investigation, Drilling
	Thomas (Bible) Subsidence	Thomas	Subsidence Investigation, Drilling
	Thomas (Simmons) Subsidence	Thomas	Subsidence Investigation, Drilling
	Thomas (Rhodes) Subsidence	Thomas	Subsidence Investigation, Drilling
	Fairmont (Crowe) Subsidence	Fairmont	Subsidence Investigation, Drilling
	Bland (AML)	Monongalia Co.	Subsurface Investigation, Geotechnical, Drainage, Deep Mine
	Commodore (AML)	Monongalia Co.	Subsurface Investigation, Geotechnical, Drainage, Deep Mine
	Stephenson (Mills) Subsidence	Wyoming Co.	Subsidence Investigation, Drilling
	Cedar Grove (Ramsey) Landslide	Kanawha Co.	Subsurface Investigation, Drilling, Geologic Investigation
	Logan (Ross) Landslide	Logan	Engineering, Drilling
	Beckley (Davis) Subsidence	Raleigh Co.	Subsidence Investigation, Drilling
	Oak Hill (Slates) Subsidence II	Oak Hill	Subsidence Investigation, Drilling
	Welch (Coleman) Subsidence	Welch	Subsidence Investigation, Drilling
	Black Wolfe Refuse Pile	McDowell Co.	Surveying & Mapping, CADD
	Shannon Branch Refuse Pile	McDowell Co.	Surveying & Mapping, CADD
	Lower Burning Creek Complex	Mingo Co.	Surveying & Mapping, CADD
	Duo Refuse Piles	Greenbrier Co.	Surveying & Mapping, CADD
	Mullins Landslide	Wyoming Co.	Drilling, Surveying, Engineering
	Crab Orchard (Mullins) Subsidence	Raleigh Co.	Drilling, Subsidence Investigation
	Williamson (Brown) Landslide	Williamson	Drilling & Sampling
	Thaxton Landslide II	Kanawha Co.	Drilling, Engineering, Geologic Investigation
	Dingess Street (Jemerison) Landslide	Logan	Drilling & Sampling
	Cedar Grove (Bass) Landslide	Kanawha Co.	Drilling, Surveying, Engineering
	Campbell's Creek (Stone) Drainage	Kanawha Co.	Surveying & Mapping
	Crab Orchard (Zickafoose II)	Raleigh Co.	Drilling & Sampling

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1996	Glen Jean Subsidence	Glen Jean	Drilling, Subsidence Investigation
	MacArthur (Green) Subsidence	Raleigh Co.	Drilling, Subsidence Investigation
	East Oak Hill (Tincher) Subsidence	Oak Hill	Drilling, Subsidence Investigation, Engineering
	Football Stadium Subsidence	Mt. Hope	Drilling, Surveying, Engineering
	Shrewsberry (Burgess) Landslide	Kanawha Co.	Drilling, Surveying, Engineering
	Clarksburg (McGinnis) Subsidence	Clarksburg	Drilling, Subsidence Investigation
	Fairmont (Retton) Subsidence	Fairmont	Drilling, Subsidence Investigation
	Fairmont (Golden) Subsidence	Fairmont	Drilling, Subsidence Investigation
	Wheeling (Zambito) Subsidence	Wheeling	Drilling, Subsidence Investigation
	Wellsburg (Fillinger) Subsidence	Wellsburg	Drilling, Subsidence Investigation
	MeMechen (Schmitt) Subsidence	Moundsville	Drilling, Subsidence Investigation
	Stillhouse Run Refuse	Galloway	Investigation, Design, Refuse Re-grade, Drainage
	Wellsburg (Ohler) Subsidence	Wellsburg	Drilling, Subsidence Investigation
	Gypsy (Abruzzino) Drilling	Gypsy	Subsurface Investigation for In-house Design
	Fairmont (Levine) Subsidence	Fairmont	Drilling, Subsidence Investigation
	Wayne Shreve Portals	Harrison Co.	Investigation, Design, Drainage, Portals, Deep Mine, AMD
	Pumpkintown, Kingsville, & Mabie Waterline Feasibility Study	Randolph Co.	Feasibility Study, Deep Mine, Surface Mines, Water Lines, AMD Contamination
	AML Surveying & Mapping	Various	Surveying & Mapping, CADD
	Fairmont (Cross) Subsidence	Fairmont	Drilling, Subsidence Investigation
	Fairmont (Delovich) Subsidence	Fairmont	Drilling, Subsidence Investigation
	Fairmont (Orisini) Subsidence	Fairmont	Drilling, Subsidence Investigation
	Morgantown (Amos) Subsidence	Morgantown	Drilling, Subsidence Investigation
	Karickhoff Mine Drainage	Monongalia Co.	Subsurface Investigation for In-house Design
	Fairmont (Danko) Subsidence	Fairmont	Drilling, Subsidence Investigation

