N O T I C E

Due to a mechanical error in one of the Purchasing Division's official time clocks on Tuesday, March 20 to Thursday, March 22, 2012, the stamp noted on some bids may have the correct day and time; however, the month that is noted is "February," but should have read "March."

CORPORATION

TERRADON

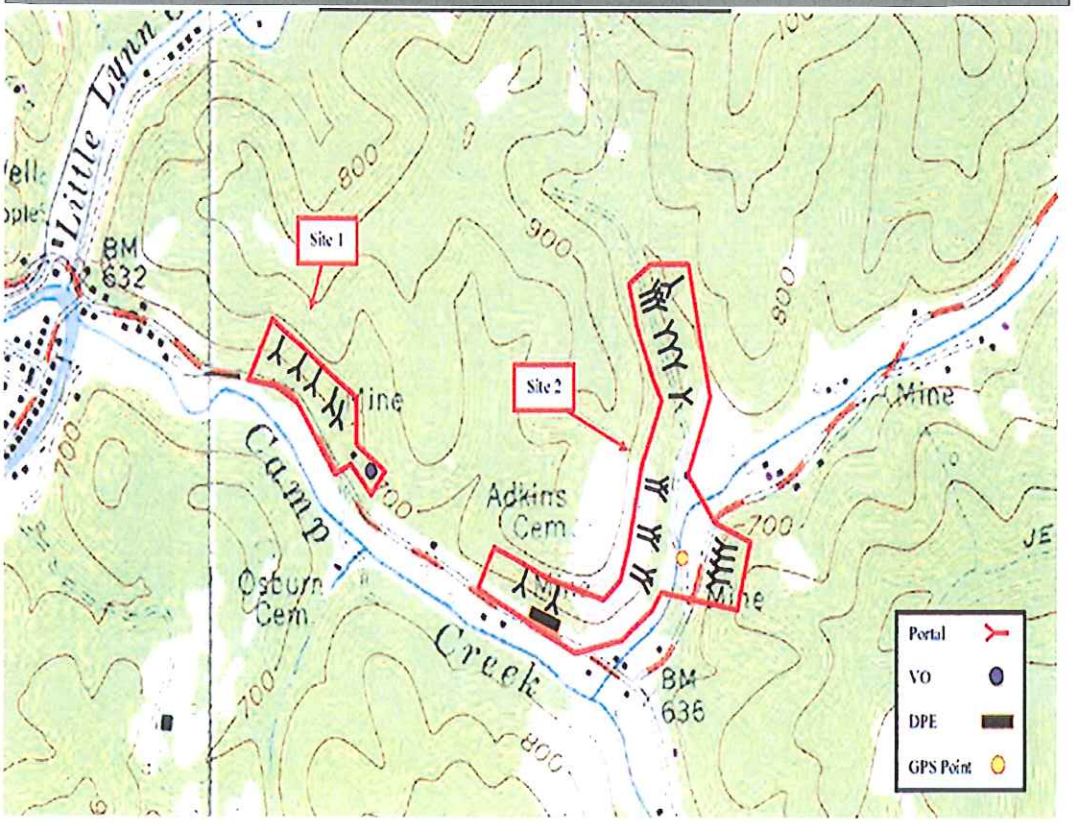
In Response to: DEP 15585

East Lynn II Design Project

Expression of Interest

Presented To:

State of West Virginia
Purchasing Division
PO Box 50130
Charleston, WV 25305-0130
Attn: Guy L. Nisbet
Buying Supervisor



March 22, 2012

Submitted By:

TERRADON Corporation
401 Jacobson Drive
Poca, WV 25159
304-755-8291
terradon.com

TERRADON

TERRADON CORPORATION
P.O. Box 519
Nitro, WV 25143
Tel: 304-755-8291
Fax: 304-755-2636
www.terradon.com

TERRADON CORPORATION
PO Box 1635
Lewisburg, WV 24901
Tel: 304-645-4636
Fax: 304-645-7614
www.terradon.com

March 22, 2012

Guy L. Nisbet, Senior Buyer
Department of Administration
Purchasing Division
2019 Washington Street, East
Charleston, WV 25305-0130

Subject: Expression of Interest
DEP15585-East Lynn II Project

Mr. Nisbet:

TERRADON is pleased to provide you with the following Expression of Interest to provide professional engineering services to the WV Department of Environmental Protection, Office of Abandoned Mine Lands and Reclamation (WVDEP/AML).

TERRADON has a long-standing history of providing quality design and construction services to the WVDEP/AML. Its diverse staff can provide complete services for any issue that may be included in this project. TERRADON welcomes the opportunity this project offers.

I look forward to an opportunity to interview for this project, and hope to be the State's preferred consultant. Should you have any questions regarding the submittal or TERRADON, please do not hesitate to contact me at 304-755-8291.

Sincerely,

Ryan Wheeler
TERRADON Corporation

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

Request for Quotation

RFQ NUMBER	PAGE
DEP15585	1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
GUY NISBET
304-558-8802

VENDOR
RFQ COPY
TYPE NAME/ADDRESS HERE
Terradon Corporation
P.O. Box 519
Nitro, WV 25143
304-755-8291

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

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
01/30/2012				

BID OPENING DATE: 03/22/2012 BID OPENING TIME 01:30PM

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

EAST LYNN II DESIGN

EXPRESSION OF INTEREST

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

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

ANY INDIVIDUAL SIGNING THIS BID IS CERTIFYING THAT: (1) HE OR SHE IS AUTHORIZED BY THE BIDDER TO EXECUTE THE BID OR ANY DOCUMENTS RELATED THERETO ON BEHALF OF THE BIDDER, (2) THAT HE OR SHE IS AUTHORIZED TO BIND THE BIDDER IN A CONTRACTUAL RELATIONSHIP, AND (3) THAT THE BIDDER HAS PROPERLY REGISTERED WITH ANY STATE AGENCIES THAT MAY REQUIRE REGISTRATION.

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
Muhammad U. Riaz	304-755-8291	03-22-12

TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE
President	55-0687626	

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

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

1. Awards will be made in the best interest of the State of West Virginia.

2. The State may accept or reject in part, or in whole, any bid.

3. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required $125 fee.

4. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods this Purchase Order/Contract becomes void and of no effect after June 30.

5. Payment may only be made after the delivery and acceptance of goods or services.

6. Interest may be paid for late payment in accordance with the ***West Virginia Code.***

7. Vendor preference will be granted upon written request in accordance with the ***West Virginia Code.***

8. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

9. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.

10. The laws of the State of West Virginia and the ***Legislative Rules*** of the Purchasing Division shall govern the purchasing process.

11. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.

12. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.

13. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at **www.state.wv.us/admin/purchase/vrc/hipaa.html** and is hereby made part of the agreement provided that the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.

14. **CONFIDENTIALITY:** The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf.

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

16. **ANTITRUST:** In submitting a bid to any agency for the State of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the State of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, or person or entity submitting a bid for the same material, supplies, equipment or services and is in all respects fair and without collusion or Fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division. Complete all sections of the quotation form.

2. Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.

3. Unit prices shall prevail in case of discrepancy. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.

4. All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130

5. Communication during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited (W.Va. C.S.R. §148-1-6.6).

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

Request for Quotation

RFQ NUMBER	PAGE
DEP15585	2

ADDRESS CORRESPONDENCE TO ATTENTION OF:
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304-558-8802

VENDOR
RFQ COPY
TYPE NAME/ADDRESS HERE
Terradon Corporation
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Nitro, WV 25143
304-755-8291

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DEPARTMENT OF
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601 57TH STREET SE
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25304 304-926-0499

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
01/30/2012				

BID OPENING DATE: 03/22/2012 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
	****** THIS IS THE END OF RFQ DEP15585 ****** TOTAL:					

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
Muhammad U. Riaz	304-755-8291	03-22-12

TITLE	FEIN	
President	55-0687626	ADDRESS CHANGES TO BE NOTED ABOVE

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

TERRADON CORPORATION

Expression of Interest

In Response to: DEP 15585
East Lynn II Design Project

Presented To:

State of West Virginia
Purchasing Division
PO Box 50130
Charleston, WV 25305-0130
Attn: Guy L. Nisbet
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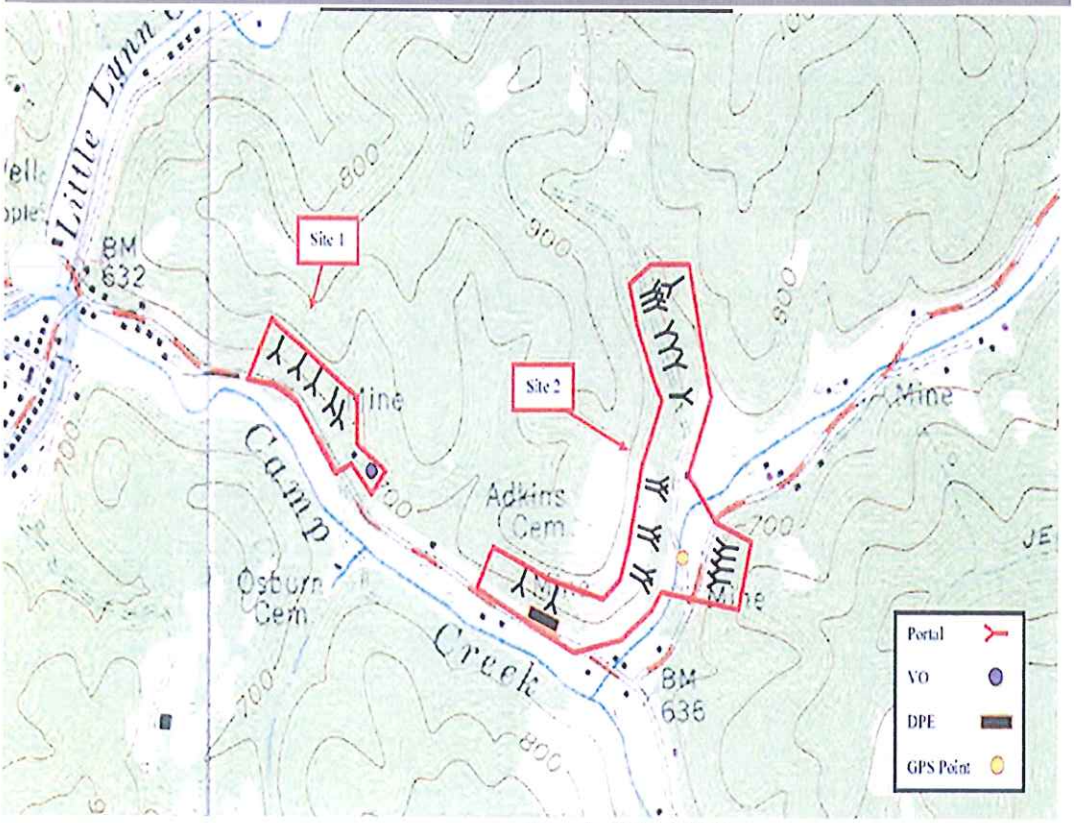


March 22, 2012

Submitted By:

TERRADON Corporation
401 Jacobson Drive
Poca, WV 25159
304-755-8291
terradon.com

CORPORATION

TERRADON

In Response to: DEP 15585
East Lynn II Design Project

Table of Contents

Submitted By:

TERRADON Corporation
401 Jacobson Drive
Poca, WV 25159
304-755-8291
terradon.com

SERVICE OFFERINGS

- LAND PLANNING & SITE DESIGN
- SURVEYING & MAPPING
- CIVIL ENGINEERING
- GEOTECHNICAL INVESTIGATIONS
- MATERIALS TESTING & CONSTRUCTION MONITORING
- ENVIRONMENTAL
- ROADWAY & BRIDGE DESIGN
- ENERGY SERVICES

TERRADON CORPORATION offers a wide range of engineering design and support services. For more than 20 years TERRADON has provided a wealth of engineering services, blanketing West Virginia and surrounding states with successful projects. The company built its reputation on expert personnel and quality, time-sensitive service. Those same founding principles hold true today.

