McAlpin Portals Design
DEP16437

January 14, 2014

west virginia
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West Virginia Purchasing Division

Prepared For:

WV Department of
Environmental Protection
Office of AML&R
601 57th Street SE
Charleston, WV 25304
Ph: 304.925.0499

Prepared By:

Triad Engineering Inc.
10541 Teays Valley Road
Scott Depot, WV 25560
Ph: 304.755.0721
Fx: 304.755.1880

TRIAD
TRIAD ENGINEERING, INC.

TRIAD Listens, Designs & Delivers™

www.triadeng.com

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January 14, 2014

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

Subject: **WVDEP Expression of Interest – DEP16437**
McAlpin Portals & Drainage Design Project
Professional Engineering Design Services
Harrison County, West Virginia
Triad Proposal No. 04-13-0588

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 Harrison 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.

David F. Meadows, PE, PS
Regional Manager

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

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
AML CONSULTANT QUALIFICATION QUESTIONNAIRE **Attachment "B"**

PROJECT NAME	DATE (DAY, MONTH, YEAR)	FEIN
McAlpin Portals Design	January 14, 2014	550592364

1. FIRM NAME	2. HOME OFFICE BUSINESS ADDRESS	3. FORMER FIRM NAME
Triad Engineering, Inc.	10541 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	Corporation	NO

7. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE

10541 Teays Valley Road, Scott Depot, WV 25560 / (304) 755-0721 / Dave Meadows, PE, PS - Regional Manager / 06

8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM	8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS
Thomas Ali, P.E. - CEO 412-257-1325 John M. Meeks, RPG, LRS - COO 304.755.0721	

9. PERSONNEL BY DISCIPLINE

14 ADMINISTRATIVE	— ECOLOGISTS	2 LANDSCAPE ARCHITECTS	— STRUCTURAL ENGINEERS
— ARCHITECTS	— ECONOMISTS	— MECHANICAL ENGINEERS	**13 SURVEYORS**
— **BIOLOGIST**	— ELECTRICAL ENGINEERS	— **MINING ENGINEERS**	— TRAFFIC ENGINEERS
8 CADD OPERATORS	8 ENVIRONMENTALISTS	— PHOTOGRAMMETRISTS	— OTHER
1 CHEMICAL ENGINEERS	— ESTIMATORS	— PLANNERS: URBAN/REGIONAL	12 DRILLERS & HELPERS
22 CIVIL ENGINEERS	**12 GEOLOGISTS**	1 SANITARY ENGINEERS	7 LABORATORY TECHS.
41 CONSTRUCTION INSPECTORS	— HISTORIANS	17 SOILS ENGINEERS	7 LIC. REMEDIATION SPECS.
7 DESIGNERS	2 HYDROLOGISTS	— SPECIFICATION WRITERS	
— DRAFTSMEN			176 TOTAL PERSONNELL

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 10 Scott Depot/20 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

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

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

12. Are your firm's personnel experienced in Abandon Mine Lands Remediation/Mine Reclamation Engineerin

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

YES Description and Number of Projects: 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

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

YES Description and Number of Projects: Our firm has completed over 11 AMD designs ranging from active to passive treatment. These projects include: Kittle Flats, Childs Highwall and Portals, Martin Creek, Steadman AMD, Wayne Shreve Portals, Pumpkintown, Kingsville, & Mable Waterline Feasibility Study, Left Fork of Little Sandy, Tunnelton Mine Drainage, Brown Street Drainage, Blaser Highwall, Hawkins AMD, and Chief Logan State Park AMD.

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:
Meadows, David F., PE, PS Regional Manager	5	35+	20

Brief Explanation of Responsibilities
Mr. Meadows will serve as principal in charge. Mr. Meadows brings over 40 years of leadership, design and project management experience to Triad Engineering. Mr. Meadows joined Triad in 2013 to provide management to the southwest region which includes the southern West Virginia area and the Athens, Ohio office. Prior to coming to Triad he served in a number of technical and leadership positions at the US Army Corps of Engineers, Huntington District. His expertise includes civil design, geotechnical engineering, construction management, surveying, environmental remediation and water resources engineering.

