



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

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

April 3, 2012

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

Subject: Request for Quotation
DEP15789 CAD Services in Northern/Southern WV

Mr. Nisbet:

TERRADON is pleased to provide you with the following Request for Quotation 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

RECEIVED

2012 APR -3 AM 9:33

WV PURCHASING
DIVISION



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
 DEP15789

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

*709060049 304-755-8291

VENDOR

TERRADON CORPORATION
 PO BOX 519
 NITRO WV 25143

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
02/24/2012				

BID OPENING DATE: 04/03/2012 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		205-05	80.00	96,000.00
CAD SERVICES IN NORTHERN/SOUTHERN WV (OPEN-END) REQUEST FOR QUOTATION THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY THE WEST VIRGINIA DEPARTMENT OF ENVIROMENTAL PROTECTIO IS SOLICITING QUOTATIONS FROM QUALIFIED VENDORS TO PROVIDE "CAD" SERVICES FOR ABANDONED MINE LAND PROJECTS IN NORTHERN AND SOUTHERN COUNTIES OF WEST VIRGINIA. CAD SERVICES MAY BE REQUIRED PER THE ATTACHED SPECIFICATIONS, SCOPE OF WORK, BID REQUIREMENTS, TERMS AND CONDITIONS, AND ATTACHED BID SCHEDULE. DEP MAY AWARD CONTRACTS TO UP TO FOUR (4) VENDORS INQUIRES: WRITTEN QUESTIONS SHALL BE ACCEPTED THROUGH 3PM ON FRIDAY 16TH OF MARCH, 2012..... QUESTIONS MAY BE SENT VIA: USPS, FAX, COURIER OR EMAIL. IN ORDER TO ASSURE NO VENDOR RECEIVES AN UNFAIR ADVANTAGE, NO SUBSTANTIVE QUESTIONS WILL BE ANSWERED ORALLY. IF POSSIBLE, EMAIL QUESTIONS ARE PREFERRED. ANY TECHNICAL QUESTIONS RECEIVED WILL BE ANSWERED BY FORMAL WRITTEN ADDENDUM TO BE ISSUED BY THE PURCHASING DIVISION AFTER THE DEADLINE HAS LAPSED. ADDRESS INQUIRES TO: GUY NISBET						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Muhammad U. Reaz</i>	TELEPHONE (304) 755-8291	DATE 02/29/12
TITLE President	FEIN 55-0687626	ADDRESS CHANGES TO BE NOTED ABOVE

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
DEP15789

PAGE
2

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

VENDOR

*709060049 304-755-8291
 TERRADON CORPORATION
 PO BOX 519
 NITRO WV 25143

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
02/23/2012				

BID OPENING DATE: **04/03/2012** **BID OPENING TIME 01:30PM**

LINE	QUANTITY	UOP	CAT. NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION 2019 WASHINGTON STREET, EAST CHARLESTON, WV. 25305 FAX: 304.558.4115 EMAIL: GUY.L.NISBET@WV.GOV EXHIBIT 1 LIFE OF CONTRACT: THIS CONTRACT BECOMES EFFECTIVE ON AWARD..... AND EXTENDS FOR A PERIOD OF ONE (1) YEAR OR UNTIL SUCH "REASONABLE TIME" THEREAFTER AS IS NECESSARY TO OBTAIN A NEW CONTRACT OR RENEW THE ORIGINAL CONTRACT. THE "REASONABLE TIME" PERIOD SHALL NOT EXCEED TWELVE (12) MONTHS. DURING THIS "REASONABLE TIME" THE VENDOR MAY TERMINATE THIS CONTRACT FOR ANY REASON UPON GIVING THE DIRECTOR OF PURCHASING 30 DAYS WRITTEN NOTICE. UNLESS SPECIFIC PROVISIONS ARE STIPULATED ELSEWHERE IN THIS CONTRACT DOCUMENT BY THE STATE OF WEST VIRGINIA, ITS AGENCIES, OR POLITICAL SUBDIVISIONS, THE TERMS, CONDITIONS AND PRICING SET FORTH HEREIN ARE FIRM FOR THE LIFE OF THE CONTRACT. RENEWAL: THIS CONTRACT MAY BE RENEWED UPON THE MUTUAL WRITTEN CONSENT OF THE SPENDING UNIT AND VENDOR, SUBMITTED TO THE DIRECTOR OF PURCHASING THIRTY (30) DAYS PRIOR TO THE EXPIRATION DATE. SUCH RENEWAL SHALL BE IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE ORIGINAL CONTRACT AND SHALL BE LIMITED TO TWO (2) SUCCESSIVE ONE (1) YEAR PERIODS. CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE COMMODITIES AND/OR SERVICE						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Muhammad U. Riaz</i>	TELEPHONE (304)755-8291	DATE 02/29/12
TITLE President	FEIN 55-0687626	ADDRESS CHANGES TO BE NOTED ABOVE