Staff includes engineers, landscape architects, surveyors, planners, environmental scientists, designers, and technicians.

The Right People Make a Difference

TERRADON maintains more than 50 engineering professionals on staff and services the State from a Charleston-area office as well as a Lewisburg-based office.

MULTI-DISCIPLINED ENGINEERING: EXPERIENCE AND SOLUTIONS UNDER ONE ROOF

TERRADON is particularly suited to design engineering within the mountainous areas of West Virginia and the Appalachian Region. The firm has been recognized through numerous awards from professional organizations and agencies including the West Virginia Division of Highways, Department of Environmental Protection and the West Virginia Chapter of American Institute of Architects.

TERRADON maintains more than 50 leading-edge staff selected to service particular client needs. Its offices sustain customers through a wide-range of engineering offerings.

DUE TO THE BREADTH OF SERVICES OFFERED, TERRADON IS REGARDED AS ONE OF THE REGION 'S LEADING INFRASTRUCTURE PLANNING

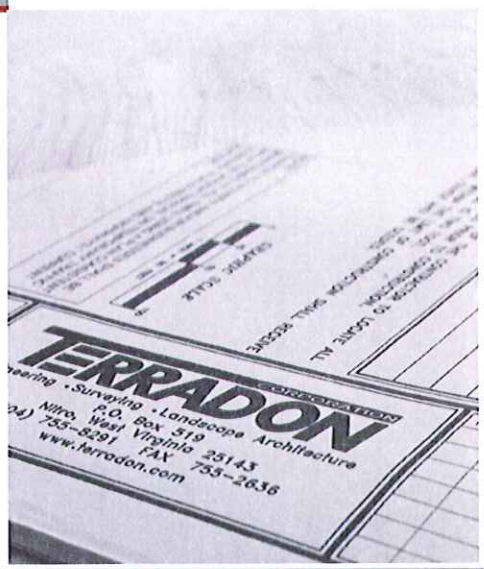
TERRADON's seven departments work cohesively to provide turn-key solutions that strive to exceed client expectations.

TERRADON's corporate culture promotes innovation and progressive thinking. Its employees understand the purpose behind their services and work to cultivate lasting relationships with clients through honest, hard work.

The family-owned business has built its reputation by providing cost effective design solutions and maintaining the highest level of customer service.

EXPRESSION OF INTEREST

TERRADON Corporation has prepared the materials of this expression of interest in accordance with the Request for Quotation (RFQ) issued by the State of West Virginia. For convenience, the following pages are arranged in order of the evaluation criteria listed in the RFQ.



TERRADON offers a professional and experienced staff to perform the tasks required for this project. TERRADON has been responsible for all aspects of numerous successfully completed Abandoned Mine Lands (AML) projects in recent years.

TERRADON maintains eight West Virginia Registered Professional Engineers located in its Primary Charleston-area office and two in its Lewisburg-based office.

Total number of WV Registered Professional Engineers (Civil or Mining) in the Primary Office:

- Joe Saunders, P.E.
  Project Manager/Engineer
- John James, P.E.
  Project Engineer
- Davis Fennell, P.E.
  Project Engineer
- Jim Nagy, P.E.
  Project Engineer
- Bud McCallister, P.E.
  Project Engineer
- Mike Pyles, P.E.
  Project Engineer
- Joe Deneault, P.E.
  Project Liaison

Total number of WV Registered Professional Engineers (Civil or Mining) in the Secondary Office:

- Phil Reed, P.E.
  Project Manager/Engineer
- Kristen McClung, P.E.
  Project Engineer

RECLAMATION ENGINEERING DESIGN EXPERIENCE

TERRADON has extensive experience in both wet and dry mine seals, with or without bat gates. Our recent experience with Stonecoal Creek had more than two dozen mine seals, and Morgan Run had over twenty as well.

In addition, TERRADON has provided regrading services on numerous refuse piles and highwalls including Jenkin Jones, Micajah, Linger, Camp Mahonegan, Cedar Creek, Roaring Creek, and Morgan Run. TERRADON has also provided regrading services on Tuppers Creek, Gerath and Drews Creek Landslides. TERRADON also regraded over 14 miles of highwall on the Garden Ground site in Fayette County.

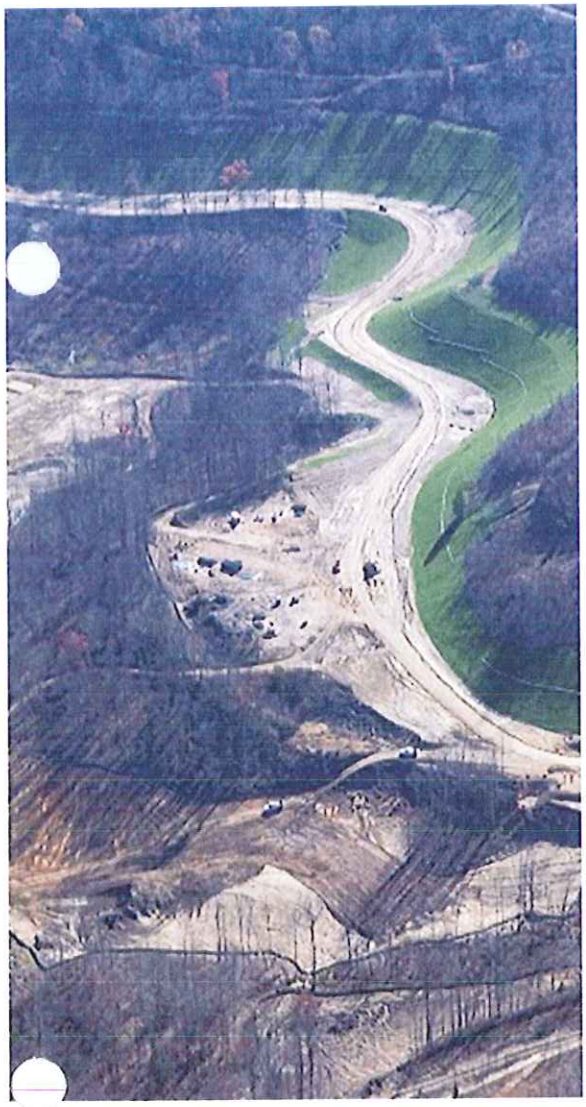
TERRADON also has experience with all facets of drainage that have been associated with the majority of projects we have completed over the years, from acid mine drainage to basic conveyance of water from problem areas via channels, ditches and pipes. Our years of experience with AML problem areas, coupled with our quick response time to WVDEP/AML needs, makes TERRADON an excellent fit for any project.

RECENT PORTAL & REFUSE EXPERIENCE

- MALLORY GIBSON PORTALS & REFUSE
- STONECOAL CREEK
- DREW'S CREEK "A" HIGHWALL
- JENKIN JONES
- MACAJAH REFUSE
- CEDAR CREEK
- CARSWELL HOLLOW
- LOWER BURNING CREEK
- SARAH ANN
- VENUS
- GRASS RUN REFUSE
- SPRING CREEK REFUSE
- BLACK WOLFE REFUSE
- ROARING CREEK
- TUPPERS CREEK
- GERATH
- NORTH VIEW MINE DRAINAGE
- HIGHLAND AVENUE
- MORGAN RUN

AVAILABLE WV AML DESIGN TEAMS

TERRADON Corporation maintains the following personnel available to assign to the project. All personnel listed have previous design or inspection experience on AML projects.



Project Engineers

- Joe Saunders, PE
- John James, PE
- Jim Nagy, PE
- Bud McCallister, PE
- Mike Pyles, PE
- Phil Reed, PE
- Kristen McClung, PE

CAD Designers

- Bill Gerencir
- Kevin Sarrett
- Kevin Garnes
- Earl Oldham
- Robert Simmons, EI
- Lee Hale, EI

Surveyors

- Robert Thaw, PS
- Dave Brown, PS
- Mike Huffman, PS
- Brian Bakanas, PS
- Randy Melton, PS

Engineering Technicians

- Dave Wallace
- Mark Clutter
- Mike Ward
- Chris Morris

AML CONSULTANT QUALIFICATION QUESTIONNAIRE

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

AML CONSULTANT QUALIFICATION QUESTIONNAIRE **Attachment "B"**

PROJECT NAME	DATE (DAY, MONTH, YEAR)	FEIN
DEP15587 Mallory (Gibson) Portals Design	11/15/11	55-0687626

1. FIRM NAME	2. HOME OFFICE BUSINESS ADDRESS	3. FORMER FIRM NAME
TERRADON Corporation	401 Jacobson Drive, Poca, WV, 25159	

4. HOME OFFICE TELEPHONE	5. ESTABLISHED (YEAR)	6. TYPE OWNERSHIP	6a. WV REGISTERED DBE (Disadvantaged Business Enterprise)
(304) 755-8291	1989	Individual **X Corporation** Partnership Joint-Venture	YES **X NO**

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

401 Jacobson Drive, Poca, WV 25159 / (304)-755-8291 / Muhammad Riaz, P.E, President / 40 persons

8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM	8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS
Muhammad Riaz, P.E., President Virginia L. King, CFO	