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1	Fairmont (Bosley) Subsidence	Fairmont	Drilling, Subsidence Investigation
	Fairmont (Neely) Subsidence	Fairmont	Drilling, Subsidence Investigation
9	Thomas (Heasley) Subsidence	Thomas	Drilling, Subsidence Investigation
	Thomas (Paugh) Subsidence	Thomas	Drilling, Subsidence Investigation
9	Fairmont (Pitsy) Landslide	Fairmont	Drilling, Subsidence Investigation
	Turkey Run Slide & Drainage	Upshur Co.	Subsurface Investigation for In-house Design
6	Tunnelton (Myers) Subsidence	Tunnelton	Drilling, Subsidence Investigation
	Fairview (Weaver) Subsidence	Fairview	Drilling, Subsidence Investigation
	Monongah (Longfellow) Subsidence	Monongah	Drilling, Subsidence Investigation
	Fairmont (Kiser) Confirmation Drilling	Fairmont	Confirmation of Deep Mine Stabilization
	Pine Bluff Tipple and Portal	Harrison Co.	Subsurface Investigation for In-house Design
1	Thomas (Uchic) Subsidence	Thomas	Drilling, Subsidence Investigation
	Rivesville (Miller) Subsidence	Rivesville	Drilling, Subsidence Investigation
9	Fairmont (Christ Temple) Subsidence	Fairmont	Drilling, Subsidence Investigation
	Fairmont (Dukich) Subsidence	Fairmont	Drilling, Subsidence Investigation
9	AML Surveying and Mapping	Various	Surveying & Mapping, CADD
	Fairmont (Renner) Subsidence	Fairmont	Drilling, Subsidence Investigation
7	Hiawatha Mine Dump	Hiawatha	Surveying & Mapping, CADD
	Booths Hollow Highwall	Bramwell	Surveying & Mapping, CADD
	Turkey Wallow Refuse Pile	Wolf Pen	Surveying & Mapping, CADD
	Sophia (Hayworth) Subsidence	Sophia	Drilling, Subsidence Investigation
	Dan's Branch (Cline) Landslide	Williamson	Drilling, Engineering, Geologic Investigation
	Spring Branch Burning Refuse	Milburn	Surveying & Mapping, CADD

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1997	Whitby (Lilly) Clogged Stream/Portals	Whitby	Surveying & Mapping, CADD
	Ennis Complex	Maybeury	Surveying & Mapping, CADD
	Carswell Hollow (Smith) Refuse	Kimball	Surveying & Mapping, CADD
	MacArthur (Kinsley) Vertical Opening	MacArthur	Drilling, Subsidence Investigation
	Stanaford (Vira) Subsidence	Beckley	Drilling, Subsidence Investigation
	Logan AML	Logan	Drilling & Sampling
	Norton Waterline	Randolph Co.	Surveying, Mapping, Subsurface Investigation, Design
	Kelly's Creek (Jones) Landslide	Kanawha Co.	Drilling, Surveying & Mapping, Engineering
	Crab Orchard (Rye) Subsidence	Raleigh Co.	Drilling, Subsidence Investigation
	Marmet (Willis Drive) Landslide	Marmet	Drilling & Sampling
	Peter Street (Bragg) Landslide	Williamson	Drilling, Engineering, Geologic Investigation
	Pinnacle Creek Refuse Pile	Wyoming Co.	Drilling, Surveying, Engineering
	Clarksburg (Felts) Subsidence	Clarksburg	Drilling, Subsidence Investigation
	Fairmont (Tibbs) Subsidence	Fairmont	Drilling, Subsidence Investigation
	Farmington (Tassone) Subsidence	Farmington	Drilling, Subsidence Investigation
	Fairmont (Morgan) Subsidence	Fairmont	Drilling, Subsidence Investigation
	Farmington (Knoble) Subsidence	Farmington	Drilling, Subsidence Investigation
	Shinnston (Bell) Subsidence	Shinnston	Drilling, Subsidence Investigation
	Zickefoose Burning Refuse	Marion Co.	Subsurface Investigation for In-house Design
	Thomas (D. Bacco) Subsidence	Thomas	Drilling, Subsidence Investigation
	Thomas (Nelson) Subsidence	Thomas	Drilling, Subsidence Investigation
	Thomas (Shoemaker) Subsidence	Thomas	Drilling, Subsidence Investigation
	Thomas (Nelson) Subsidence	Thomas	Drilling, Subsidence Investigation
	Fairmont (St. Joseph) Subsidence	Fairmont	Emergency, Subsidence Investigation