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<p>SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM WITH THE SPECIFICATIONS OF THE BID AND CONTRACT HEREIN.</p> <p>OPEN MARKET CLAUSE: THE DIRECTOR OF PURCHASING MAY AUTHORIZE A SPENDING UNIT TO PURCHASE ON THE OPEN MARKET, WITHOUT THE FILING OF A REQUISITION OR COST ESTIMATE, ITEMS SPECIFIED ON THIS CONTRACT FOR IMMEDIATE DELIVERY IN EMERGENCIES DUE TO UNFORESEEN CAUSES (INCLUDING BUT NOT LIMITED TO DELAYS IN TRANSPORTATION OR AN UNANTICIPATED INCREASE IN THE VOLUME OF WORK).</p> <p>INSURANCE: SUCCESSFUL VENDOR SHALL FURNISH PROOF OF COVERAGE OF COMMERCIAL GENERAL LIABILITY INSURANCE PRIOR TO ISSUANCE OF THE CONTRACT. UNLESS OTHERWISE SPECIFIED IN THE BID DOCUMENTS, THE MINIMUM AMOUNT OF INSURANCE COVERAGE REQUIRED IS \$1,000,000.00</p> <p>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THIS CONTRACT IS AUTOMATICALLY NULL AND VOID, AND IS TERMINATED WITHOUT FURTHER ORDER.</p> <p>REV. 9/98 EXHIBIT 10</p> <p>REQUISITION NO.: DEP15789</p> <p>ADDENDUM ACKNOWLEDGEMENT</p> <p>I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.</p> <p>ADDENDUM NO.'S:</p>						

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	20. 1					
	NO. 2					
	NO. 3					
	NO. 4					
	NO. 5					
<p>I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS.</p> <p>VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.</p> <p style="text-align: right;"> <i>Muhammad U. Riaz</i> SIGNATURE Terradon Corporation COMPANY ..02/29/12..... DATE </p> <p>NOTE: THIS ADDENDUM ACKNOWLEDGEMENT SHOULD BE SUBMITTED WITH THE BID.</p> <p>REV. 09/21/2009</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

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6

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LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>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 THERE TO 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.</p>						
<p>***** THIS IS THE END OF RFQ DEP15789 ***** TOTAL:</p>						<p>96,000.00</p>

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Muhammad U. Riaz</i>	TELEPHONE (304) 755-8291	DATE 02/29/12
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**CAD SERVICES OPEN-END CONTRACT
NORTHERN & SOUTHERN COUNTIES OF WEST VIRGINIA
DEP15789**

Section A – Scope of Services

Background

DEP is mandated by the Surface Mining Control and Reclamation Act of 1977, Public Law 95-87, to reclaim lands and water affected by coal mining that impose social and economic costs on residents, impair environmental quality, prevent or damage the beneficial use of land or water resources or endanger the health and safety of the public.

Scope of Work

The scope of work shall include the development of detailed Abandoned Mine Land Project Drawings consisting of cover sheets, existing conditions, reclamation plan, cross sections, profiles and details. In addition, services requested will include the performance of area, linear and volume calculations for the purpose of DEP engineering design. All work will be under the direction of, reviewed and signed by a DEP professional engineer. The work to be performed under the direction of the DEP engineer will be accomplished by exchange of electronic drawings as well as plotted copies, in addition to meetings on site or at an office location. The Offeror will provide CAD Operator(s) to complete these tasks under the review of a DEP engineer.

