

September 18, 2008

Project E081094

Purchasing Division  
2019 Washington Street, East  
Charleston, West Virginia 25305

RE: Expression of Interest  
Engineering Services Required for the  
Mallory Refuse Pile  
DEP14391

RECEIVED

08 SEP 18 PM 1:13

PURCHASING DIVISION  
STATE OF WV

Gentlemen:

GAI Consultants, Inc. (GAI) welcomes the opportunity to submit our proposal in response to your Request for Expression of Interest DEP14391 to provide professional engineering services. These services will result in the development of mapping, engineering drawings, contract specifications, and other contract documents required for Mallory Refuse Pile project in Logan County, West Virginia.

GAI is exceptionally well qualified to provide the State with the above referenced services offered at the most favorable terms from both a technical and cost standpoint. The work under this contract will be performed in our Charleston, West Virginia office. The Charleston office has provided the State with quality engineering services for the abatement of problems arising from abandoned mine lands since opening in 1985. We have served the State on previous West Virginia Department of Environmental Protection – Abandoned Mine Land (WVDEP-AML) open-end contracts and other contracts from 1986 to the present. As a result of this long-term experience, GAI can provide the required expertise, continuity and conformance to program guidelines established by the WVDEP-AML.

GAI welcomes you to visit our facilities located at 500 Summers Street, 3<sup>rd</sup> Floor, Charleston, West Virginia 25301.

GAI has:

- on staff four West Virginia registered civil and mining engineers who will review, stamp, and sign all work and contract documents.
- available staff of civil and mining engineers, CADD operators, surveyors, geologists, and biologists with extensive experience in reclamation engineering, hydrology, and geology; and
- extensive experience in surface and underground coal mining, environmental, ecological principles, stream restoration and mitigation, and contract administration.

In summary, GAI will provide the most favorable terms as a result of:

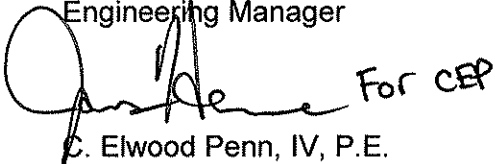
- Exceptional qualifications/previous 20 years of in-state AML experience,
- Local, Charleston presence with excellent access to the project site and AML offices, and
- Efficient and experienced personnel.

We look forward to continuing our relationship with WVDEP-AML.

Sincerely,  
GAI Consultants, Inc.



Charles F. Straley, P.E.  
Engineering Manager

 For CEP

C. Elwood Penn, IV, P.E.  
Assistant Vice President  
Managing Officer

Enclosure

EXPRESSION OF INTEREST  
ENGINEERING SERVICES REQUIRED  
FOR THE MALLORY REFUSE PILE  
LOGAN COUNTY, WEST VIRGINIA  
DEP14391

Issuing Office:

West Virginia Department of Environmental Protection  
Office of Abandoned Mine Lands and Reclamation  
601 57<sup>th</sup> Street, S.E.  
Charleston, West Virginia 25304

By:

GAI Consultants, Inc.  
500 Summers Street, 3<sup>rd</sup> Floor  
Charleston, West Virginia 25301  
(304) 926-8100

Project E081094

September 18, 2008



gai consultants

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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
DEP14391

PAGE
1

ADDRESS CORRESPONDENCE TO ATTENTION OF
CHUCK BOWMAN
304-558-2157

RFQ COPY

TYPE NAME/ADDRESS HERE

VENDOR

GAT Consultants, Inc.  
 500 Summers Street  
 3rd Floor  
 Charleston, WV 25301

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
08/21/2008				
BID OPENING DATE: 09/18/2008		BID OPENING TIME 01:30PM		

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		906-29		
<p>MALLORY REFUSE PILE DESIGN</p> <p>EXPRESSION OF INTEREST</p> <p>THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, IS SOLICITING EXPRESSIONS OF INTEREST FOR PROFESSIONAL ENGINEERING DESIGN SERVICES AND CONSTRUCTION MONITORING SERVICES AT THE MALLORY REFUSE PILE PROJECT IN LOGAN CO, WEST VIRGINIA, PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS.</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>						