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1997	Thomas (Lambert) Subsidence	Thomas	Drilling, Subsidence Investigation
	Left Fork of Little Sandy Reclamation	Preston Co.	Investigation, Design, Portals, Drainage, AMD, Re-grade
	Demarco Mine Drainage	Monongalia Co.	Subsurface Investigation for In-house Design
	Summit Park (Seftick) Slide	Clarksburg	Investigation and Design, Slopes, Drainage, Deep Mine
	Thomas (Stanley) Subsidence	Thomas	Drilling, Subsidence Investigation
	Morgantown (Horrell) Subsidence	Morgantown	Drilling, Subsidence Investigation
	Morgantown (Malone Subsidence	Morgantown	Drilling, Subsidence Investigation
	Core (Swiger) Subsidence	Core	Drilling, Subsidence Investigation
	Shinnston (Brown) Landslide	Shinnston	Subsurface Investigation for In-house Design
	Delmar Complex	Monongalia Co	Subsurface Investigation for In-house Design
	Morgantown (McVickers) Subsidence	Morgantown	Drilling, Subsidence Investigation
	Moundsville (Marling) Subsidence	Moundsville	Drilling, Subsidence Investigation
	Wheeling (Tridigo) Subsidence	Wheeling	Drilling, Subsidence Investigation
	Barrickville (Vennis) Subsidence	Barrickville	Drilling, Subsidence Investigation
	Clarksburg (Ray) Subsidence	Clarksburg	Drilling, Subsidence Investigation
	Fairmont (Toothman) Subsidence	Fairmont	Drilling, Subsidence Investigation
	Grant Town (Haller) Subsidence	Grant Town	Drilling, Subsidence Investigation
	Monongah (Dumas) Subsidence	Monongah	Drilling, Subsidence Investigation

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1998	Chauncey (Vance) Drainage	Logan Co.	Drilling, Surveying, Engineering
	Skin Creek Refuse Pile	Wyoming Co.	Surveying & Mapping, CADD
	Riffe Branch Impoundment	Raleigh Co.	Surveying & Mapping, CADD
	Holden (Paggett) Landslide	Holden	Drilling, Surveying, Engineering
	Sycamore Camp Subsidence	Holden	Drilling, Engineering
	Gerath Landslide	Weston	Surveying & Mapping, CADD
	Carswell Hollow Design	McDowell Co.	Drilling, Engineering, CADD
	Spruce Laurel Fork	Clothier	Drilling, Surveying, Engineering
	Red Jacket Refuse	Mingo Co.	Subsurface Investigation
	Nitro (Taylor) Landslide	Nitro	Drilling, Engineering
	Georges Creek (Holmes) Landslide	Rand	Drilling, Engineering
	Dog Hollow AML	Boone Co.	Drilling & Sampling
	Adkins Drainage	Boone Co.	Drilling & Sampling, Geologic Investigation
	Rumble (Smith) Drainage	Rumble	Drilling, Engineering, Geologic Investigation
	MacArthur AML	Raleigh Co.	Drilling & Sampling
	Chief Logan AMD	Logan Co.	Drilling, Surveying, Design, Engineering
	Davis Creek Emergency AML	Kanawha Co.	Drilling, Surveying, Design, Engineering
	Holden Drainage	Holden	Drilling, Engineering
	Bloomingrose (Milam) Drainage	Bloomingrose	Drilling, Surveying, Engineering
	Webster (Jerryville) AML	Webster Co.	Drilling & Sampling
	Thompson Gas Complaint	Williamson	Drilling & Sampling
	Glasgow Subsidence	Glasgow	Drilling, Subsidence Investigation
	AML Surveying & Mapping	Various	Surveying & Mapping, CADD
	Wheeling (Upper Stroch) Subsidence	Wheeling	Drilling, Subsidence Investigation