EDUCATION (Degree, Year, Specialization)
Bachelor of Science, Civil Engineering, West Virginia Institute of Technology 1974
Masters of Science, General Engineering, WV College of Graduate Studies 1981
Masters of Engineering, Geotechnical Engineering, Virginia Polytechnic Institute & State University 1987

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
S.A.M.E., ASCE, United States Society on Dams, WV Association of Land Surveyors	Registered Professional Engineer,1980, West Virginia Registered Professional Surveyor,1996, West Virginia

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
McCoy, Larry L., Jr., P.E. Civil Department Manager/ Senior Engineer	3	12	4

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, AMD treatment design, 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	Registered Professional Engineer/2001/ WV Registered Professional Engineer/2007/ Ohio Registered Professional Engineer/2008/ Kentucky

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:
Criniti, James R. "Bo"	4	4	4

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, AMD treatment design and 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:
Lipscomb, Daniel H.	0	11	0

Brief Explanation of Responsibilities
Mr. Lipscomb has formulated and implemented subsurface investigations on landfills, roadway/bridges, and structures for coal mining facilities. Mr. Lipscomb's responsibilities include development and implementation of subsurface programs, analysis of subsurface conditions and preparation of final reports including conclusions and recommendations based on subsurface conditions and proposed site use.

EDUCATION (Degree, Year, Specialization)
BSCE/ 2002/ Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
WVSPE ASCE	Registered 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		
Huffman, Jeffrey, T.	YEARS OF AML DESIGN EXPERIENCE: 1	YEARS OF AML RELATED DESIGN EXPERIENCE: 20	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0

Brief Explanation of Responsibilities:
Mr. Huffman brings over 22 years of full-time design and project management experience as well as 2 years of teaching experience to Triad Engineering. Mr. Huffman joined Triad in 2013 to provide geotechnical expertise to the southwest region. Prior to coming to Triad he served in a number of technical and leadership positions for various consultants in the mid-Atlantic area. His expertise is in geotechnical engineering, receiving his undergraduate degrees in civil engineering with a specialty in geotechnical engineering. He has completed the course work for his Ph. D. also in this field.

EDUCATION (Degree, Year, Specialization)
Ph,D. Course Work Completed, Civil Engineering (Geotechnical), Virginia Polytechnic Institute and State University, Blacksburg, Virginia, Anticipated degree award May 2015.
M.S., Civil Engineering (Geotechnical), 1990, Virginia Polytechnic Institute and State University, Blacksburg, Virginia.
B.S., Civil Engineering, 1988, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, Graduated Cum Laude.

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Society of Engineering Educators. Society of American Military Engineers - Director, Huntington Post. American Society of Civil Engineers - WV Section Treasurer Society of American Military Engineers - American Society of Civil Engineers Student Chapter - Faculty Advisor Order of the Engineer. American Council of Engineering Companies.	Registered Professional Engineer, 2005 West Virginia Registered Professional Engineer, 1994 Pennsylvania Registered Professional Engineer, 2007 Kentucky Registered Professional Engineer, 2007 Ohio Registered Professional Engineer, 2008 North Carolina

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

Equipment Listing

Drilling Equipment:

Track Mounted Rigs	1 - Davey DK 90 2 - CME 55 1 - CME 45 C
All Terrain Drill Rigs	3 - CME 550 C
Truck Mounted Rigs	2 - Mobile B53
Skid Mounted Rigs	1 - Diedrich D25
Transport Vehicles	4 - Peterbilt Tandem Axle Tiltbeds 1 - Mack Tractor & Lowboy Trailer 1 - International Tractor & Lowboy Trailer 1 - Military 5 Ton Water Truck 1 - Military 2.5 Ton Water Truck 15 - 4WD ¾ Ton Support Trucks 1 - Pontoon Boat 1 - Barge 1 - John Boat
Portable Drilling Equipment	1 - Motorized Cathead/Tripos Unit 2 - Handheld Sampling Equipment