RECEIVED  
 AUG 26 2008  
 GAT CONSULTANTS INC.  
 NO. \_\_\_\_\_

SEE REVERSE SIDE FOR TERMS AND CONDITIONS			
SIGNATURE <i>Charles Straley</i>	TELEPHONE 304.926.8100	DATE Sept 18, 2008	
TITLE Engineering Manager	FEIN 25-1260999	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. All quotations are governed by the *West Virginia Code* and the *Legislative Rules* of the Purchasing Division.
4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125.00 registration fee.
5. All services performed or goods delivered under State Purchase Orders/Contracts are to be continued for the term of the Purchase Order/Contract, 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.
6. Payment may only be made after the delivery and acceptance of goods or services.
7. Interest may be paid for late payment in accordance with the *West Virginia Code*.
8. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
9. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
11. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, this Contract may be deemed null and void, and terminated without further order.
14. **HIPAA Business Associate Addendum:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (<http://www.state.wv.us/admin/purchase/vrc/hipaa.htm>) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Covered Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
15. **West Virginia Alcohol & Drug-Free Workplace Act:** If this Contract constitutes a public improvement construction contract as set forth in Article 1D, Chapter 21 of the West Virginia Code ("The West Virginia Alcohol and Drug-Free Workplace Act"), then the following language shall hereby become part of this Contract: "The contractor and its subcontractors shall implement and maintain a written drug-free workplace policy in compliance with the West Virginia Alcohol and Drug-Free Workplace Act, as set forth in Article 1D, Chapter 21 of the West Virginia Code. The contractor and its subcontractors shall provide a sworn statement in writing, under the penalties of perjury, that they maintain a valid drug-free work place policy in compliance with the West Virginia Alcohol and Drug-Free Workplace Act. It is understood and agreed that this Contract shall be cancelled by the awarding authority if the Contractor: 1) Fails to implement its drug-free workplace policy; 2) Fails to provide information regarding implementation of the contractor's drug-free workplace policy at the request of the public authority; or 3) Provides to the public authority false information regarding the contractor's drug-free workplace policy."

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**INSTRUCTIONS TO BIDDERS**

1. Use the quotation forms provided by the Purchasing Division.
2. **SPECIFICATIONS:** 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. Complete all sections of the quotation form.
4. Unit prices shall prevail in cases of discrepancy.
5. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.
6. **BID SUBMISSION:** 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

**EXPRESSION OF INTEREST**  
**Mallory Refuse Pile**

**Requisition #DEP 14391**

**Part 1 GENERAL INFORMATION**

**1.1 Purpose:**

The Acquisition and Contract Administration Section of the Purchasing Division State is soliciting Expression(s) of Interest (EOI) for the WVDEP, Office of Abandoned Mine Lands, from qualified firms to provide architectural/engineering services as defined in section two (2) and three (3), and construction monitoring services during the construction phase of the project as defined by the **Scope of Work**. Construction Inspection by the firm will be at the option of WVDEP/AML.

**1.2 Project:**

The mission or purpose of the project described in sections 2 & 3 is to provide design services to:

**Mallory Refuse Pile:**

Provide for the design to construct drainage channels to divert water to a nearby stream.

Provide for the design to stabilize a refuse pile.

Provide for the upgrade of the access road.

Provide for the design of stream bank protection.

Provide for the conditioning and re-vegetation of all areas disturbed during construction.

**1.3 Format:**

All responses should be submitted in a loose-leaf, three-ring binder. The response should be presented in concise format which defines the corporate history and the experience, qualifications, and performance data of the firm's staff as requested by the AML Consultant Confidential Qualification Questionnaire (CCQQ), Attachment B and the AML and Related Project

Experience Matrix (RPEM), Attachment C .

**Electronic copies of the above referenced documents Attachment "B" and Attachment "C" are available online for registered vendors at: <http://www.state.us.wv/admin/purchase/newbul.htm>**

**1.4 Inquiries:**

Additional information inquiries regarding this EOI must be submitted in writing to the State Buyer with the exception of questions regarding proposal submission, which may be oral. The deadline for written inquiries is identified in the Schedule of Events, Section 1.16. All inquiries of specification clarification must be addressed to:

Chuck Bowman, Buyer  
Purchasing Division  
P.O. Box 50130  
Charleston, WV 25305-0130  
Fax: (304) 558-4115  
[charles.a.bowmanjr@wv.gov](mailto:charles.a.bowmanjr@wv.gov)

**The firm, or anyone on the firm's behalf, is not permitted to make any contact whatsoever with any member of the evaluation committee. Violation may result in rejection of the EOI. The State Buyer named above is the sole contact for any and all inquiries after this EOI has been released.**

**1.5 Vendor Registration:**

Firms participating in this process should complete and file a **Vendor Registration and Disclosure Statement** (Form WV-1) and remit the registration fee. Firm is not required to be a registered vendor in order to submit an EOI, but the **successful firm must register and pay the fee prior to the issuance of an actual contract.**

**1.6 Oral Statements and Commitments:**

Firm must clearly understand that any verbal representations made or assumed to be made during any oral discussions held between firm's representatives and any State personnel are not binding. Only the information issued in writing and added to the Expression of Interest specifications file by an official written addendum is binding.

**1.7 Economy of Preparation:**

EOI's should be prepared simply and economically, providing a straightforward, concise description of firm's abilities to satisfy the requirements of the EOI. Emphasis should be placed on completeness and clarity of content. Example projects referred to in a firm's EOI's submittal should address projects that are similar in scope to that of the EOI. **Firms must complete the CCQQ and RPEM as included in Section 4.2 of this EOI.**

**1.8 Labeling of the Sections:** The response sections should be labeled for ease of evaluation.



**1.9 Submission:**

1.9.1 State law requires that the original expression shall be submitted to the Purchasing Division. All copies to the Purchasing Division must be submitted **prior** to the date and time stipulated as the opening date. All expressions will be date and time stamped on the Purchasing Division official time clock to verify time and date of receipt.

1.9.2 Firms mailing expressions should allow sufficient time for mail delivery to ensure timely arrival. The Purchasing Division **CANNOT** waive or excuse late receipt of an expression which is delayed and late for any reason according West Virginia State Code §5A-3-11. Any EOI received after the bid opening time and date will be immediately disqualified in accordance with State law and the Legislative Rule 148-CSR-1.