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1999	Clarksburg (Post) Subsidence	Clarksburg	Drilling, Subsidence Investigation
	Thomas United Methodist Church	Thomas	Drilling, Subsidence Investigation
	Bridge Run Refuse	Upshur Co.	Geotechnical Investigation & Evaluation
	Kanes Creek South	Preston Co.	Reclamation Design
	Riffe Refuse Pile	Raleigh Co.	Drilling & Sampling, Temperature Probes
	Turkey Gap Burning Refuse	Oak Hill	Surveying & Mapping, CADD
	Hotcoal Mine Dump	Raleigh Co.	Surveying & Mapping, CADD
	Laurel Creek Subdivision Subsidence	Raleigh Co.	Surveying & Mapping, CADD
	Kelly's Creek Burning Refuse	Kanawha Co.	Drilling & Sampling
	WV Tech Tennis Courts	Montgomery	Drilling, Surveying, Engineering
	Holden (Alshire) AML Slide	Holden	Drilling, Surveying, Engineering
	Ragland (Kirk) Subsidence	Ragland	Drilling, Subsidence Investigation
	Beckley Exhibition Coal Mine	Beckley	Surveying & Mapping, CADD
	Kilsyth Drainage	Kilsyth	Drilling, Surveying, Engineering, Design
	Borderland Portals	Mingo Co.	Drilling & Sampling, Piezometer Installation
	Dille-Widen Feasibility Study	Clay Co.	Engineering, Geology, Hydrology
	Mullens Water Feasibility Study	Mullens	Engineering, Geology, Hydrology
	Mileground Stabilization	Morgantown	Stabilization Investigation & Design
	Tunnelton Mine Drainage	Tunnelton	AMD Drainage Investigation
	AML Surveying and Mapping	Various	Surveying & Mapping, CADD
	Brown Street Drainage	Marshall Co.	AMD Drainage Design
	Davis (Warren) Subsidence	Davis	Drilling, Subsidence Investigation
	Turkey Run III	Upshur Co.	Drainage/Landslide Investigation
	Benwood Refuse	Marshall Co.	Refuse Investigation

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2000	Shinnston (Wentz) Subsidence	Shinnston	Drilling, Subsidence Investigation
	Kingwood 52/6 Project	Kingwood	Water Line Feasibility Study
	Van Burning Refuse	Van	Drilling & Sampling, Temperature Probes
	Witcher Creek (Evans) Portals	Kanawha Co.	Surveying & Mapping, CADD
	Newton (Hatfield) Landslide	Mingo Co.	Surveying & Mapping, CADD
	Northfork Refuse Pile	McDowell Co.	Surveying & Mapping, CADD
	Red Jacket Portal	Mingo Co.	Surveying & Mapping, CADD
	Matoka (WV Rt. 10) Subsidence	Matoka	Drilling & Sampling, Geologic Investigation
	Montgomery (Grey) Landslide	Montgomery	Drilling & Sampling, Geologic Investigation
	Davis Water Tanks	Davis	Subsidence Investigation, Drilling
	Kingsville Water Line	Kingsville	Water Line Feasibility Study
	AML Surveying & Mapping	Various	Surveying & Mapping, CADD
2001	Horner Run Portal, Highwall & Landslide	Harrison Co.	Portal, Highwall & Landslide Investigation, Remediation Design
	Clarksburg Landslide	Clarksburg	Landslide Investigation and Evaluation
	North 8th Street Refuse & Portals	Warwood	Design, Re-grade & Drainage
	Livengood Highwall & AMD	Preston Co.	Design, Re-grade & Drainage
	Layton Mine Drainage	Harrison Co.	Drainage, Slope Investigation
	Rocklick (Blethem) Drainage	Minden	Drilling & Sampling, Geologic Investigation
	Leslie (Nelson) Drainage	Greenbrier Co.	Surveying & Mapping, CADD
	Mullins Mine Drainage	Mingo Co.	Drilling & Sampling
	North Matewan (Gooslin) Landslide	Matewan	Drilling, Surveying, Engineering
	Helen Mine Drainage	Raleigh Co.	Drilling, Surveying, Engineering
	Newton (Hatfield) Landslide	Mingo Co.	Drilling, Surveying, Engineering
	Prong Fork (Hughart) Landslide	Kanawha Co.	Drilling, Surveying, Engineering