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

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

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

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

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

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

Equipment Listing

Continued – page 7

- AutoCAD Civil 3D 2013 – (7) 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

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

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

Equipment Listing

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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 CP6015x
    - KM 350
    - KM 600
    - KM C353
- Plotters
    - HP DesignJet 1050C
    - HP DesignJet 4020 PS
- Fax Machines
    - HP 3100
    - Brother MFC4600
- Copiers
    - KM 350
    - KM 600
    - KM C353
- 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
Rain Garden Design Build Huntington, WV	City of Huntington, WV 800 5th Avenue Huntington, WV 25717	Project Lead, Civil Design, Surveying, Geotechnical Engineering, and QC testing and inspection	$70,000.00	95%
Wastewater System Improvements Minden, WV	Arbuckle PSD P.O. Box 369 Minden, WV 25879	Preliminary Civil Design, preliminary engineering report	$6,000,000.00	50%
Water System Improvements Toronto, Ohio	City of Toronto P.O. Box 189 416 Clark Street Toronto, Ohio 43964	Civil Design, Geotechnical, Surveying and Construction Administration	$2,100,000.00	50%
Water System Improvements Tunnelton, WV	Denver Water Association P.O. Box 146 Tunnelton, West Virginia 26444-0146	Civil Design, Geotechnical, Surveying and Construction Administration	$1,000,000.00	90%
Raw Water System Improvements Bluefield, WV	Green Valley-Glenwood PSD P.O. Box 6099 Bluefield, WV 24701	Civil Design, Geotechnical, Surveying and Construction Administration	$16,000,000.00	90%
South and Center Trunk Line WWTP Upgrade Design/Build Cadiz, Ohio	Village of Cadiz, Ohio 128 Court Street Cadiz, Ohio 43907	Civil Design, Geotechnical, Surveying and Construction Administration	$3,500,000.00	90%
Sewer Study North Trunk Line Cadiz, Ohio	Village of Cadiz, Ohio 128 Court Street Cadiz, Ohio 43907	Civil Design, Geotechnical, Surveying and Construction Administration	$3,500,000.00	90%

TOTAL NUMBER OF PROJECTS: 7

TOTAL ESTIMATED CONSTRUCTION COSTS: $32,170.00

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

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPL
Rutland Wastewater PER Meigs County, Ohio	Miegs County Commission 100 East Second St. Suite 301 Pomeroy, Ohio 45769	Civil Design, Geotechnical, Surveying and Construction Administration	$4,500,000.00	100%
Rutland Water PER Meigs County, Ohio	Miegs County Commission 100 East Second St. Suite 301 Pomeroy, Ohio 45769	Civil Design, Geotechnical, Surveying and Construction Administration	$1,200,000.00	100%
Water Line Extensions Salt Rock, WV	Salt Rock PSD 100 Padero Drive Ona, WV 25545	Civil Design, Geotechnical, Surveying and Construction Administration	$1,800,000.00	50%
Wastewater Treatment Upgrades, Phase II Belle, WV	Town of Belle, WV 1100 East Dupont Ave. Belle, WV 25313	Civil Design, Geotechnical, Surveying and Construction Administration	$3,800,000.00	80%
Water System Improvements Camden On Gauley, WV	Town of Camden on Gauley Mayor Avenue Camden on Gauley, WV 26208	Civil Design, Geotechnical, Surveying and Construction Administration	$2,000,000.00	85%
Wastewater Improvements Hartford, WV	Town of Hardford PO Box 7 Hartford, WV 25247	Civil Design, Geotechnical, Surveying and Construction Administration	$1,700,000.00	98%
Thacker Branch Water Line Matewan, WV	Town of Matewan P.O. Box 306 Matewan, WV 25678	Civil Design, Geotechnical, Surveying and Construction Administration	$2,200,000.00	95%
TOTAL NUMBER OF PROJECTS: 7			TOTAL ESTIMATED CONSTRUCTION COSTS: $49,370.00	