**Submit:**

One original plus (1) convenience copy and (1) copy on CD to:  
Purchasing Division  
2019 Washington Street, East  
P.O. Box 50130  
Charleston, WV 25305-0130

The outside of the envelope or package(s) should be clearly marked:

Buyer: CB-23  
Req#: DEP 14391  
Opening Date: 09/18/2008  
Opening Time: 1:30 pm

**1.10 Rejection of Expressions:**

The State shall select the best value solution according to §5G-1-3 of the West Virginia State Code. However, the State reserves the right to accept or reject any or all expressions and to reserve the right to withdraw this Expression of Interest at any time and for any reason. Submission of, or receipt by the State of Expressions confers no rights upon the firm nor obligates the State in any manner.

**1.11 Incurring Costs:**

The State and any of its employees or officers shall not be held liable for any expenses incurred by any firm responding to this EOI for expenses to prepare, deliver, or to attend the short-list interviews.

**1.12 Addenda:**

If it becomes necessary to revise any part of this EOI, an official written

addendum will be issued by the State to all potential firms of record.

**1.13 Independent Price Determination:**

A contract will not be considered for award if the negotiated price was not arrived at independently without collusion, consultation, communication, or agreement as to any matter relating to prices with any competitor.

**1.14 Price Quotations:** No price or fee quotation is requested or permitted in the response.

**1.15 Public Record:**

*1.15.1 Submissions are Public Record.*

All documents submitted to the State Purchasing Division related to purchase orders/contracts are considered public records. All EOI's submitted by firms shall become public information and are available for inspection during normal official business hours in the Purchasing Division Records and Distribution center after the expressions have been opened.

*1.15.2 Written Release of Information.*

All public information may be released with or without a Freedom of Information request, however, only a written request will be acted upon with duplication fees paid in advance. Duplication fees shall apply to all requests for copies of any document. Currently the fees are \$0.50/page, or a minimum of \$10.00 per request, which ever is greater.

*1.15.3 Risk of Disclosure.*

The only exemptions to disclosure of information are listed in West Virginia Code §29B-1-4. Primarily, only trade secrets as submitted by a firm are the only exemption to public disclosure. The submission of any information to the State by a firm puts the risk of disclosure on the firm. The submission of any information to the State by a vendor puts the risk of disclosure on the vendor. The State does not guarantee non-disclosure of any information to the public.

**1.16 Schedule of Events:**

Release of EOI.....08/21/2008  
EOI Opening Date..... 09/18/2008

**1.17 Mandatory Pre-Bid Conference: N/A**

1.18 **Bond Requirements:** N/A

1.19 **Purchasing Affidavit:**

West Virginia State Code §5A-3-10a (3) (d) requires that all firms submit an Affidavit regarding any debt owed to the State and licensing and confidentiality certifications. The Affidavit **must** be signed and submitted prior to award. It is preferred that the Affidavit be submitted with the EOI.

## **PART 2 OPERATING ENVIRONMENT**

2.1 **Location:**

### **Directions to the Mallory Refuse Pile:**

Turn off of Route 10 into the community of Mallory. Take Wagon Wheel Drive, and then take the first right past the Mallory Baptist Church, this street is not named or marked. The problem area is located behind and on the side of the mountain of Mrs. Pearl Short's home.

Location Map is attached (Attachment A1).

2.2 **Background:**

Firms are to be licensed Architectural/Engineering Firms (A/E) and should be familiar with, and have a successful track record of design of similar projects. The anticipated contract will be for "full-service" A/E design. Aspects of the design are to include, but not be limited to, Civil, Structural, Geological and Hydrological.

*The successful A/E will be responsible for Mapping and Design of the following:*

The problem area consists of a 15 acre refuse pile located on a hillside above Mallory, WV. The pile is very steep and heavily eroded. The pile is unstable and shows evidence of sliding. The pile is easily accessible and shows evidence of frequent visitation. There are several houses located near the base of the pile and has the potential of impacting the homes through flooding or a landslide, damaging homes, property, and the potential for loss of life.

Preliminary design documents will be due 90 days from the issuance of the Purchase Order.

## **PART 3 PROCUREMENT SPECIFICATIONS**

**3.1 General Requirements:**

Firm must submit a completed CCQQ (Attachment B ) and RFEM (Attachment C ) in Section 4.2

**3.2 Project Description:**

The scope of the project described in Sections 2 & 3 is as follows:

**Mallory Refuse Pile:**

Refer to Section (1.2)

**3.3 Special Terms and Conditions:**

3.3.1 *Bid and Performance Bonds:* Not Applicable

3.3.2 *Insurance Requirements:* \$1,000,000 Professional Liability with the WVDEP listed as additional insured. #DEP 14391 must be listed on Insurance Certificate.

3.3.3 *License Requirements:* Workers Compensation Certificate upon award.

**3.4 General Terms and Conditions:**

By signing and submitting the EOI, the successful firm agrees to be bound by all the terms contained in Section Three (3) of this EOI.