9. PERSONNEL BY DISCIPLINE

5 ADMINISTRATIVE	— ECOLOGISTS	4 LANDSCAPE ARCHITECTS	1 STRUCTURAL ENGINEERS
— ARCHITECTS	— ECONOMISTS	— MECHANICAL ENGINEERS	**8 SURVEYORS**
BIOLOGIST	— ELECTRICAL ENGINEERS	— **MINING ENGINEERS**	— TRAFFIC ENGINEERS
5 CADD OPERATORS	1 ENVIRONMENTALISTS	— PHOTOGRAMMETRISTS	— OTHER
— CHEMICAL ENGINEERS	— ESTIMATORS	— PLANNERS: URBAN/REGIONAL	
11 CIVIL ENGINEERS	**1 GEOLOGISTS**	— SANITARY ENGINEERS	
2 CONSTRUCTION INSPECTORS	— HISTORIANS	1 SOILS ENGINEERS	
5 DESIGNERS	— HYDROLOGISTS	— SPECIFICATION WRITERS	44 TOTAL PERSONNEL
— DRAFTSMEN			

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 9

***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:		WORKED WITH BEFORE ____ Yes ____ No
NAME AND ADDRESS:		WORKED WITH BEFORE ____ Yes ____ No
NAME AND ADDRESS:		WORKED WITH BEFORE ____ Yes ____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE ____ Yes ____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE ____ Yes ____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE ____ Yes ____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE ____ Yes ____ No
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE ____ Yes ____ No

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

YES Description and Number of Projects: **50 Projects for WVDEP/AML&R**

NO

B. Is your firm experienced in Soil Analysis?

YES Description and Number of Projects: **35 WVDEP/AML&R projects included some soil analysis. TERRADON provides geotechnical engineering on a wide variety of projects including dams, highways, bridges, etc.**

NO

C. Is your firm experienced in hydrology and hydraulics?

YES Description and Number of Projects: **35 WVDEP/AML&R projects included hydrology and hydraulics.**

NO

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

YES Description and Number of Projects:

NO **We routinely provide photo control surveys and field edit the mapping provided.**

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

YES Description and Number of Projects: **9 WVDEP/AML&R projects included the evaluation of aquifer degradation as a result of mining. Four of those projects have been designed and constructed. TERRADON has also designed hundreds of miles of waterline in the last 5 years.**

NO

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

YES Description and Number of Projects: **5 WVDEP/AML&R projects included acid mine drainage evaluation and abatement. In addition, TERRADON was 1 of only 2 firms evaluating and designing AMD abatement of special reclamation projects in 1992, 1993 and 1994.**

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:
James, John W., P.E. **Senior Geotechnical Engineer**	**10**	**32**	**8**

Brief Explanation of Responsibilities

Geotechnical Project Manager for TERRADON Corporation. Responsible for contract administration and project management; peer review of design, construction drawings and specifications; constructability review and construction cost estimate.

EDUCATION (Degree, Year, Specialization)
B.S., 1968, Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
American Society of Civil Engineers (Past President, WV Section)	**P.E., 1973,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:
Saunders, Joe, PE **Senior Design Engineer/Project Manager**	**1**	**20**	**20**

Brief Explanation of Responsibilitie1

_Primary Project Manager for and Engineer. Responsible for project oversight and overall delivery. Will be design engineer for all elements of the project and ensure compliance with all local, state and federal regulations.

EDUCATION (Degree, Year, Specialization)
Bachelor of Science – Civil Engineering, 1998
West Virginia Institute of Technology

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
ACECWV	**PE, West Virginia, 2001** **PE, North Carolina, 2005**

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:
Gerencir, William **Senior CAD Designer**	**19**	**22**	**19**

Brief Explanation of Responsibilities

Mr. Gerencir is responsible for CAD design, including site layout, grading, stream alignments. Plan, cross section, and detail sheet preparation. Quantity Takeoffs, Calculation Briefs and additional design related tasks.

EDUCATION (Degree, Year, Specialization)

Associate, 1989, Civil/Surveying Engineering Technology

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
N/A	**N/A**

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:
Brown, David A., P.S. **Professional Surveyor**	**8**	**14**	**6**

Brief Explanation of Responsibilities

Responsible for all aspects of surveying including photogrammetry control, if required, field editing of mapping, topographic mapping, establishment of survey control monuments and establishing base lines for construction layout and quantity measurement. Also, tax map overlays and detailed property clarifications.

EDUCATION (Degree, Year, Specialization)

B.S., 1996, Engineering Technology

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
West Virginia Association of Land Surveyors	**P.S. 2003, WV; P.S, 2008, TN**

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

Software

Autodesk 2010 Civil 3D
SedCad 4 - Erosion Control and Hydrology Software
Haested Method Flowmaster Software for Channel Design
Haested Methods – Water CADD (Pipe Network Analysis)
Slope Stability -
- **PC Stable**
  - **REAME**
  - **SBSLOPE**
  - **WinStable and WinStable 2003**

Piling Walls, Anchors and Reinforced Earth Walls -
- **Lpile**
- **HeliCAP**
- **Anchor 400**
- **KeyWall 2004**

TR 55, TR 20, TR 66 (Sites) - Hydrology
Hec-1, Hec HMS 2.22, Hec R As 3.1.2 – Hydrology
LC 58 + RP 61 – Structural (wall)
Microstation V8

Surveying Equipment

Trimble 4700 modular, RTK Global Positioning Total Station
Trimble Geomatics Office Software
Topcon Total Stations (3)
SMI Data Collectors (3)

Printing/Plotting/Reproduction

HP DesignJet T1120
HP DesignJet 1050C Plotter (2)
HP LaserJet 8000 Printer (2)
HP Color LaserJet 3700
HP Color LaserJet 5500
Sharp AR-550 Copier/Printer (2)
Sharp AR-C150 Full Color Copier/Printer
Océ 7056 Engineering Size Copier

15. PRESENT ACTIVITIES ON WHICH YOU ARE THE DESIGNATED ENGINEER OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
Boys Scouts of America Jamboree Site Fayette County, West Virginia	**Trinity Works 2128 Mistletoe Boulevard Fort Worth, Texas 76110**	**$100,000,000**	**50%**
Sanitary Landfill Expansion Design, West Virginia	**Confidential Client**	**$25,000,000**	**95%**
Greenbrier County Schools 5 various school projects in Greenbrier County, West Virginia	**Greenbrier County Schools 202 Chestnut Street Lewisburg, WV 24901**	**$50,000,000**	**90%**
Various Survey Projects Throughout West Virginia	**Various Clients**	**$3,000,000**	**60%**
Charleston Replacement Housing Site/Civil for CRH 1-5 Charleston, West Virginia	**Alan Ives Construction 10 South La Salle Street, Suite 3440 Chicago, Illinois 60603**	**$20,000,000**	**95%**
Robinette Branch Refuse Pile WVDEP/AML	**WVDEP/AML&R 601 57TH Street SE Charleston WV 25304**	**$850,000**	**80%**
Gains Highwall WVDEP/AML	**WVDEP/AML&R 601 57TH Street SE Charleston WV 25304**	**$1,500,000**	**80%**

Continued on next page

15. PRESENT ACTIVITIES ON WHICH YOU ARE THE DESIGNATED ENGINEER OF RECORD			
PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
Tucker County Landfill Expansion Design of Cell 7 Thomas, West Virginia	**Tucker County Solid Waste Authority PO Box 58 Thomas WV 26292**	**$15,000,000**	**95%**
Harris Branch Refuse Pile WVDEP/AML	**WVDEP/AML&R 601 57TH Street SE Charleston WV 25304**	**$95,000**	**99%**
Shabbyroom Hollow Complex AML Reclamation Project McDowell County, WV	**WVDEP/AML&R 601 57TH Street SE Charleston WV 25304**	**$750,000**	**50%**
TOTAL NUMBER OF PROJECTS: **10**		TOTAL ESTIMATED CONSTRUCTION COSTS: **$216,950,000**	

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
WVANG SFS Facility West Virginia	**Geotechnical Investigation**	**WVANG Charleston, WV**	**2012**	**$3,000,000**	**10%**
South Preston PK-8 School Preston County, WV	**Site Design**	**Preston County BOE Kingwood, WV**	**2012**	**$5,000,000**	**30%**
VDOT Value Engineering Bridge B610 Page County, VA	**Value Engineering**	**VDOT/Kanawha Stone Company Nitro, WV**	**2012**	**Savings of $750,000**	**80%**
State Office Building, Fairmont, West Virginia	**Civil, Site Design, Surveying,**	**WV Dept. of Admin. Bldg. 1, Rm. E119 State Capitol Complex Charleston, WV 25305**	**2010**	**$15,000,000**	**55%**
Kingwood Elem School Addition Kingwood, WV	**Construction Services**	**Preston County BOE Kingwood, WV**	**2011**	**$1,000,000**	**10%**
Marshall University Applied Science Bldg. Huntington, WV	**Geotechnical Investigation**	**Marshall University Huntington, WV**	**2012**	**$5,000,000**	**10%**

Continued on next page

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)
Montgomery Wastewater Treatment Plant Upgrade, Design Montgomery, West Virginia	City of Montgomery 706 3rd Avenue Montgomery WV 25136	$2,800,000	2009	Yes
Sleeths Run Bridge CR119/1 Lewis County West Virginia	WVDOT Building 5, Room A-110 1900 Kanawha Blvd. East Charleston WV 25305	$ 1,800,000	2009	Yes
Fairmont Connector, Value Engineering, Kanawha Stone Company	WVDOT Building 5, Room A-110 1900 Kanawha Blvd. East Charleston WV 25305	Savings of $2,500,000	2009	Yes
Derrick Creek Water Line Extensions Sissonville, West Virginia	West Virginia American Water PO Box 1906 Charleston WV 25327	$1,500,000	2009	Yes
Gypsy Bridge S317-19-23.25 00 Erection Plans Harrison County, West Virginia	Bilco Construction Company, Inc. 805 Wisteria Drive South Charlston, WV 25309	$ 20,000 fee	2008	Yes
South Branch Potomac River Bridge, X316-H-100.40 04 Erection Plans Hardy County, West Virginia	Vecellio & Grogan, Inc. P.O. Box 2438 Beckley, WV 25902	$31,000,000	2008	Yes
WV Route 2 Water Line Extensions Huntington, West Virginia	West Virginia American Water PO Box 1906 Charleston WV 25327	$450,000	2008	Yes
Sawmill Village Development Site/civil Design, Snowshoe, West Virginia	Summit III, LLC 295 Seven Farms Drive Charleston, WV 29492	$100,000,000	2008	Yes