Section B – Contractual Information & Requirements

I. Statement of Work

The Contractor shall furnish all personnel, facilities, equipment, material, supplies, and services for all of the scope of work required in this contract.

II. Location of Work

The area of work shall include both the northern and southern coalfields across the entire State of West Virginia. Projects will be coordinated with engineers from the DEP offices located in Philippi, Oak Hill and Charleston.

III. Ordering Procedure

- A. This is an indefinite quantity contract for the services specified in the Statement of Work and for the period set forth herein. Delivery or performance shall be made in accordance with the provisions of this contract.
- B. Work will be ordered by the DEP (Project Manager) by issuance of a Work Directive, which shall specify the location of the project site, the specified problem, the work to be performed and the time frame during which the work must be completed. The Contractor will then be responsible for contacting DEP to arrange a meeting to discuss the proposed project scope. DEP will provide base topographical mapping for the project and access to standard drawing formats and details. Upon completion of the meeting with a DEP representative, the Contractor will submit a cost proposal for the work requested, signed by a principal of the firm. The individual project cost proposal which contains the quantity estimates shall be in accordance with the unit prices provided in the response to this RFQ. Periodic site visits with the DEP may be required.

IV. Delivery

- A. The Offeror shall prepare, submit and deliver all drawings and/or calculations as may be requested by the specific Work Directive within the time frame established for the project. The submission of all preliminary documents or required revisions must also be accomplished within said time frame. Additional time will be given for completion of any revisions and to provide time for billings. Such time to be defined as the performance period. If these time frames are not met, the DEP may refrain from issuing further Work Directives and if a Contractor persists in being late with submittals, the DEP may refuse to renew the Contractor's contract.
- B. The work and services to be performed under this contract shall be subject to continuous monitoring and inspection by the State's authorized representatives. Such inspection will, among other things, ensure compliance. Final inspection and acceptance will be made by the DEP (Project Manager) or authorized representative(s).
- C. In accomplishing services to fulfill the requirements of Work Directives, neither the Contractor nor his Subcontractor shall create any adverse environmental effects, and shall be responsible for compliance with all applicable local, state and federal environmental and occupational health and safety laws and regulations pertinent to the work.
- D. Any Contractor shall be ineligible to bid on any aspect of the construction phase of a project if it prepared any part or aided in the preparation of any part of the contract documents for construction.

- E. DEP may retain ten percent (10%) of the Offeror's invoices until such time as the Assistant Director is satisfied that all of the conditions of the contract have been met. The Offeror must be responsible for taking any and all such measures as are necessary to correct any defect(s) arising out of the contract which are proven to be as a result of error(s) in the mapping. Such corrective action(s) shall be performed to the satisfaction of the Assistant Director.

V. Cost and Payments

- A. Payment to the contractor will be made on the basis of the items and unit prices outlined in the Purchase Order.
- B. The Offeror shall invoice after the completion of work specified in the Work Directive and after submission of all required work when the performance period is less than thirty (30) days. Invoices may be submitted monthly when the performance period exceeds 30 days. The State may retain 10 percent of each invoice to guarantee that all of the conditions of the contract have been met. This retainage may be held for a period of six (6) months and shall run from the date that construction on a project commences. However, final payment (except for any retainage which may be held) will only be made after all work and reports specified in a Work Directive and this contract are delivered and accepted by the State. All invoices shall show labor, travel, other expenses incurred during the billing period and the work yet to be accomplished. Invoices showing costs not clearly identifiable will not be paid. No payment(s) will be authorized for any work incurred as a result of any error on the part of the Contractor.

Section C – Qualification Requirements & Evaluation Factors

I. Offeror Qualification Requirements

The Offeror shall demonstrate the capability of providing senior level CAD services.

During the performance of this contract, the Contractor agrees to follow and obey all Federal and State Laws and Regulations, etc.