**3.4.1 Conflict of Interest:**

Firm affirms that it, its officers or members or employees presently have no interest and shall not acquire any interest, direct or indirect which would conflict or compromise in any manner or degree with the performance or its services hereunder. The firm further covenants that in the performance of the contract, the firm shall periodically inquire of its officers, members and employees concerning such interests. Any such interests discovered shall be promptly presented in detail to the Agency.

**3.4.2 Prohibition Against Gratuities:**

Firm warrants that it has not employed any company or person other than a bona fide employee working solely for the firm or a company regularly employed as its marketing agent to solicit or secure the contract and that it has not paid or agreed to pay any company or person any fee, commission, percentage, brokerage fee, gifts or any other consideration contingent upon or resulting from the award of the contract. For breach or violation of this warranty, the State

shall have the right to annul this contract without liability at its discretion, and/or to pursue any other remedies available under this contract or by law.

**3.4.3 Certifications Related to Lobbying:**

Firm certifies that no federal appropriated funds have been paid or will be paid, by or on behalf of the company or an employee thereof, to any person for purposes of influencing or attempting to influence an officer or employee of any Federal entity, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment or modification of any Federal contract, grant, loan, or cooperative agreement.

If any funds other than federally appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee or any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the firm shall complete and submit a disclosure form to report the lobbying.

Firm agrees that this language of certification shall be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub recipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this contract was made and entered into.

**3.4.4 Vendor Relationship:**

The relationship of the firm to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by the parties to this contract. The firm as an independent contractor is solely liable for the acts and omissions of its employees and agents.

Firm shall be responsible for selecting, supervising and compensating all individuals employed pursuant to the terms of this EOI and resulting contract. Neither the firm nor any employees or contractors of the firm shall be deemed to be employees of the State for any purposes whatsoever.

The Firm shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties,

fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension or other deferred compensation plans, including but not limited to Workers' Compensation and Social Security obligations, and licensing fees, etc. and the filing of all necessary documents, forms and returns pertinent to all of the foregoing.

The Firm shall hold harmless the State, and shall provide the State and Agency with a defense against all claims including but not limited to the foregoing payments, withholdings, contributions, taxes, social security taxes and employer income tax returns.

The firm shall not assign, convey, transfer or delegate any of its responsibilities and obligations under this contract to any person, corporation, partnership, association or entity without expressed written consent of the Agency.

**3.4.5 Indemnification:**

The firm agrees to indemnify, defend and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person or firm performing or supplying services, materials or supplies in connection with the performance of the contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the firm, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use or disposition of any data used under the contract in a manner not authorized by the contract, or by Federal or State statutes or regulations; (3) Any failure of the firm, its officers, employees or subcontractors to observe State and Federal laws, including but not limited to labor and wage laws.

**3.4.6 Contract Provisions:**

After the most qualified firm is identified, and fee negotiations are concluded, a formal contract document will be executed between the State and the firm. The order of precedence is the contract, the EOI and the firm's response to the EOI.

**3.4.7 Governing Law:**

This contract shall be governed by the laws of the State of West Virginia. The firm further agrees to comply with the Civil Rights Act of 1964 and all other applicable laws (Federal, State or Local Government) regulations.

**3.4.8 Compliance with Laws and Regulations:**

The firm shall procure all necessary permits and licenses to comply with all applicable laws, Federal, State or municipal, along with all regulations, and

ordinances of any regulating body.

The firm shall pay any applicable sales, use, or personal property taxes arising out of this contract and the transactions contemplated thereby. Any other taxes levied upon this contract, the transaction, or the equipment, or services delivered pursuant here to shall be borne by the contractor. It is clearly understood that the State of West Virginia is exempt from any taxes regarding performance of the scope of work of this contract.

**3.4.9 *Subcontracts/Joint Ventures:***

The State will consider the firm to be the sole point of contact with regard to all contractual matters. The firm may, with the prior written consent of the State, enter into written subcontracts for performance of work under this contract; however, the firm is totally responsible for payment of all subcontractors.

**3.4.10 *Term of Contract:***

This contract will be effective (date set upon award) and shall extend until the scope of work is complete or for one (1) consecutive twelve (12) month period. The contract may be renewed upon mutual consent for two (2) consecutive years one (1) year periods or until such reasonable time as may be necessary to obtain a new contract or to complete work.

**3.4.11 *Non-Appropriation of Funds:***

If the Agency is not allotted funds in any succeeding fiscal year for the continued use of the service covered by this contract by the West Virginia Legislature, the Agency may terminate the contract at the end of the affected current fiscal period without further charge or penalty. The Agency shall give the firm written notice of such non-allocation of funds as soon as possible after the Agency receives notice. No penalty shall accrue to the Agency in the event this provision is exercised.

**3.4.12 *Contract Termination:***

The State may terminate any contract resulting from this EOI immediately at any time the firm fails to carry out its responsibilities or to make substantial progress under the terms of this EOI and resulting contract. The State shall provide the firm with advance notice of performance conditions, which are endangering the contract's continuation. If after such notice the firm fails to remedy the conditions contained in the notice, within the time contained in the notice, the State shall issue the firm an order to cease and desist all work immediately.