Continued on next page

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)
Derrick Creek Water Line Extensions Sissonville, West Virginia	West Virginia American Water PO Box 1906 Charleston WV 25327	$1,200,000	2008	Yes
Upper Fishers Branch/Guthrie Water Main Extension Kanawha County, West Virginia	West Virginia American Water PO Box 1906 Charleston WV 25327	$2,800,000	2008	Yes
Upper Frame Phase 2 Water Main Extension Kanawha County, West Virginia	Kanawha County RDA & West Virginia American Water PO Box 1906 Charleston WV 25327	$2,100,000	2008	Yes
Back Fork Water Main Extension Webster County, West Virginia	West Virginia American Water PO Box 1906 Charleston WV 25327	$800,000	2008	Yes
New Hope 1 MG Water Storage Tank Princeton, West Virginia	WV American Water PO Box 1906 Charleston WV 25327	$600,000	2008	Yes
Putnam County 2007 Water Main Extensions, Putnam County, West Virginia	Putnam County Commission 3389 Winfield Road Winfield, WV 25213	$2,000,000	2008	Yes
Fort Lee Hydraulic Study, Water Line Extensions, and New Fuel Tanks Hope Well, Virginia	Virginia American Water Co. 900 Industrial Street Hopewell, VA 23860	$450,000	2008	Yes
Yeager Airport Rental Car Parking Deck Charleston, West Virginia	Central West Virginia Airport 100 Airport Road #175 Charleston, WV 25311	$3,000,000	2008	Yes

Continued on next page

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)
Salt Rock PSD Water Main Extensions Salt Rock, West Virginia	Salt Rock PSD & Cabell County Commission Huntington, West Virginia	$1,500,000	2008	Yes
US 35 Value Engineering, Ramp 1, WV 34 Interchange Putnam County, West Virginia	WVDOT Building 5, Room A-110 1900 Kanawha Blvd. East Charleston WV 25305	Saving $3,000,000	2007	Yes
Tucker County Landfill Expansion Design of Cell 6 Thomas, West Virginia	Tucker County Solid Waste Authority PO Box 58 Thomas WV 26292	$2,500,000	2007	Yes
Rabel Mountain Water Main Extensions Kanawha County, West Virginia	WV American Water PO Box 1906 Charleston WV 25327	$600,000	2007	Yes
Sedalia Arch Bridge, Bridge Replacement Sedalia, West Virginia	WVDOT Building 5, Room A-110 1900 Kanawha Blvd. East Charleston WV 25305	$890,000	2006	Yes
Fairmont Coke Works Redevelopment Traffic Study, Fairmont, West Virginia	City Fairmont 200 Jackson Street Fairmont, West Virginia 26554	$20,000 fee	2006	No
Hinton Landslide, Landslide Reclamation Hinton, West Virginia	WVDOT, Division of Highways Building 5, Room A-110 1900 Kanawha Boulevard East Charleston, WV 25305	$1,000,000	2006	Yes
Fort Lee Water Distribution System Upgrade Fort Lee, Virginia	WV American Water PO Box 1906 Charleston WV 25327	$1,000,000	2006	Yes
Prince Williams 1 Million Gallon Elevated Water Storage Tank Prince Williams County, Virginia	WV American Water PO Box 1906 Charleston WV 25327	$1,500,000	2006	Yes
Hickory Ridge Water Storage Tank Relocation, County, West Virginia	WV American Water PO Box 1906 Charleston WV 25327	$1,000,000	2006	Yes
Winfield High School Expansion Winfield, West Virginia	Putnam County BOE Winfield, WV 25213	$2,000,000	2006	Yes

Continued on next page

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)
City Beer Bridge on I-77 Bridge Replacement Project Wood County, West Virginia	WVDOT Building 5, Room A-110 1900 Kanawha Blvd. East Charleston WV 25305	$4,900,000	2011	Under Construction
Garden Ground Highwalls AML Reclamation Design Fayette County, West Virginia	WVDEP/AML&R 601 57TH Street SE Charleston WV 25304	$10,000,000	2010-11	Phase I completed; Phase II under construction
Venus (Hamilton) Drainage AML Reclamation Design McDowell County, West Virginia	WVDEP/AML&R 601 57TH Street SE Charleston WV 25304	$200,000	2009	Yes
Drews Creek Highwall AML Reclamation Design Raleigh County, West Virginia	WVDEP/AML&R 601 57TH Street SE Charleston WV 25304	$500,000	2009	Yes
Manila Ridge Water Extensions Putman County, West Virginia	Putman County Commission 3389 Winfield Road Winfield, WV 25213-9370	$1,500,000	2010	Yes
Sleeths Run Bridge CR119/1 Lewis County West, Virginia	WVDOT Building 5, Room A-110 1900 Kanawha Blvd. East Charleston WV 25305	$2,000,000	2010	Yes
Sarah Ann (Vance) Drainage Logan County, West Virginia	WVDEP/AML&R 601 57TH Street SE Charleston WV 25304	$600,000	2011	Yes
Little Beaver State Park Campground Design, Beaver, West Virginia	WV DNR, Parks Section 1900 Kanawha Blvd. East Capitol Complex, Bldg. #3 Charleston, WV 25305	$1,000,000	2010	Yes

18. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM HAS BEEN A SUB-CONSULTANT TO OTHER FIRMS (INDICATE PHASE OF WORK FOR WHICH YOUR FIRM AS 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
Fairmont State University Campus Improvements Fairmont, West Virginia	**Fairmont State University 1201 Locust Avenue Fairmont, WV 26554**	**$1,000,000**	**2007**	**Yes**	**Omni Associates**
Mountain View Elementary Civil, Site Design, Surveying Scott Depot, West Virginia	**Putnam County BOE Winfield, WV 25213**	**$1,000,000**	**2008**	**Yes**	**Williamson Shriver Architects**
Mountain State University Health Science Building Civil/Site/Surveying Beckley, WV	**Mountain State University PO Box 9003 Beckley, WV 25802-9003**	**$1,500,000**	**2007**	**Yes**	**Dan Sneed Architects**
WVU Recreation Center Master Plan Morgantown, WV	**West Virginia University**	**$2,000,000**	**2006**	**No**	**Omni Associates**
Doddridge County High School Doddridge County, West Virginia	**Doddridge County BOE 104 Sistersville Pike West Union, WV 26456**	**$1,500,000**	**2006**	**Yes**	**Williamson Shriver Architects**
Capon Bridge Intermediate School Hampshire County, West Virginia	**Hampshire County BOE 46 South High Street Romney, WV 26757**	**$1,000,000**	**2006**	**Yes**	**Williamson Shriver Architects**
University High School Monongalia County, WV	**Monongalia County Schools, 668 River Rd Morgantown, WV 26507**	**$12,000,000.00**	**2009**	**Yes**	**Williamson Shriver Architects**
Mountain View Elementary Scott Depot, West Virginia	**Putnam County BOE Winfield, WV 25213**	**$2,000,000**	**2008**	**Yes**	**Williamson Shriver Architects**
Moorefield Intermediate School Moorefield, West Virginia	**Hardy County BOE 510 Ashby Street Moorefield, WV 26836**	**$12,000,000**	**2008**	**Yes**	**Williamson Shriver Architects**

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 AS 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
New Teays Elementary Scott Depot, West Virginia	**Putnam County BOE Winfield, WV 25213**	**$1,000,000**	**2009**	**Yes**	**Williamson Shriver Architects**
Marshall University, Health & Wellness Center, Dormitories Site/Civil, Survey Huntington, WV	**Marshall University Facilities Planning & Management, Huntington, WV**	**$27,000,000**	**2009**	**Yes**	**Capstone Development**
Pikeview Middle School Site/Civil, Survey Mercer County, West Virginia	**Mercer County Public Schools 1403 Honaker Avenue Princeton, WV 24740**	**$5,000,000**	**2009**	**Under Construction**	**E.T Boggess Architects**
Doddridge County High School US Route 50 Turning Lanes Design Doddridge County, West Virginia	**WVDOT Building 5, Room A-110 1900 Kanawha Blvd. East Charleston WV 25305**	**$100,000**	**2006**	**Yes**	**Williamson Shriver Architects**
WVARNG Eleanor Access Road Surveying & Roadway Design Eleanor, West Virginia	**WV Army National Guard 1740 Coonskin Drive Charleston WV 25311**	**$300,000**	**2009**	**Yes**	**Williamson Shriver Architects**

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.

TERRADON has extensive experience in both wet and dry mine seals, with or without bat gates. Our recent experience with Stonecoal Creek had over two dozen mine seals, and Morgan Run had over twenty as well. In addition, we have done regrading on numerous refuse piles and highwalls including Jenkin Jones, Micajah, Linger, Camp Mahonegan, Cedar Creek, Roaring Creek, Harris Branch and Tuppers Creek, Gerath, and Drews Creek Landslides. We have experience regarding over 6 miles of dangerous highwall on the Garden Ground site in Fayette County. TERRADON also has experience designing road upgrades and pile and lagging walls, as well as experience in drainage design on all projects.

20. The foregoing is a statement of facts.

Signature: _____ Title: MARKETING DIRECTOR

Printed Name: RYAN WHEELER

Date: 3-22-2012

NOTE: THIS DOCUMENT WILL BECOME VOID AFTER DECEMBER 31 IN CALENDAR YEAR OF DATE HEREON.