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

PROJECT NAME, TYPE AND LOCATION	NATURE OF FIRMS RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CONSTRUCTION COST	
				ENTIRE PROJECT	YOUR FIRMS RESPONSIBILITY
Proposed Wayne Impoundment Upshur County, WV	Geotechnical Engineering	Smith Land Surveying 226 West Main St. Glenville, WV 26351	On-going		$13,500.00
Sheetz Store # 467 Hurricane, WV	Quality Control Testing and Inspection	Sheetz, Inc. 242 Sheetz Way Claysburg, PA 16625	On-Going		$25,000.00
CPT 11 Access Road Upshur County, WV	Geotechnical Engineering	Smith Land Surveying 226 West Main St. Glenville, WV 26351	On-going		$12,600.00
Dupont Sump Location Survey Belle, WV	Surveying	Jacobs Engineering 500 Elk River Rd S Elkview, WV 25071	On-going		$6,800.00
Proposed Cent 22 Well Pad Upshur County, WV	Geotechnical Engineering	Smith Land Surveying 226 West Main St. Glenville, WV 26351	On-going		$14,300.00
Jupiter Bridge Foundation Bim, WV	Geotechnical Engineering	Patriot Coal P.O. Box 66823 St. Louis, MO 63166	On-going		$5,000.00
Proposed Troy 7 Well Pad Gilmer County, WV	Geotechnical Engineering	Smith Land Surveying 226 West Main St. Glenville, WV 26351	On-going		$12,700.00

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)
Richardson Branch Complex Raleigh County, WV	WVDEP - AML&R 601 57th Street Charleston, WV 25304	Engineering Design	2012	100%
Coaldale Refuse & Portals McDowell County, WV	WVDEP - AML&R 601 57th Street Charleston, WV 25304	Engineering Design	2010	100%
Mullens Portals Project Wyoming County, WV	WVDEP - AML&R 601 57th Street Charleston, WV 25304	Engineering Design	2011	100%
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	2010	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	2010	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	2010	100%
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%

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
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
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

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 seven office locations in WV, Pennsylvania, Ohio, 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) - Tom Ali, PE
- Chief Operating Officer (COO) - John Meeks, PG, LRS
- Chief Engineer - Randy Moulton, PE
- Chief Financial Officer (CFO) - Tina McPhail
- Chief Marketing Officer (CMO)
- Bob Bush, PS
- Chad Brinkley
- Robert Holstead, PE
- Roger Simar
- 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:_____ Date:_____

Printed Name:_____

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 McAlpin Portals Design 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, it's Greensburg office to Pittsburgh, Pennsylvania, and opened offices in Hagerstown, Maryland and Athens, Ohio.

Facilities and equipment available to support our staff have grown substantially during the past 38 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 170 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, wetland delineators 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

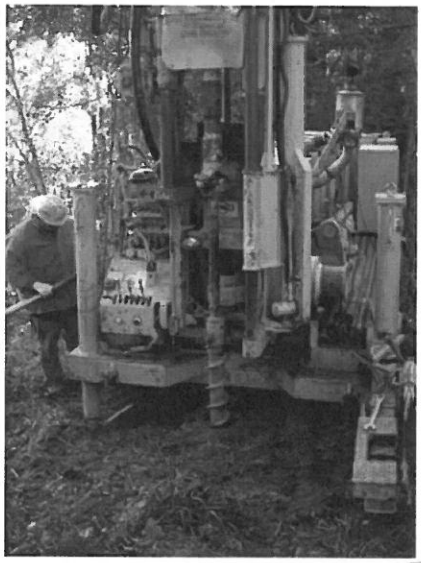
utilizes state of the art tools and equipment including Global Positioning system base station and portable GPS HF radio receivers, as well as total station theodolites with electronic data collectors. Maps and plats are developed in either AutoCADD or Microstation format.