The State shall be obligated only for services rendered and accepted prior to the

date of the notice of termination. The contract may also be terminated upon mutual agreement of the parties with thirty (30) days prior notice.

**3.4.13 Changes:**

If changes to the original contract become necessary, a formal contract change order will be required. Prior to any work being performed, the change must be negotiated and approved by the State, the Agency and the firm. An approved contract change order is defined as one approved by the Purchasing Division and approved as to form by the West Virginia Attorney General's Office prior to the effective date of such amendment. **NO CHANGE SHALL BE IMPLEMENTED BY THE FIRM UNTIL THE FIRM RECEIVES AN APPROVED WRITTEN CHANGE ORDER.**

**3.4.14 Invoices, Progress Payments, & Retainage:**

The Firm shall submit invoices, in arrears, to the Agency at the address on the face of the purchase order labeled Invoice To pursuant to the terms of the contract. Progress payments may be made at the option of the Agency based on percentage of work completed if so defined in the final contract. Any provision for progress payments must also include language for a minimum 10% retainage until the final deliverable is accepted.

If progress payments are permitted, firm is required to identify points in the work plan at which compensation would be appropriate. Progress reports must be submitted to Agency with the invoice detailing progress completed or any deliverables identified. Payment will be made only upon approval of acceptable progress or deliverables as documented in the firm's report. Invoices may not be submitted more than once monthly and State law forbids payment of invoices prior to receipt of services.

The firm will invoice for completed work on an approved WVDEP form. If the purchase order has more than one project, a separate invoice must be provided for each project.

**3.4.15 Liquidated Damages:**

According to West Virginia State Code §5A-3-4(8), firm agrees that liquidated damages shall be imposed at the rate of **N/A** per workday, for failure to provide deliverables at the agreed upon date identified in the final contract. This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue to any other additional remedy to which the State or Agency may have legal cause for action including further damages against the firm.



3.4.16 *Record Retention (Access & Confidentiality):*

Firm shall comply with all applicable Federal and State of West Virginia rules and regulations, and requirements governing the maintenance of documentation to verify any cost of services or commodities rendered under this contract by the firm. The firm shall maintain such records a minimum of five (5) years and make available all records to Agency personnel at firm's location during normal business hours upon written request by Agency within 10 days after receipt of the request.

Firm shall have access to private and confidential data maintained by Agency to the extent required for firm to carry out the duties and responsibilities defined in this contract. Firm agrees to maintain confidentiality and security of the data made available and shall indemnify and hold harmless the State and Agency against any and all claims brought by any party attributed to actions of breach of confidentiality by the firm, subcontractors, or individuals permitted access by the firm.

**PART 4 EVALUATION & AWARD**

**4.1 Evaluation and Award Process:**

- a) Expressions of Interest will be evaluated and awarded in accordance with **§5G-1-3 Contracts for architectural and engineering services; selection process where total project costs are estimated to cost two hundred fifty thousand dollars or more.**

In the procurement of architectural and engineering services for projects estimated to cost two hundred and fifty thousand dollars or more the director of purchasing shall encourage such firms engaged in the lawful practice of the profession to submit an expression of interest, which shall include a statement of qualifications, and performance data and may include anticipated concepts and proposed methods of approach to the project. All such jobs shall be announced by public notice published as a Class II legal advertisement in compliance with the provisions of article three [§59-3-1et seq.] A committee comprised of three to five representatives of the agency initiating the request shall evaluate the statements of qualifications and performance data and other material submitted by the interested firms and select three firms which in their opinion are the best qualified to perform the desired service. Interviews with each firm selected shall be conducted and the committee shall conduct discussions regarding anticipated concepts and the proposed

methods of approach to the assignment. The committee shall then rank in order of preference no less than three professional firms deemed to be the most highly qualified to provide the services required, and shall commence scope of service and price negotiations with the highest qualified professional firm for architectural or engineering services or both. Should the agency be unable to negotiate a satisfactory contract with the professional firm considered to be the most qualified, at a fee determined to be fair and reasonable, price negotiations with the firm of second choice shall commence. Failing accord with the second most qualified professional firm, the committee shall undertake price negotiations with the third most qualified professional firm. Should the agency be unable to negotiate a satisfactory contract with any of the selected professional firms, it shall select additional professional firms in order of their competence and qualifications and it shall continue negotiations in accordance with this section until an agreement is reached.

- b) The evaluation criteria and assigned point values are as follows:

The criteria and assigned point values are as follows:

- A. WV Registered Professional Engineers (Civil or Mining)  
In the Primary Office 20 points
- B. Reclamation Engineering design experience of the Primary office's  
WVRPE as it relates to the specific project problem areas 25 points
- C. Available WV-AML Design Teams within the Primary office  
(A Design team should consist of one Project Engineer (Civil or Mining),  
one CAD person and availability of other support personnel as required by  
the particular project) 20 points