AML AND RELATED PROJECT EXPERIENCE MATRIX

East Lynn II Design Project

TERRADON AML and RELATED PROJECT EXPERIENCE MATRIX

PROJECT NAME	Exp. Basis C=Corp. P=Personal *	Additional Info Provided in Section (s) **	PROJECT EXPERIENCE															PRIMARY STAFF PARTICIPATION/CAPACITY M=Management P=Professional ***					
			Abandoned Surface Mine Reclamation	Abandoned Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/ Replacement	Construction Inspection/Management	Water Treatment	Equipment/Structure Removal	Stream Restoration	Geotechnical/Stability	Joe Saunders, PE	John James, P.E.	Bill Gerencir	Dave Brown, P.S.	Kevin Sarrett	
Mallory Gibson Portals	C/P	no						X			X				X		X	M/P	M/P	P	P	P	
Roaring Creek #4	C	yes	X					X			X					X	X		P	P	P	P	
Stonecoal Creek Complex	C	yes		X	X	X					X				X	X	X		P	P	P		
Stonecoal Creek Complex #2	C	yes		X	X	X					X				X	X	X		M/P	P			
Stonecoal Creek Complex #3	C	yes		X	X	X					X				X	X	X		M/P	P			
Jenkin Jones	C	yes	X	X	X	X	X				X					X	X		M/P	P	P		
Micajah Refuse Pile	C	yes	X	X	X	X	X	X			X	X				X	X			P	P		
Carswell Hollow (Smith) Refuse	C	yes		X		X				X	X				X	X				P	P		
Cedar Creek Refuse	C	yes		X	X	X	X				X				X		X			P	P		
Spring Branch Burning Refuse Pile	C	yes		X		X	X	X			X						X			P	P		
Grass Run Refuse (Award Winner)	C	yes	X	X	X	X	X				X	X		X	X	X	X			P	P		
Black Wolfe Refuse	C	yes		X	X	X	X			X	X				X	X	X			P	P		
Lower Burning Creek Refuse	C	yes		X	X	X	X			X	X				X	X	X			P	P		
Morgan Run PA #2	C	yes	X		X	X		X			X				X		X			P	P	P	
Drews Creek "A" Highwall	C	yes	X		X	X					X						X		P	P	P	P	
Venus (Hamilton, R) Drainage	C	yes	X		X	X					X								P	P	P	P	
Sara Ann (Vance) Drainage	C	yes	X		X	X					X				X		X		P	P	P	P	
Garden Ground Highwalls	C	yes	X	X	X	X					X				X		X		P	P	P	P	
Harris Branch Refuse Pile	C	yes	X		X						X				X		X		P	P	P	P	
Kingwood Rt. 7 Highwall	C	yes	X	X	X	X					X				X		X		P	P	P	P	
Shabbyroom Hollow Complex	C	yes	X	X	X	X					X				X		X		P	P	P	P	P
Robinette Branch Refuse	C	yes	X	X	X	X					X				X		X	P	P	P	P	P	P
Gains Highwall	C	yes	X	X	X	X					X				X		X		P	P	P	P	P

* List whether project experience is corporate or personal 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.

TERRADON CORPORATION

RELEVANT PROJECT EXAMPLES

STONECOAL CREEK COMPLEX

The Stonecoal Creek Complex project is located along Stonecoal Creek, near the community of Lillybrook, in southern Raleigh County. The site consisted of numerous coal refuse piles and open mine portals which occupied approximately 66 acres of conglomerate land area. All the refuse piles had areas of steep, unstable slopes; the primary source of a very high sediment load to Stonecoal Creek. The subsequent sediment deposits in Stonecoal Creek resulted in a significant reduction of the flow-carrying capacity of Stonecoal Creek, resulting in more frequent flooding of adjacent areas. The open mine portals were easily accessible and represented a significant life safety hazard from roof falls, potential deadly gases, and other hazards.

The purpose of this reclamation program was to regrade the refuse piles to stable slopes, provide proper stabilization with vegetative cover and permanent drainage channel improvements, and seal open mine portals. Generally, the refuse piles were regraded to stable slopes and permanent drainage patterns were established, relocating portions of Stonecoal Creek where necessary. Where refuse piles toe into the creek, stream bank protection was provided. The open mine portals were closed with an appropriate mine seal. All disturbed areas were revegetated or otherwise stabilized with structural methods.

DREWS CREEK "A" HIGHWALL

Drews Creek "A" Highwall consists of a large landslide and three (3) existing mine portals. The slide starts below a pre-law surface mine bench and consists mostly of "shoot and shove" material. A local resident stated that he saw a large stream of water flowing out of the toe for several days during the initial stages. The toe of the slide is located next to the stream bank. Large boulders and very large trees have fallen over and are obstructing the stream flow. This slide is approximately six (6) acres in size. Most of the six acres is exposed soil, eroding very fast during rain events. Approximately 0.25 miles below this slide is a community of approximately 50 people living in close proximity to the creek. The slide has the potential of impounding water (during heavy rain events), in the waterway, and therefore, the potential to flood these 50 people and homes exists.

Two of the mine portals are partially collapsed. One portal is 4 feet wide and 3 feet high; the second is 6 feet wide and 3 feet high. Both of these portals have mine drainage seeping from the partially collapsed openings.

These portals are located on the above mentioned highwall bench, and are easily accessible by humans. The third portal is located inside an existing block building on the same bench.

The project approach consists of wet and dry seals on all open portals, conveyance of all drainage to new channels leading to all drainage dispensing into Drews Creek. The landslide will be regraded and all drainage from the grading will be conveyed to Drews Creek.

STONECOAL CREEK COMPLEX #2

The Stonecoal Creek Complex project is located along Stonecoal Creek, near the community of Lillybrook, in southern Raleigh County. The site consisted of eight coal refuse piles and twelve open mine portals. All the refuse piles had areas of steep, unstable slopes; they are the primary source of a very high sediment load to Stonecoal Creek. The subsequent sediment deposits in Stonecoal Creek had resulted in a significant reduction of the flow-carrying capacity of Stonecoal Creek, resulting in more frequent flooding of adjacent areas. The open mine portals were easily accessible and represent a significant life safety hazard from roof falls, potential deadly gases, and other hazards.

The purpose of this reclamation program was to regrade the refuse piles to stable slopes, provide proper stabilization with vegetative cover and permanent drainage channel improvements, and seal open mine portals. Generally, the refuse piles were regraded to stable slopes and permanent drainage patterns were established, relocating portions of Stonecoal Creek where necessary. Where refuse piles toe into the creek, stream bank protection was provided. The open mine portals were closed, wet seals were placed in the 12 portals consisting of two drainage pipes. Two of the wet seals received cisterns since local residents are using the mine water. In addition, one of the portals receiving the cistern had a bat gate installed. Two of the remaining 10 wet mine seals received bat gates. Bat gates consisted of either 24 or 36-inch diameter plastic pipe with an angle iron grill. The wet mine seals were stowed with stone and covered with soil.

All disturbed areas were revegetated or otherwise stabilized with structural methods. The access roads to gas wells were maintained and returned to as good or better condition as they were found. Existing utilities were relocated, where necessary.

STONECOAL CREEK COMPLEX #3

The Stonecoal Creek Complex #3 consisted of five coal refuse piles, scattered gob, and six open mine portals. The open mine portals were easily accessible and represent a significant life safety hazard from roof falls, potential deadly gases, and other hazards.

The purpose of this reclamation program was to regrade the refuse piles to stable slopes, provide proper stabilization with vegetative cover and permanent drainage channel improvements, and seal open mine portals. Wet seals were needed in 5 of the portals consisting of two drainage pipes. Discharge from the mine drained into the existing drainage in front of the portal or channeled to the stream. Four of the wet mine seals received bat gates. Bat gates consisted of either 24 or 36-inch diameter plastic pipe with an angle iron grill. There was only one dry mine seal needed on this project. The wet and dry mine seals were stowed with stone and covered with soil.

All disturbed areas were revegetated or stabilized with structural methods. The access roads to gas wells were maintained and returned to as good or better condition as they were found. Two piles received permanent access roads. A resident lives at the end of one of the permanent access roads, which remained open. Several foundations and piers, and railroad trestle abutments were removed.

JENKIN JONES

The Jenkin Jones project is located near Anawalt, in southern McDowell County. The site consisted of four large coal refuse piles which occupied approximately 75 acres of land area. All the refuse piles had areas of steep, unstable slopes that could slide creating a substantial hazard. In addition, two large buildings were demolished. The purpose of this reclamation program was to regrade the refuse piles to stable slopes, and provide proper vegetative cover to minimize erosion. Permanent drainage channels were provided to conduct the surface water off of, and around, the refuse piles. Generally, the refuse piles were regraded by excavating back the top portion to original ground while filling the bottom portion to form stable slopes. This required keying the toe into the steep hillside. The structures consisted of a mine office building and company store with a small warehouse. The structures were built in 1917 by the Pocahontas Fuel Company. The buildings are substantial being constructed of brick, steel, and concrete. It is likely that some asbestos was used in the construction and asbestos sampling was conducted.

MICAJAH REFUSE PILE

The Micajah Refuse Pile project is located in Wyoming County, near Covel, West Virginia. The area was deep mined resulting in two refuse dumps and an open portal. An access road crosses both refuse piles. One access road embankment had a 12- foot diameter culvert. The site was mined by United Pocahontas Coal Company and was last mined in the1960's. The site is south of Herndon on WV Route 16/2, off of WV Route 10. A frequently used gas well access road crossed the refuse piles. The refuse piles have steep, unstable side slopes that span the valley and toe out in the creek.

During heavy precipitation, refuse eroded from the side slopes and entered the stream. The refuse piles could impound water. Failure of the impoundments could endanger a railroad and public road. One of the piles was burning, creating noxious fumes and possible voids that presented a cave-in hazard. Also an open portal existed that was draining. The refuse piles were regraded to a stable configuration and streamdrainage was channelized across the refuse. Scattered gob was incorporated into the regarded areas. The access road across the refuse piles was rerouted to a better condition than it was found. Existing gas lines were also relocated.

The burning refuse was extinguished. The existing 12-foot steel plate pipe was removed and disposed of. The refuse on the valley floor of this site was "mucked" and backfilled with select rock fill over geotextile to provide a stable foundation for the regarded refuse. The existing portal was closed with a wet seal consisting of a double-block wall and two drainage pipes.

CARSWELL HOLLOW

The site is located on Carswell Hollow Road, near Kimball, in northeastern McDowell County. The area drains to Laurel Branch, a tributary of Elkhorn Creek, which flows to Tug Fork. The entire project area had been extensively mined over several decades. The project area contained a large, steep, unstable coal refuse pile as well as an area consisting of structures, foundations, retaining walls, deep shafts and a tall smoke stack, from an abandoned mining operation. The refuse pile was very steep and highly eroded along Laurel Branch.

The refuse extended into the creek and was contributing significant sediment loads to the stream. The top of the embankment continues to slough off. The steepness of the eroding slopes represented a significant life safety hazard. The dilapidated buildings, retaining walls and smoke stack created a significant-life safety hazard as well. The roof structures were collapsing, walls were in ruin and retaining walls had no fall protection. The refuse pile was re-graded to establish a stable slope and stream bank protection as installed to eliminate erosion. All disturbed areas were re-vegetated. The dilapidated structures were demolished and properly disposed. The area was re-graded as well to provide proper drainage and vegetative cover.