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2001	Mullens (McNeely) Landslide	Mullens	Drilling, Surveying, Engineering
	Mullens (Dixon) Landslide	Mullens	Drilling, Surveying, Engineering
	Easly Refuse Pile	Boone Co.	Drilling, Surveying, Engineering
	AML Surveying & Mapping	Various	Surveying & Mapping, CADD
	Philip Thorn Highwall	Preston Co.	Design, Re-grade, & Drainage
	Sandy Creek Waterline	Taylor Co.	Waterline Feasibility Study
	Davis Waterline Extension	Davis	Waterline Feasibility Study
	Dayton Park AML	Philippi	Drainage/Portal Investigation
	Stillhouse Run Refuse	Barbour Co.	Design, Drainage & Refuse Re-grade
	Bethlehem (Sinclair) Subsidence	Wheeling	Drilling, Subsidence Investigation
	Blaser Highwall	Preston Co.	Design, AMD, Re-grade & Drainage
	Cross Street	Warwood	Drainage Investigation
2002	Lundale (Dickerson) Drainage	Logan Co.	Surveying & Mapping, CADD
	Ned's Branch Refuse	Mingo Co.	Surveying & Mapping, CADD
	Wheatley Branch (Gooden) Landslide	Logan Co.	Drilling & Sampling, Engineering
	Squire Landslide	McDowell Co.	Drilling & Sampling, Piezometer Installation, Engineering
	County Route 27 Landslide	Mt. Hope	Drilling & Sampling, Engineering
	Delbarton (Curry) Landslide	Delbarton	Drilling & Sampling, Engineering
	Sugar Branch Burning Refuse	Logan Co.	Drilling & Sampling, Geologic Investigation
	Thacker Subsidence	Crab Orchard	Drilling & Sampling, Subsidence Investigation
	AML Surveying & Mapping	Various	Surveying & Mapping, CADD
	Rosemont Highwall & Portals 2	Barbour Co.	Design, Re-grade & Drainage
	Clarksburg (Bailey) Mine Drainage	Clarksburg	Drainage Investigation
	Morgantown Airport Subsidence II	Morgantown	Drilling & Sampling, Subsidence Investigation