D. The Oral Interview (See Section 4.3 of this EOI)

35 points

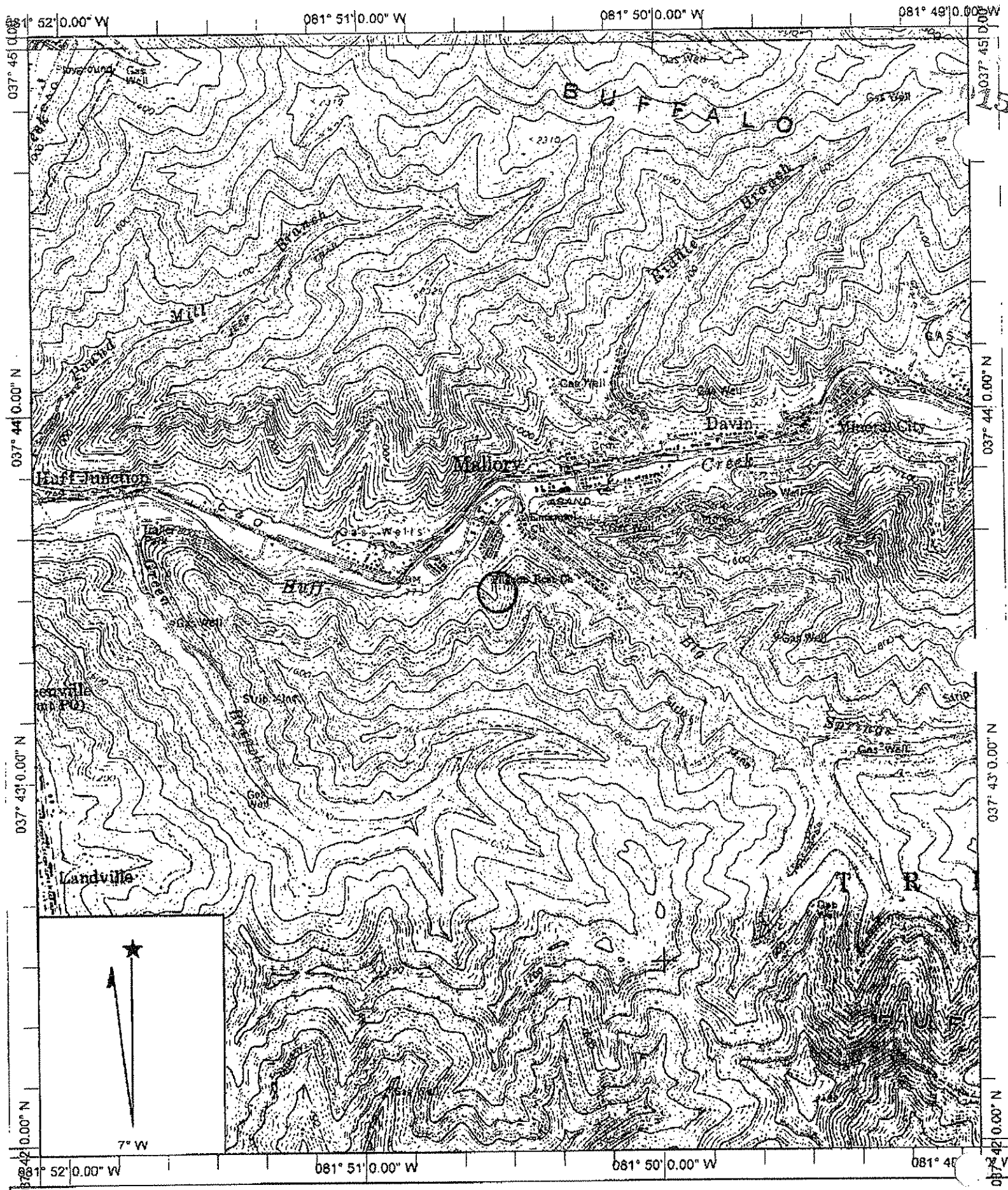
4.2 (a) AML Consultant Confidential Qualification Questionnaire (CCQQ) must be completed to be eligible  
(See Attachment B).

(b) AML and Related Project Experience Matrix (RPEM) must also be completed to be eligible (See Attachment C).

4.3 Interviews as stated in 4.1 Evaluation and Award Process will be conducted with the three firms selected as the most qualified by the WVDEP Selection Committee. The Committee will schedule the interviews.

The format for the interviews will be a 15-30 minute PowerPoint presentation consisting, at a minimum, of the following:

- Corporate/personnel experience as it relates to the project or projects
- Proposed project management plan
- Key personnel available for the proposed work
- Proposed subcontractors (mapping, geotechnical, etc.)
- Product quality control
- Project cost control