CEDAR CREEK REFUSE PILE

The Cedar Creek Refuse Pile project is located near the former town of Mahan, in Fayette County, West Virginia. The project area was deep mined in three coal seams, No. 2 Gas, Powellton (Eagle "A"), and Eagle, each with open or draining portals. A large refuse pile was located near a portal in the Eagle seam. The site was mined by the Christian Colliery Company and the Carbon Fuel Company. The last mining was by the Carbon Fuel Company in the No. 2 Gas seam in the 1970s. The site is about one half mile south of the Mahan exit of the West Virginia Turnpike on County Route 15. A frequently used gas well access road leads to the refuse pile. The refuse pile had steep, unstable side slopes which toe out in the creek below. The refuse covers the creek in several locations, creating the potential for impounding water and causing significant amounts of refuse to wash downstream. Additionally, during heavy precipitation, refuse erodes from the side slopes. The site had multiple portals in all three coal seams, many were draining. The mine drainage from these portals was a contributor to poor water quality on the lower Paint Creek watershed.

The roof of the portals, which remained open were severely weathered and the rock strata was cracked. The partial remains of a brick structure exist at one of the portals. The refuse pile was excavated and re-graded to a stable configuration. The regrade required a valley fill with underdrains and surface water control structures. Exposed refuse received soil cover. The structures were dismantled and removed. The draining portals had wet seals installed after the mine workings were dewatered. The discharge was treated and diverted to the stream. Debris and scrap metal was disposed of properly. All disturbed areas were revegetated.

LOWER BURNING CREEK

The Lower Burning Creek Refuse project is located at the intersection of U.S. Routes 52 and 52/12 in Mingo County, West Virginia. The project site was approximately one-half mile southeast of the town of Kermit. The site consisted of two ponds, coarse coal refuse disposal areas, foundations of preparation plant and loadout facility, open mine entries, and an unreclaimed highwall.

Two ponds were identified at the site. The ponds were adjacent to each other and next to Lower Burning Creek at the entrance to the site. The ponds appeared to have been sediment control structures and/or water treatment structures. Both ponds had failing outlet pipes and the potential to cause downstream flooding. The embankments of both ponds appeared to be constructed of refuse material. One pond had a seep at its toe that was orange from iron precipitate. Uncontaminated surface water was infiltrating through the refuse material causing acid mine drainage (AMD).

Just upstream from the ponds were the remains of a preparation plant and loadout facility. This area had debris that was potentially hazardous, including old capacitors and scrap metal. There were also deteriorating retaining walls, small refuse piles and abandoned rail lines. Additionally, several old building remains were scattered cross the project area. Coarse coal refuse was primarily disposed in two piles next to Lower Burning Creek. The first was approximately 500 feet upstream of the loadout facility. It was 1.5 acres and as much as 25 feet deep. The pile was restricting the creek as it eroded and slid into the channel. The second refuse pile was approximately 500 feet upstream from the rest. It was 3.5 acres in area and had very little vegetation. The pile was as much as 50 feet deep and had several eroded areas. There was a small illegal dump next to this pile.

The purpose of this reclamation program was to regrade and cover the exposed coal refuse at the site, and seal the open mine portals. Areas of standing water in contact with acidic coal refuse were eliminated. Drainage channels were constructed to minimize contact between runoff and the refuse. The settling ponds (presently inoperative) were removed. Garbage at the site was disposed of properly. All areas with sparse or no vegetation were vegetated. The approximate area contained within the limits of construction was 50 acres.

SARAH ANN (VANCE)

Sarah Ann (Vance) was a project that is located along Conley Branch near Sarah Ann in Logan County. The site is comprised of open and collapsed draining portals, as well as an area that consists of a slide.

TERRADON provided additional surveying to include the new slide that had developed on the site. We identified 24 portals; 8 that required wet or dry seals, along with 9 bat gate dry seals, 6 rip rap chutes and 3 cisterns. Project was completed in summer of 2011.

SPRING BRANCH REFUSE PILE

The Spring Branch Burning Refuse Pile project is located around the former town of Milburn, in Fayette County, West Virginia. The project had three separate sites, each with coal refuse piles. Site one was just below Milburn on Paint Creek, it was a small refuse pile between County Road 15 and Paint Creek. Site two was across Paint Creek from Milburn and about a half-mile up Spring Branch. It had a large refuse disposal area covering about 4 acres and two other refuse areas about two acres each.

Site three was about one half-mile above Milburn on Paint reek, it was a small refuse pile between Interstate 64/77 and the CSX railroad right-of-way. Refuse Pile No. 1 was regraded to stabilize the slope, covered with soil and revegetated, and had drainage structures installed to prevent erosion.

Refuse Pile No. 2A was excavated, burning refuse extinguished and regraded to a stable configuration. The regrade required a valley fill with underdrains and surface water control structures. The upper area of the pile was removed to original ground due to the steep slopes, thereby requiring the relocation of the gas company access road that crossed the pile. Exposed refuse received soil cover. All disturbed areas were revegetated. Refuse Pile No. 2B was removed to original ground. The refuse was hauled to Pile No. 2A and incorporated in the installed and all disturbed areas were revegetated. Refuse Pile No. 2C was handled in the same manner as Refuse Pile No. 2B. Refuse Pile No. 3 was regraded to stabilize the steep slopes, covered with soil and revegetated, and had drainage structures installed to prevent erosion. Areas on any of the three sites that have trees or shrubs established were direct seeded or soil covered in such a way that did not harm the existing vegetation.

VENUS

In the community of Venus, McDowell County, on a steep mountain side, mine drainage is discharging from a collapsed portal. The amount of water flowing from this portal changes from time to time throughout the year. This mine water discharges down the mountain side, on the surface of the ground and also through underground voids, causing damage to the homes and property of the approximate seven (7) homeowners living down slope of this discharge. A wet seal was designed at the open portal and the drainage from this mine was conveyed into a pipe across the gas well road. A grouted rip rap drainage channel was designed to carry all flow away from the property owners, down the hillside to a point of discharge near the railroad.

GRASS RUN REFUSE

The Grass Run Refuse project is located approximately one mile north of the intersection of Routes 33/3 and 119/19 (Grass Run Road) in Lewis County, West Virginia. The project site was approximately five miles east of Weston.

The Grass Run Refuse project included a series of water treatment ponds, coarse coal refuse disposal areas, fine coal refuse slurry ponds, foundations associated with a preparation plant, unreclaimed highwalls, and backfilled mine entries. Acid mine drainage (AMD), high suspended solids, and excessive runoff contributed to poor water quality and flooding along Grass Run, a tributary of Stonecoal Creek. Coarse coal refuse was disposed at numerous locations over the site. The main disposal area was a valley fill constructed in the north fork of the site. The fill covered approximately 11 acres and contained coal refuse to a depth of over 60 feet. Other coarse coal refuse disposal areas existed in the east fork of the site.

Fine coal refuse was disposed in several slurry ponds. Based on visual observations, disposal of fine coal refuse is evident along the west side of the north fork and in two ponds near the confluence of the north and east forks. The surface area of these ponds was approximately 5 acres. Several water treatment ponds existed at the site for sediment control and AMD treatment. Some of these ponds contained water and sediments while others were breached.

The reclamation of the site included regrading areas of coal refuse to provide positive drainage. Areas of coarse coal refuse located in the east fork were regraded. Two breached ponds were covered and developed into wetland areas. Two ponds were rehabilitated to provide stormwater detention to lessen downstream flooding. One pond was covered and vegetated.

Dangerous highwalls were eliminated. Surface water channels were constructed to convey runoff through the site. Finally, exposed coal refuse were covered with a 1 foot layer of soil and revegetated. The approximate area contained within the limits of construction was 120 acres.

CAMP MAHONEGAN SURFACE MINE

The Camp Mahonegan Surface Mine project is lo cated along the border of Randolph and Barbour Counties, West Virginia. The problem area included acid mine drainage (AMD) seeping from numerous locations over an area of approximately 100 acres. AMD is believed to be a result of surface mining the

Kittanning coal seam by mountaintop mining methods during the 1960s and early 1970s. During mining, the Homewood sandstone overburden was brought to the surface as spoil. This acidic overburden was responsible for sparse vegetation over portions of the site.

TERRADON identified more than 20 locations where AMD seeps impacted surface water. The reclamation plan included constructing both anoxic limestone drains (ALD) and open limestone channels (OLC) to generate alkalinity to buffer the AMD. Two existing ponds had the existing pipe outlets removed, the embankments lowered and new spillways installed. Areas that had standing water were regraded to provide positive drainage. Areas that lacked soil cover and vegetation were covered with soil from borrow areas. All disturbed areas were limed, fertilized, seeded and mulched.

BLACK WOLFE REFUSE PILE

The Black Wolfe Refuse project is located approximately one mile northwest of the intersection of State Routes 103 and 161 in McDowell County, West Virginia.

The project site was approximately three miles southeast of Gary. The site consisted of a 12 acre refuse pile and one smaller pile, five (5) portals, an abandoned tipple and mining equipment.

The refuse pile was unstable, as evidenced by slips and erosion, and had already begun to block the stream at the toe of the pile. Three (3) of the portals had large openings with hazardous roof conditions. Near the center of the project site, there were the remains of a preparation plant and load out facility. This area had debris that was potentially hazardous, including old scrap metal.

There were also deteriorating retaining walls, small refuse piles and abandoned rail lines. Additionally, old building remains were scattered around the old preparation area.

Coal refuse had been primarily disposed in two piles. They were approximately 1500 feet upstream of the confluence of the Tug Fork and Doc Branch. The large pile was as much as 50 feet deep and both had several eroded areas which were impacting Doc Branch. There was a small illegal dump next to the large pile.

The purpose of this reclamation program was to regrade and cover the exposed coal refuse at the site, properly seal the mine portals, and remove the building remains. Drainage channels were constructed to minimize uncontrolled runoff anderosion. Garbage at the site was disposed of properly. All areas with sparse or no vegetation were vegetated. The approximate area contained within the limits of construction was 28 acres.

ROARING CREEK #4

The site consisted of surface mine spoil material that was cast to the outslope and not reclaimed to the original contour. Large areas of unvegetated spoil were fund throughout the site. Also, large erosion gullies have developed in several areas which is causing spoil and fines to wash into Roaring Creek.

The landowner, Marshall Walls, raises horses and he is very concerned about the highwalls and spoil areas. One horse broke its leg and had to be destroyed. Mr. Walls has two small children and he is concerned about their safety on the areas of the farm that was mined.

The 63 acre site was graded in the design phase to remove the highwalls and revegetation was included in the design. In addition, all drainage on the site was directed to new channels and conveyed away from the problem areas. Underdrain was also utilized in the design.