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2003	Thomas (Wolfe Welding) Subsidence	Tucker Co.	Drilling & Sampling, Subsidence Investigation
	Duffy Street/Van Rufus Subsidence	Shinnston	Reclamation Design
	Brownton Landslide	Barbour Co.	Reclamation Design
	Clarksburg (A. Davis) Subsidence	Clarksburg	Drilling & Sampling, Subsidence Investigation
	Mt. Clare (Strader) Landslide	Harrison Co.	Drilling & Sampling, Subsidence Investigation
	White Park Bus Garage PCB Site	Monongalia Co.	Environmental Investigation
	White Park	Monongalia Co.	Environmental Investigation
	Collins Ferry Road B.P. Station	Monongalia Co.	Drilling & Sampling
	Bull Run Emergency Drilling	Preston Co.	Drilling & Sampling
	Enterprise (Swiger) Subsidence	Harrison Co.	Drilling & Sampling, Subsidence Investigation
	Saul's Run Strip and Slide	Lewis Co.	Landslide Investigation, Drilling & Sampling, Engineering
	Whitehair Landslide	Monongalia Co.	Landslide Investigation, Drilling & Sampling, Engineering
	Ragland (Caudill) Subsidence	Mingo Co.	Drilling & Sampling, Subsidence Investigation
	WVU Tech Drainage	Montgomery	Design, Drilling & Sampling, Piezometer Installation, Surveying & Mapping, Portals, Re-grade, Dewatering
2004	Ring Hollow (Meadows) Portals	Hernshaw	Drilling & Sampling, Piezometer Installation
	Coal Hollow Refuse "A"	Putnam Co.	Design, Refuse, Re-grade, Portals
	DNR Office Subsidence	Beckley	Drilling & Sampling, Subsidence Investigation
	Alspaugh Landslide	Mount Hope	Drilling & Sampling, Geologic Investigation
	Mon County (Rockley Road)	Monongalia Co.	Drilling & Sampling, Geotechnical Investigation
	Long Run (Adkins) Landslide	Taylor Co.	Landslide & Subsidence Investigation, Drilling & Sampling
	Hawkins AMD	Lambert Run	AMD/Reclamation
	Jimtown Tipple	Harrison Co.	Subsurface Investigation, Slide Repair
	Ven Runs Landslide Maintenance	Lewis Co.	Subsurface Investigation, Slide Repair

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2005 THRU 2009	Blankenship Subsidence	Beckley	Drilling & Sampling, Subsidence Investigation
	Mabscott (Houck) Subsidence	Mabscott	Drilling & Sampling, Subsidence Investigation
	Spicer Subsidence	Maidsville	Drilling & Sampling, Subsidence Investigation
	Everettsville Burning Refuse	Monongalia Co.	Drilling, Geotechnical Investigation
	Union Prong (Carpenter) LS Project	Kanawha Co.	Drilling & Sampling, Piezometer Installation, Well Abandonment
	Rawl (Pigman) Portals	Mingo Co.	Drilling & Sampling, Piezometer Installation
	Whitman (Williams) Drainage	Logan Co.	Drilling & Sampling, Piezometer Installation
	Varney (Justice) Drainage	Mingo Co.	Drilling & Sampling, Piezometer Installation
	Brounland (Holstein) Drainage	Kanawha Co.	Drilling & Sampling, Piezometer Installation
	Musick (Brewer) Subsidence	Mingo Co.	Drilling & Sampling, Subsidence Investigation
	Elk Creek Portals	Mingo Co.	Design, Surveying & Mapping, Portals, Re-grade, Section 404 Permit, Demolition of Structures
	Chapmanville (Henry) Portals/Lake (Winkler) LS/Stone Branch (Adkins LS 1/Mud Fork (Baisden)	Logan Co.	Drilling & Sampling, Piezometer Installation
	Rumble (Stevens) Refuse & Portals	Boone Co.	Design, Surveying & Mapping, Portals, Re-grade, Section 404 Permit, Demolition of Structures
	Campbells Creek (Miller) Drainage	Kanawha Co.	Drilling & Sampling, Piezometer Installation
	Rich Fork (Spells) Portals	Kanawha Co.	Drilling & Sampling, Piezometer Installation
	Mullens Portals	Wyoming Co.	Design, Drilling & Sampling, Piezometer Installation, Surveying & Mapping, Portals, Re-grade, Dewatering
	Belington Portals & Drainage	Barbour Co.	Design, Drilling & Sampling, Piezometer Installation, Surveying & Mapping, Portals, Re-grade, Dewatering
	Beckley (St. John's) Subsidence	Raleigh Co.	Drilling & Sampling, Mining Determination

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Triad Engineering
St. Albans and Morgantown, West Virginia

YEAR	PROJECT NAME	LOCATION	SERVICES PROVIDED
2010 THRU 2011	Chauncey (Miller) Drainage	Logan Co., WV	Drilling & Sampling, Mining Determination
	Morris Creek (Jackson) Drainage	Fayette Co., WV	Drilling & Sampling, Mining Determination
	Coaldale Refuse	Fayette Co., WV	Full Civil Design and Permitting Services
	Richardson Branch Complex	Raleigh Co., WV	Full Civil Design and Permitting Services