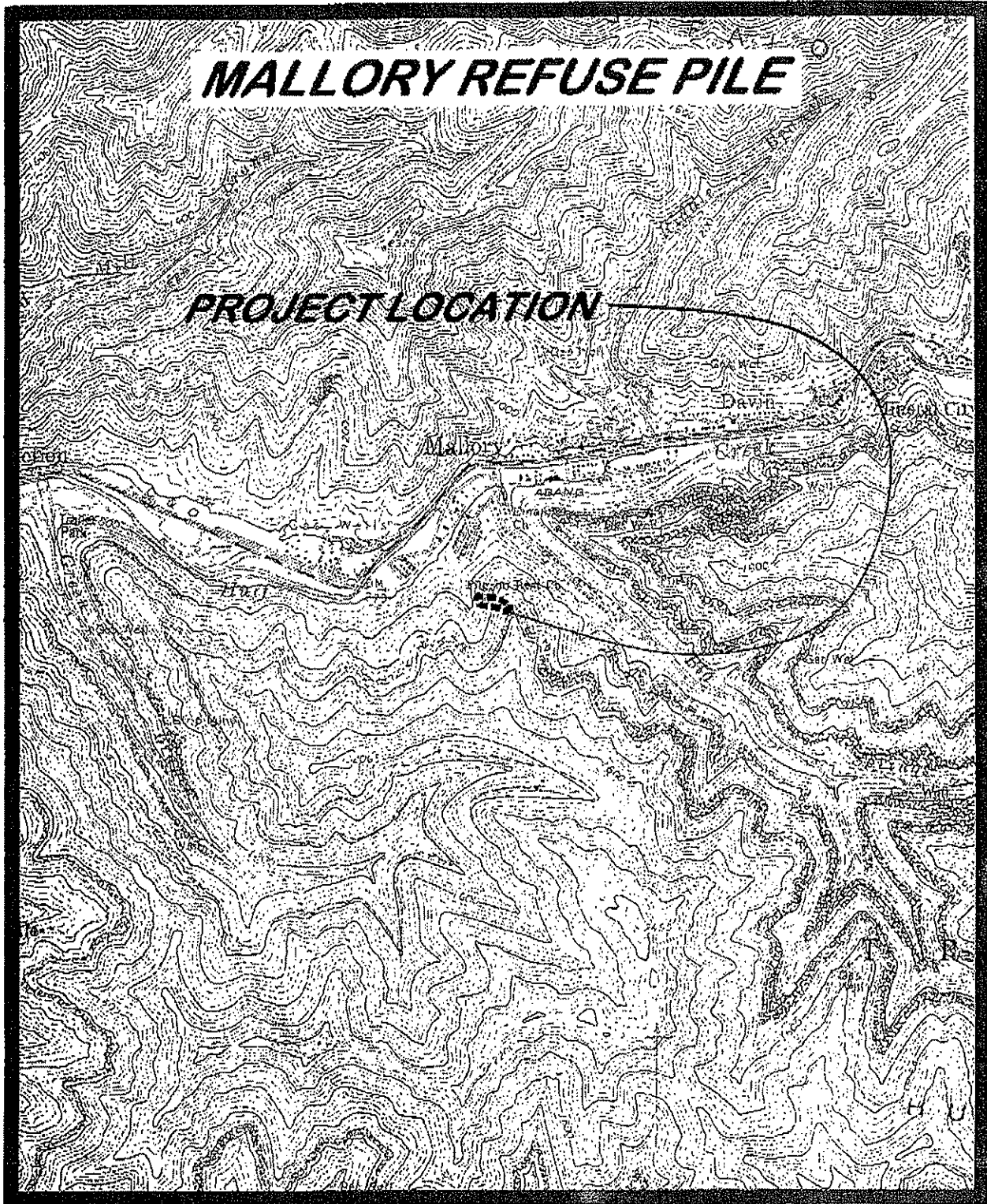
Name: MALLORY  
 Date: 7/2/2008  
 Scale: 1 inch equals 2000 feet

Location: 037° 43' 30.28" N 081° 50' 31.14" W  
 Caption: Mallory Refuse Pile

Copyright (C) 1997, Maptech, Inc.