TUPPERS CREEK (LAYNE)

The Tuppers Creek site is accessed by turning left (if coming from Charleston) from the exit ramp onto U.S. Route 33. Proceed for approximately 2/10 mile to County Route 119/16 (Mud Lick Road) and turn left. Proceed approximately 7/10 mile to an intersection with an unmarked dirt road. Turn right onto the dirt road and proceed 3/10 mile to the project site. The project area consisted of three landslides; one above the access road to RPM Salvage and two below. The two slides below the road were blocking the stream below and threatening the stability of the access road. The slide above the road was being addressed in this project. known to be completely flooded with other sections suspected to be at least partially flooded. The proximity of residences downstream of the flooded mine workings required that any pooled water be eliminated.

The remedial measures for this project included:

- Establishing positive drainage around the landslide at the Layne residence.
- Removal of the landslide material to a waste area.
- nstalling wet mine seals and dewatering the mine workings.
- Providing positive drainage from the wet seals to natural drainage features.
- Revegetating all disturbed areas.
- Resurfacing the existing roads in the project area
- after construction is completed.

GERATH LANDSLIDE

The Gerath Landslide project is located adjacent to the Weston/Buckhannon exit off Interstate 79 near Weston, in Lewis County, West Virginia. The site is accessed by turning left (if coming from Charleston) from the exit ramp onto U.S. Route 33. Proceed for approximately 2/10 mile to County Route 119/16 (Mud Lick Road) and turn left. Proceed approximately 7/10 mile to an intersection with an unmarked dirt road. Turn right onto the dirt road and proceed 3/10 mile to the project site.

The project area consisted of three landslides; one above the access road to RPM Salvage and two below. The two slides below the road were blocking the stream below and threatening the stability of the access road. The slide above the road was being addressed in this project.

The remedial measures for this project included:

- Establishing positive drainage around the landslide.
- Removal of the landslide material to a waste area.
- Installing underdrains and riprap buttresses.
- Revegetating all disturbed areas.
- Resurfacing the existing road in the project area after construction is completed.

NORTH VIEW MINE DRAINAGE

The North View Mine Drainage project is located in the North View section of Clarksburg, West Virginia.

The proposed mine drainage project consisted of interceptor and piping systems, wet mine seals, and a special basement treatment for mine water. Mine water was intercepted just below the coal seam elevation along Richards Avenue on both sides of its intersection with North 18th Street. The intercepted mine water was conveyed through 12 PVC pipe to the existing catch basins at the corners of the intersection.

Similarly, water from sealed mine portals about ½ mile away from the above mentioned site was conveyed to the existing storm sewer system. The wet mine seals were installed after excavating and dewatering the mine portal. During dewatering of the existing mine, the discharge was monitored and Treated, as necessary, to meet state and federal discharge limits. The wet seal consists of drainage stone, 12 inch PVC perforated pipe, and a compacted soil cover. A special assessment treatment is required to intercept was caused by roof falls and clogged mine drains.

Existing mine seals were removed and replaced with new seals and drainage system. A special underdrain system was installed continuously on three parcels to intercept subsurface seepage and prevent further damage to foundation walls and basements. The existing corroded sanitary sewer systems downstream of the problem were replaced to properly transport the intercepted drainage and sewer flows.

The treatment included removing the existing floor and installing both a perimeter drain, and a drainage blanket in the floor area. A new concrete floor was installed over the area drain. These drains collect AMD into a pipe which discharges into the sewer at the end of the driveway. This project solved wet conditions in basements, on roads, and in yards.

HIGHLAND AVENUE DRAINAGE

The Highland Avenue Drainage Project consisted of replacement of existing mine seals, the addition of an underdrain system, and the replacement of corroded underground sanitary sewer systems. The drainage system installed intercepts and drains subsurface waters from abandoned mine shafts which lie above Nuttal, Clifton, and Highland Avenues in the City of Wheetling, Ohio County, West Virginia.

The problem created a nuisances and property damage from the mineral-laden subsurface seepage onto the residential properties and public streets.

MORGAN RUN PA #2

The Morgan Run PA #2 project was located in Preston County and contained over twenty (20) open portals, gob piles and drainage associated with open draining portals on Site 1. This site also contained a partially graded gob pile on the opposite side of the road.

Site 2 consisted of one (1) deep mine portal with a borehole at stream level. The borehole was discharging at 5gpm and the associated drainage was running into a creek. A large depression was also located behind the deep mine portal.

The project area was analyzed and a design was completed to correct the problems on both sites. Wet and dry mine seals were designed to close all open portals, and the drainage was conveyed away from the homes below the site into a channel. All gob piles were regraded as well. A mine seal was designed for the deep mine portal at Site 2 and the open borehole drainage was conveyed into a newly designed channel. Both sites were designed to keep all drainage away from the property and homes below the site.

GERATH LANDSLIDE

The site consisted of surface mine spoil material that was cast to the outslope and not reclaimed to the original contour. Large areas of unvegetated spoil were fund throughout the site. Also, large erosion gullies have developed in several areas which is causing spoil and fines to wash into Roaring Creek.

The landowner, Marshall Walls, raises horses and he is very concerned about the highwalls and spoil areas. One horse broke its leg and had to be destroyed. Mr. Walls has two small children and he is concerned about their safety on the areas of the farm that was mined. The 63 acre site was graded in the design phase to remove the highwalls and revegetation was included in the design. In addition, all drainage on the site was directed to new channels and conveyed away from the problem areas. Underdrain was also utilized in the design.

MORGAN RUN PA#2

The Morgan Run PA #2 project was located in Preston County and contained over twenty (20) open portals, gob piles and drainage associated with open draining portals on Site 1. This site also contained a partially graded gob pile on the opposite side of the road. Site 2 consisted of one (1) deep mine portal with a borehole at stream level. The borehole was discharging at 5gpm and the associated drainage was running into a creek. A large depression was also located behind the deep mine portal.

The project area was analyzed and a design was completed to correct the problems on both sites. Wet and dry mine seals were designed to close all open portals, and the drainage was conveyed away from the homes below the site into a channel. All gob piles were re-graded as well. A mine seal was designed for the deep mine portal at Site 2 and the open borehole drainage was conveyed into a newly designed channel. Both sites were designed to keep all drainage away from the property and homes below the site.

KEY PERSONNEL RESUMES

W. Joe Saunders, P.E.

AML-Highways Department Head

As lead designer for TERRADON Corporation, Mr. Saunders is responsible for design engineering for AML and Highways projects. Responsibilities include preliminary design and reports, construction plans and specifications, construction estimates, contracts and bidding review, and construction engineering. Mr. Saunders has more than 14 years similar experience as a designer.

Mr. Saunders directs the in house AML and Highways design teams by QA/QC checking and reviewing, and hydrology and hydraulic calculations. Mr. Saunders also works with the design team to schedule manpower.

Education

» B.S. Civil Engineering, 1998
West Virginia University Institute of Technology

Work Experience

» 2012-Present
TERRADON Corporation

» 2003-2012
Ms Consultants

» 1998-2003
Buchart Horn

» 1990-1998
Laborers Union

Registration

» Professional Engineer in
West Virginia, North Carolina

Recent Project Experience Highlights

» **Mallory Gibson Portals (WVDEP)**
Serves as Project Manager and Lead Design Engineer for this WVDEP-AML project located in Logan County, WV. Responsible for all project tasks and coordination with the client.

» **Robinette Refuse Pile (WVDEP)**
Serves as Project Manager for this WVDEP-AML Project. While not initially involved as design engineer, Saunders now oversees any remaining work on the project, including engineering support for the client and contractor, and inspection services.

» **U.S. 35 Design and Construction Plans, West Virginia Dept. of Transportation, Mason County (WVDOH**
Structural Engineer: Overall QA/QC. Involved in checking and reviewing roadway geometry, drainage and quantities. Responsible for the design of box culverts.

» **U.S. Route 35, Review of Shop Drawings, West Virginia Dept. of Transportations, WV (WVDOH)**
Tech Resp Staff reviewed and approved shop drawings for two-span, curved bridge crossing WV County Route 38 and Lower Ninemile Creek.

» **Duhring Bridge Study, Desing and Preparation of Replacement Plans, WV (WVDOH)**
Senior Structural Engineer and Technical Manager. Detailed the study of several alternates for a replacement bridge for a structure constructed in the 1930s.

KEY PERSONNEL

William L. Gerencir
Auto CAD Designer/Technician

Mr. Gerencir has nearly 20 years of experiences in the engineering related fields including more than 13 years CAD design expertise for a broad scope of projects. He has been with TERRADON for most of those years where he is responsible for design, drafting, quantity estimates, site design and is also capable of managing a project and corresponding CAD files properly.

Work Experience

- 1993 - Present
  TERRADON Corporation
- 1992-1993
  ERM-Midwest, Inc.
- 1990-1992
  The H.C. Nutting Company

Certifications

- West Virginia DOT Certified Portland Cement/Concrete Inspector
- West Virginia Certified Compaction Inspector
- WVDOH Certified Agg. Sampler
- Fairmont State College Engineering Technician/ Technologist Certification Program #2356 Level III - TRET

Relevant Project Examples

- **Robinette Refuse Pile– 2010**
  Regraded a 5 acre refuse pile and restored 2,100 LF of stream that was being encroached on by said refuse pile as well as design all necessary surface water conveyance channels. Served as lead CAD Designer on project responsible for site layout, grading. Regraded refuse pile in a manner to maintain the current location of an existing stream so as not to add length to the US Army Corps of Engineers permit process as well as avoid disturbing residents property in the area adjacent to the stream. Ensured balancing of earthwork, drainage layout and design. Also plan sheet preparation, profiles sheet preparation, cross section sheet preparation and detail sheet preparation. Responsible to coordinate CAD work and other design tasks with other CAD designers on the project. Generate quantity takeoffs on the project for the contractors bid form and the engineers cost estimate. Prepare the calculation brief on the project, perform quality control checks on the construction plan sheets. Produce the final deliverable including plans, contractors bid form, engineers and cost estimate. Administered conceptual design meeting with WVDEP on this project. Participated in field reconnaissance and field investigation necessary for completion of the project.

William L. Gerencir
Auto CAD Designer/Technician

TERRADON CORPORATION

Relevant Project Examples

» **Gain Highwall– 2010**
Served as lead CAD Designer on this project responsible for site layout, grading, balancing of earthwork, drainage layout and design. Also plan sheet preparation, profiles sheet preparation, cross section sheet preparation and detail sheet preparation. Coordinate CAD work and other design tasks with other CAD Designers on the project. Generate quantity takeoffs on the project for the contractors bid form and the Engineers cost estimate. Prepared the calculation brief on the project as well as performed quality control checks on the construction plan sheets. Produced the final deliverable including plans, contractors bid form, engineers cost estimate, and calculation brief. Ran conceptual design meeting with WVDEP . Participated in field reconnaissance and field investigation necessary for the completion of the project.