The Offeror must meet the requirements listed below in order to be considered qualified to perform the work designated by this RFQ. Successful Offerors should have the following professional capabilities or staff available at the time of the bid:

- Professional Computer Aided Drafting Capabilities;
- Minimum eight (8) years CAD experience;

- Must demonstrate that employee (s) designated have participated in preparation of drawings on a minimum of five (5) AML Reclamation Projects;
- Adequate Computer Aided Design Capabilities (AutoCAD Version Release 17 or Engineer approved alternate);
- Capacity to process and complete multiple projects within the designated time frames

Vendors must submit the following at the time of bid:

1. Names of individuals performing work including years of CAD experience.
2. List of similar projects completed by your firm and each individual offered in this RFQ (included past five (5)).
3. List of similar projects currently working on.
4. Name of Project Manager anticipated for this project.
5. Number of years your company has performed this type of work.

II. The Contractor will be required to have knowledge or experience in the following areas:

A. Development of AML Project drawings including cover sheet, existing conditions, reclamation plan, grading and drainage layout, details and profiles.

III. All work prepared under this contract will be performed under the direction and reviewed by a Professional Engineer employed by the DEP and his or her stamp and signature will be affixed to the cover sheet of all contract documents.

IV. On certain projects the Contractor shall obtain additional umbrella insurance liability coverage for no less than \$ 1,000,000.00 for bodily injury and property damage for each occurrence, and not less than \$ 1,000,000.00 aggregate. This coverage will be over and above the standard insurance coverage required on all projects, which is \$ 1,000,000.00 for bodily injury and property damage for each occurrence and not less than \$ 1,000,000.00 aggregate. Successful bidders will be required to provide a Certificate of Insurance or some form of certified proof that this insurance can be obtained on demand prior to the issuance of this contract. All employees of the Contractor and of Subcontractors engaged in the work of this contract shall be covered by West Virginia Workers' Compensation Insurance. Certificates shall be provided to DEP by the Contractor and Subcontractors showing compliance with the Workers' Compensation Laws of West Virginia.

*DEP may award contracts to up to four (4) vendors.

State of West Virginia

VENDOR PREFERENCE CERTIFICATE

...fication and application* is hereby made for Preference in accordance with West Virginia Code, §5A-3-37. (Does not apply to construction contracts). West Virginia Code, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the West Virginia Code. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Resident Vendor Preference, if applicable.

1. Application is made for 2.5% resident vendor preference for the reason checked:

- Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; or, Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or, Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; or,

2. Application is made for 2.5% resident vendor preference for the reason checked:

- Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,

3. Application is made for 2.5% resident vendor preference for the reason checked:

- Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,

4. Application is made for 5% resident vendor preference for the reason checked:

- Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; or,

5. Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:

- Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; or,

6. Application is made for 3.5% resident vendor preference who is a veteran for the reason checked:

- Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: Terradon Corporation

Signed: Muhammad U. Riaz

Date: 02/29/12

Title: President

*Check any combination of preference consideration(s) indicated above, which you are entitled to receive.

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: Muhammed U. Riaz Date: 2.29.12

State of West Virginia

County of Putnam, to-wit:

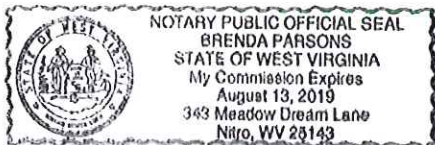
Taken, subscribed, and sworn to before me this 29th day of February, 2012.

My Commission expires August 13, 2019.

AFFIX SEAL HERE

NOTARY PUBLIC

Brenda Parsons



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.

KEY PERSONNEL

William L. Gerencir
Auto CAD Designer/Technician



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 take-offs 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 take-offs 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.

ADDITIONAL PROJECT EXPERIENCE

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

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

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

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 re-

graded 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 con-

sisted 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 Covell, 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 the 1960'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 stream drainage was channelized across the refuse. Scattered gob was incorporated into the regraded 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 regraded 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 precipita-

tion, 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 Creek, 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 located 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 re-grade 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 and erosion. 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 found 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.
- » Installing 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 Wheeling, 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 found 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.