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 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

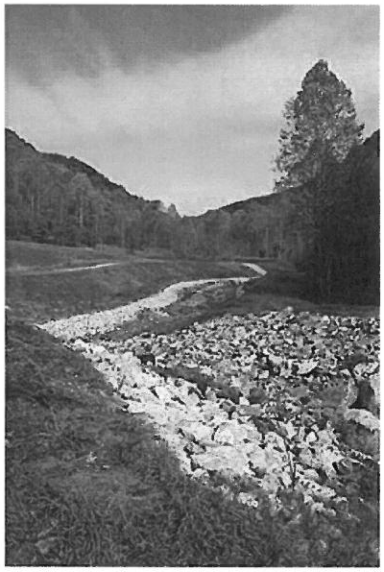
TRIAD has extensive experience in design engineering and preparation of construction contract drawing on projects for the WVDEP/AML&R, OSMRE as well as similar projects for private concerns. TRIAD provides comprehensive design service to our clients on numerous types of projects. Professional services for all phases of civil / site development are available, including commercial and industrial site developments, landslide repair, dams, landfills, reclamation design, constructed wetlands, and airport developments. Utilizing the breadth of our in-house services, TRIAD's engineers oversee, and are responsible for, projects from the initial site visit to final design and acceptance by the owner. At TRIAD we pride ourselves on our ability to perform top-quality work for our clients, which is both on schedule and within budget. We believe our company is small enough to be responsive to the needs of our clients, and large enough to remain at the forefront of engineering technology and equipment

III. QUALIFICATIONS OF PERSONNEL

TRIAD now maintains a staff of over 175. 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 175 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, 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. Unless there are changes in the project scope, the originally agreed upon scope will be adhered to. Should changes in the project scope occur, AML&R personnel will be notified immediately. The original project budget will be revised to reflect the change in scope.

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 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.

Related Services

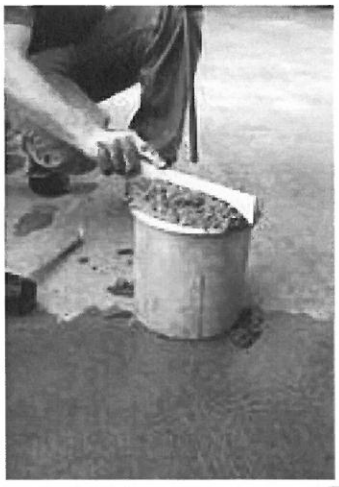
QA/QC, Materials Testing, Construction Monitoring

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.

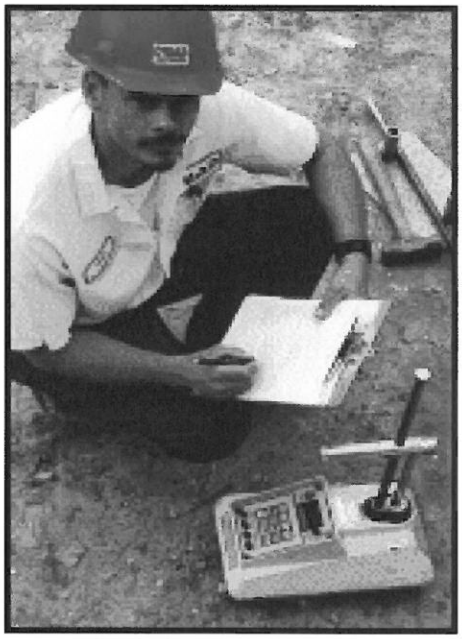
Services Include:

- 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



QA/QC, Materials Testing, Construction Monitoring

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, 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

Office of Abandoned Mine Lands and Reclamation
Completed Projects – 1992 to Present
Triad Engineering
St. Albans, West Virginia
Page 2

YEAR	PROJECT NAME	LOCATION	SERVICES PROVIDED
1	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
9	F & M Coal	Preston Co.	Surveying, Mapping, CADD
	Moran Subsidence	Marion Co.	Subsidence Investigation
	Monongah (Mayo) subsidence	Marion Co.	Subsidence Investigation
9	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
2	Rivesville (Straight) Subsidence	Marion Co.	Subsidence Investigation
	Morgantown (Fox) Subsidence	Monongalia Co.	Subsidence Investigation
	Fairmont (Parks) Subsidence	Marion Co.	Subsidence Investigation
	Moundsville (Oliver) Subsidence	Marshall Co.	Subsidence Investigation
1	Fairmont (Hines) Subsidence	Marion Co.	Subsidence Investigation
	Morgantown (McCabe) Subsidence	Monongalia Co.	Subsidence Investigation
9	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
9	Pageton Refuse Pile	McDowell Co.	Surveying, Mapping, CADD
	Eckman Refuse Pile	McDowell Co.	Surveying, Mapping, CADD
3	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