» **Shabby Room Hollow Complex– 2010**
Served as lead CAD Designer on project responsible for site layout, grading, and balance of earthwork (regarded and balanced both refuse piles 1 and 2 which had very little room, on site as to not require removal of any refuse to another location on site of to an offsite waste area., drainage layout and design. Plan sheet preparation, profiles sheet preparation, cross section sheet preparation, detailed sheet preparation. Also coordinate CAD work and other design tasks with other CAD designers on the project. Generate quantity takeoffs on the project for the contractors bid form and the engineers cost estimate.

» **Harris Branch Refuse Pile - 2010**
Served as lead CAD Designer on project responsible for Site layout, Grading and balancing of earthwork, Drainage layout and design also plan sheet preparation, profiles sheet preparation, cross section sheet preparation and detail sheet preparation, also to coordinate CAD work and other design tasks with other Cad designers on the project, Generate quantity takeoffs on the project for the contractors bid form and the Engineers cost estimate. Also prepare the calculation brief on the project. perform quality control checks on the construction plan sheets. Produce the final deliverable including plans, contractors bid form, engineers cost estimate and calculation brief. Also run conceptual design meeting with wvdep on project. Also participate in field reconnaissance and field investigation necessary for completion of the project.

» **Kingwood Rt. & Highwall - 2010**
Served as lead CAD Designer on project responsible for Site layout, Grading and balancing of earthwork, Drainage layout and design also plan sheet preparation, profiles sheet preparation, cross section sheet preparation and detail sheet preparation, also to coordinate CAD work and other design tasks with other Cad designers on the project, Generate quantity takeoffs on the project for the contractors bid form and the Engineers cost estimate. Also prepare the calculation brief on the project. perform quality control checks on the construction plan sheets. Produce the final deliverable including plans, contractors bid form, engineers cost estimate and calculation brief. Also run conceptual design meeting with wvdep on project. Also participate in field reconnaissance and field investigation necessary for completion of the project.

Kevin Sarrett

CAD Designer

Kevin Sarrett is a veteran CAD Designer for TERRADON Corporation. Sarrett offers more than 18 years of industry experience. Sarrett has extensive experience in roadway, drainage and grading design, having provided services on numerous projects to the West Virginia Department of Transportation and the Department of Environmental Protection.

Education

» B.S. Civil Engineering
West Virginia Institute of Technology

Work Experience

» 2006 – Present
TERRADON Corporation

» 1998-2006
Neff Longest & Beam

» 1994-1998
Woolpert Consultants

Relevant Project Experience

» **Robinette Branch Refuse Pile**
Field reconnaissance to assess site conditions. Miscellaneous CAD drafting to set up sheets, details, profiles and cross sections. Designed all drainage for pipes, channels, and aprons. Prepared calculations brief with all supporting documentation, NPDES permit, SWPPP and MM109 permits. Worked with the WVDEP throughout the project in meetings, site visits, emails, and phone calls.

» **Gains Highwall**
Field reconnaissance to assess and locate portals and site conditions. Miscellaneous CAD drafting to set up sheets, details, profiles, and cross sections. Designed all drainage for portals, pipes, channels, and aprons. Prepared calculations brief with all supporting documentations, NPDES permit, SWPPP and MM109 permits. Worked with the WVDEP throughout the project in meetings, site visits, emails, and phone calls.

» **Shabbyroom Hollow Complex**
Field reconnaissance to assess and locate portals and site conditions. Miscellaneous CAD drafting to set up sheets, details, profiles, and cross sections. Designed all drainage for portals, pipes, channels, and aprons. Prepared calculations brief with all supporting documentation, NPDES permit, SWPP and MM109 permits. Worked with the WVDEP throughout the project in meetings, site visits, emails, and phone calls.

» **Harris Branch**
Field reconnaissance to assess site conditions. Miscellaneous CAD drafting to set up sheets, details, profiles, and cross sections. Designed all drainage for pipes, channels, and aprons. Prepared calculations brief with all supporting documentation, NPDES permit, SWPPP and MM109 permits. Worked with the WVDEP throughout the project in meetings, site visits, emails, and phone calls.

Kevin Sarrett

Relevant Project Experience

» **Kingwood Rt. 7 Highwall**
Field reconnaissance to assess site conditions. Miscellaneous CAD drafting to set up sheets, details, profiles and cross sections. Regraded refuse pile on site 2. Designed all drainage for portals, pipes, channels, and aprons. Prepared calculations brief with all supporting documentation, NPDES permit, SWPPP and MM109 permits. Worked with the WVDEP throughout the project in meetings, site visits, emails, and phone calls.

» **Sarah Ann (Vance) Drainage**
Field reconnaissance to assess and locate portals and site conditions. Miscellaneous CAD drafting to set up sheets, details, profiles, and cross sections. Regraded slide area. Designed all drainage for portals, pipes, channels, and aprons. Prepared calculations brief with all supporting documentation, NPDES permit, SWPPP and MM109 permits. Worked with the WVDEP throughout the project in meetings, site visits, emails, and phone calls.

» **Venus (Hamilton) Drainage**
Field reconnaissance to assess and locate portals and site conditions. Miscellaneous CAD drafting to set up sheets, details, profiles, and cross sections. Designed all drainage for portals, pipes, channel and energy dissipater. Prepared calculation brief with all supporting documentation. Worked with the WVDEP throughout the project in meetings, site visits, emails, and phone calls.

» **Drew's Creek**
Field reconnaissance to assess site conditions. Miscellaneous CAD drafting to set up sheets, details, profiles, and cross sections. Designed all drainage for pipes, channels, and aprons. Prepared calculations brief with all supporting documentation. Worked with the WVDEP throughout the project in meetings, site visits, emails, and phone calls.

» Prepare contract documents and permits for numerous WVDEP Office of Abandoned Mine Lands & Reclamation projects to include: erosion and sediment control, grading and drainage, impoundment closure, portal closure, water quality evaluation/mitigation, water treatment, and dewatering of deep mine works.

» Groundwater sampling, monitoring, and analysis for various Municipal and Industrial Landfills and WVDEP Office of Abandoned Mine Lands & Reclamation projects.

» Consultation with flood plain agencies and perform Hydraulic Impact Analyses (HEC-RAS) on numerous projects throughout West Virginia, Kentucky, and Ohio.

Mark A. Clutter

Project Manager

Prepare construction documents and associated permitting for numerous projects throughout Kentucky, Ohio, and West Virginia to include: erosion and sediment control plans, storm water management, design of impoundment closures, slope stability analysis, field surveying, drawings and specification preparation, design, design drafting, construction inspection, quality control testing, shop drawing review, project management, contract administration, permitting and report preparation.

Education

- B.S. Civil Engineering Technology
  Fairmont State College
- A.A.S. Civil Engineering Technology
  Fairmont State College
- A.A.S. Drafting/Design Engineering Technology
  Fairmont State College

Work Experience

- 2010 – Present
  TERRADON Corporation
- 2004-Present
  Codeworks
- 2000-2010
  Triad Engineering, Inc.
- 1990-2003
  WV Army National Guard

Registrations

- Certified 40 Hr. HAZWOPER (OSHA 29 CFR 1910.120) OSHA, 2001

Relevant Project Experience

- **Mullens Portals & Drainage- 2009, Mullens, Wyoming County, WV**
  Served as Project Manager for AML Project No. DEP14430. Responsibilities included: project management, design, drawings and specification preparation, contract administration, water sampling, permitting, and report preparation. The project consisted of extensive mine workings requiring: construction access, treatment of numerous open and collapsed portals, and treating/conveying storm/mine drainage, in and around the city of Mullens. A majority of the mine drainage flowed through the city storm sewer system and under County Route 54, requiring close coordination with city, state, and federal agencies.

- **Bellington Portals & Drainage– 2009, Belington, Barbour County, WV**
  Served as Project Manager- responsibilities included: project management, design, drawings and specification preparation, contract administration, water sampling, permitting, and report preparation. The project consisted of extensive mine workings requiring: construction access, treatment of numerous open and collapsed portals, and treating/conveying storm/mine drainage, in and around the city of.

- **Rumble Refuse & Portals- 2008, near Rumble, Boone County, WV**
  Served as Project Manager- responsibilities included: project management, design, drawings and specification preparation, contract administration, water sampling, permitting, and report preparation. The project consisted of extensive mine workings requiring: construction access, stabilizing/regarding of refuse piles, treatment of open and collapsed portals, and treating/conveying storm/mine drainage.

- **Elk Creek Portals- 2007, near Delbarton, Mingo County, WV**
  Served as Project Manager- responsibilities included: project management, design, drawings and specification preparation, contract administration, water sampling, permitting, and report preparation. The project consisted of extensive mine workings requiring: stream and construction access, treatment of numerous open and collapsed portals, and treating/conveying storm/mine drainage.

Mark A. Clutter
Project Manager

Relevant Project Experience

» **WVU Tech. Portals & Drainage- 2005, Montgomery**
Served as Staff Engineer- responsibilities included: project management, design, drawings and specification preparation, contract administration, water sampling, permitting, and report preparation. The project consisted of extensive mine workings requiring: construction access, horizontal drilling, treatment of numerous open and collapsed portals, and treating/ conveying storm/mine drainage.

» **Morris Creek Portals & Drainage- 2004, near Montgomery, Fayette/Kanawha County, WV**
Served as Staff Engineer- responsibilities included: project management, design, drawings and specification preparation, contract administration, water sampling, permitting, and report preparation. The project consisted of extensive mine workings requiring: construction access, treatment of numerous open and collapsed portals, acid mine drainage treatment systems, wetlands design, stream relocation, and treating/conveying storm/mine drainage.

» **Coal Hollow Refuse– 2003, near Poca, Putnam County, WV**
Served as Staff Engineer- responsibilities included: design, drawings and specification preparation, contract administration, water sampling, permitting, and report preparation. The project consisted of extensive mine workings requiring: construction access, impoundment removal, stabilizing/regarding of refuse piles, treatment of open and collapsed portals, and treating/conveying storm/mine drainage.

PURCHASING AFFIDAVIT

000031

RFQ No. _____

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

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

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

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

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

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

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: Terradon Corporation

Authorized Signature: Muhammad U. Riaz Date: 3/22/12

State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 22nd day of March, 2012.

My Commission expires May 13, 2013.

AFFIX SEAL HERE

NOTARY PUBLIC Janet Summers

Official Seal
Notary Public, State Of West Virginia
Janet Summers
9 Escoe Drive
Nitro WV 25143
My commission expires May 13, 2013