West Virginia Department of Environmental Protection
Office of Abandoned Mine Lands and Reclamation
Completed Projects – 1992 to Present
Triad Engineering
St. Albans, 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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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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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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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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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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1996	Fairmont (Bosley) Subsidence	Fairmont	Drilling, Subsidence Investigation
	Fairmont (Neely) Subsidence	Fairmont	Drilling, Subsidence Investigation
	Thomas (Heasley) Subsidence	Thomas	Drilling, Subsidence Investigation
	Thomas (Paugh) Subsidence	Thomas	Drilling, Subsidence Investigation
	Fairmont (Pitsy) Landslide	Fairmont	Drilling, Subsidence Investigation
	Turkey Run Slide & Drainage	Upshur Co.	Subsurface Investigation for In-house Design
	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
1997	Pine Bluff Tipple and Portal	Harrison Co.	Subsurface Investigation for In-house Design
	Thomas (Uchic) Subsidence	Thomas	Drilling, Subsidence Investigation
	Rivesville (Miller) Subsidence	Rivesville	Drilling, Subsidence Investigation
	Fairmont (Christ Temple) Subsidence	Fairmont	Drilling, Subsidence Investigation
	Fairmont (Dukich) Subsidence	Fairmont	Drilling, Subsidence Investigation
	AML Surveying and Mapping	Various	Surveying & Mapping, CADD
	Fairmont (Renner) Subsidence	Fairmont	Drilling, Subsidence Investigation
	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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YEAR	PROJECT NAME	LOCATION	SERVICES PROVIDED
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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YEAR	PROJECT NAME	LOCATION	SERVICES PROVIDED
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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2010 THRU 2013	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
	Dingess Street Emergency Drainage	Logan County, WV	Drilling & Sampling and Full Civil Design
	Keystone Emergency Drainage	McDowell Co., WV	Drilling & Sampling and Full Civil Design

AML and RELATED PROJECT EXPERIENCE MATRIX

PROJECT	Exp. Basis C=Corp. P=Personal *	Additional Info Provided in Section (s) **	PROJECT EXPERIENCE REQUIREMENTS															PARTICIPATION/CAPACITY *** M=Management P=Professional				
			Abandoned Surface Mine Reclamation	Abandoned Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/Replacement	Construction Inspection/Management	Water Treatment	Equipment/Structure Removal	Stream Restoration	Geotechnical/Stability	Lee McCoy, P.E.	James. R. "Bo" Criniti	Amanda Sutphin	Danny Lipscomb, PE	Steven A Clark, PS
Morris Creek Drainage	C			X	X	X					X	X	X	X	X	X	X	P/M		P		M
WVU Tech Drainage	C			X	X	X			X	X	X	X	X	X			X	P/M		P		M
Coal Hollow Refuse "A"	C			X	X	X					X	X	X	X		X	X			P		P/M
Dille-Widen Water Feasibility	C											X										
Mullens Water Feasibility	C											X										
Logan AMD	C				X	X				X	X	X		X	X		X					P/M
Elk Creek Portals	C			X	X	X					X	X	X	X				P/M	P			P
Rumble (Stevens) Refuse & Portals	C		X	X	X	X					X	X	X		X		X	P/M	P			P
Mullens Portals	C		X	X	X	X					X	X	X	X	X	X	X	P/M	P			P
Belington Portals & Drainage	C		X	X	X	X					X	X	X	X		X	X	P/M	P			P
Coaldale Refuse	C		X	X	X	X					X	X	X					P/M	P			P
Richardson Branch Complex	C		X	X	X	X					X	X	X	X				P/M	P		P	P

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

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

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