# PROJECT LOCATION MAP

026



**SCALE: 1"=2000'**

**LOGAN COUNTY**

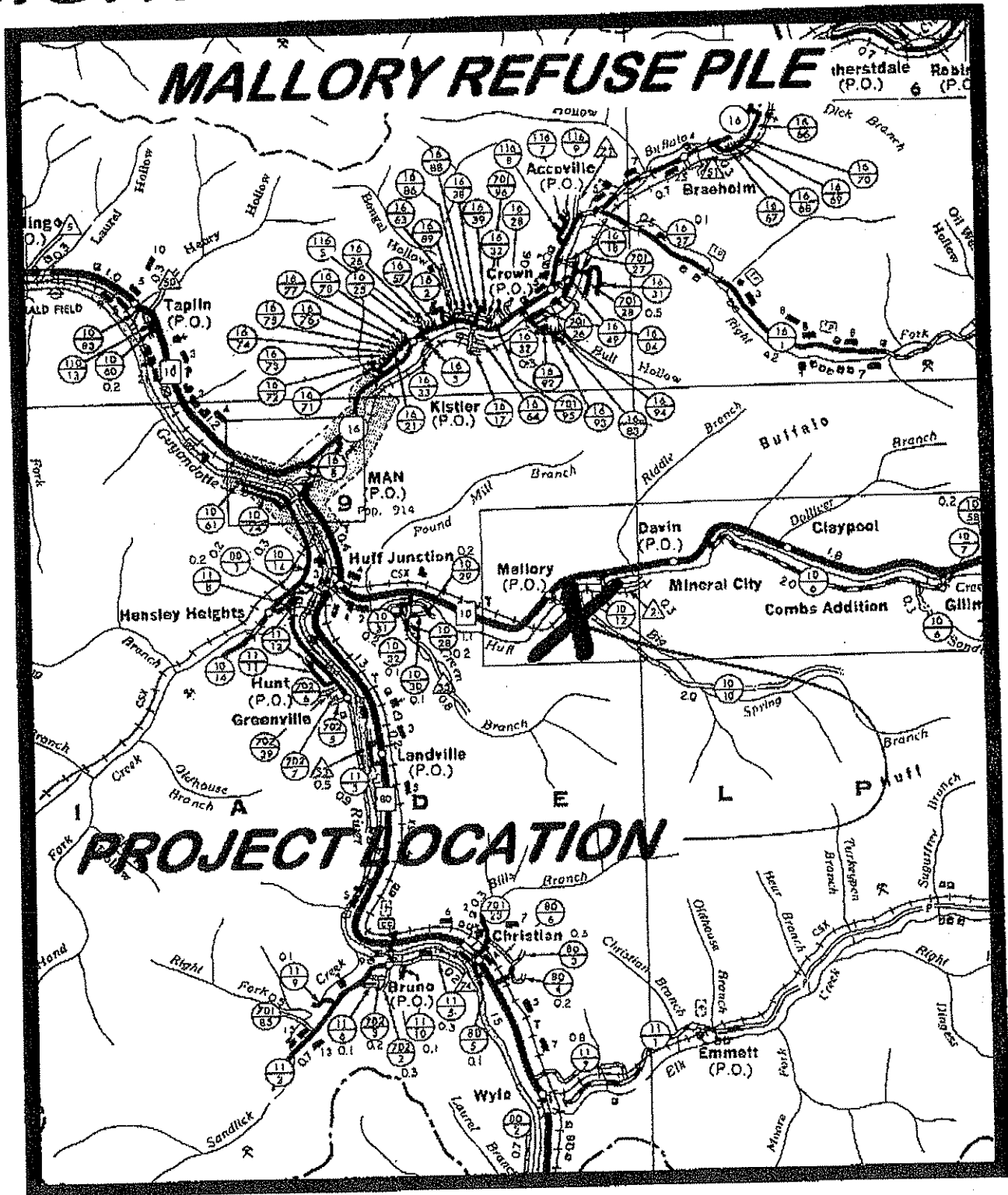
**MALLORY QUAD.**

**LATITUDE 37° 43' 30"**

**DASHED LINE IS POTENTIAL PROJECT LIMITS FOR OFF SITE BORROW AND DISPOSAL AREAS.**

**LONGITUDE 81° 50' 31"**

# HIGHWAY LOCATION MAP (17)



**1"=1 MILE, LOGAN COUNTY HIGHWAY MAP**

STATE OF WEST VIRGINIA  
Purchasing Division**PURCHASING AFFIDAVIT**128**VENDOR OWING A DEBT TO THE STATE:**

*West Virginia Code* §5A-3-10a provides that: 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.

**PUBLIC IMPROVEMENT CONTRACTS & DRUG-FREE WORKPLACE ACT:**

*West Virginia Code* §21-1D-5 provides that: Any solicitation for a public improvement construction contract shall require each vendor that submits a bid for the work to submit at the same time an affidavit that the vendor has a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the West Virginia Code. A public improvement construction contract may not be awarded to a vendor who does not have a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the West Virginia Code and who has not submitted that plan to the appropriate contracting authority in timely fashion. For a vendor who is a subcontractor, compliance with Section 5, Article 1D, Chapter 21 of the West Virginia Code may take place before their work on the public improvement is begun.

**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 materials, 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.

**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, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, 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.

**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. Vendors should visit [www.state.wv.us/admin/purchase/privacy](http://www.state.wv.us/admin/purchase/privacy) for the Notice of Agency Confidentiality Policies.

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

Vendor's Name: GAF Consultants, Inc.Authorized Signature: Charles Stanley Date: 9/18/2008

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10/10/10



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

PROJECT NAME  
 Mallory Refuse Pile Project - DEP 14391

DATE (DAY, MONTH, YEAR)  
 18, September, 2008

FEIN  
 25-1260999

1. FIRM NAME  
 GAI Consultants, Inc.

2. HOME OFFICE BUSINESS ADDRESS  
 385 E. Waterfront Drive  
 Homestead, Pennsylvania 15120

3. FORMER FIRM NAME  
 NA

4. HOME OFFICE TELEPHONE  
 412-476-2000

5. ESTABLISHED (YEAR)  
 1958

6. TYPE OWNERSHIP  
 Corporation

6a. WV REGISTERED DBE  
 (Disadvantaged Business Enterprise)  
 NO

7. PRIMARY AML DESIGN OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE  
 500 Summers Street, 3<sup>rd</sup> Floor, Charleston, WV 25301 / C. Elwood Penn, IV, P.E. / 19 Charleston, 13 Monroeville 304/926-8100

8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM  
 C. Elwood Penn, IV, P.E., Managing Officer / Asst. Vice President  
 8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS  
 Gary M. DeJidas, P.E., President, 412/476-2000  
 Lawrence R. Dodds, P.E., Senior Vice President, 412/476-2000

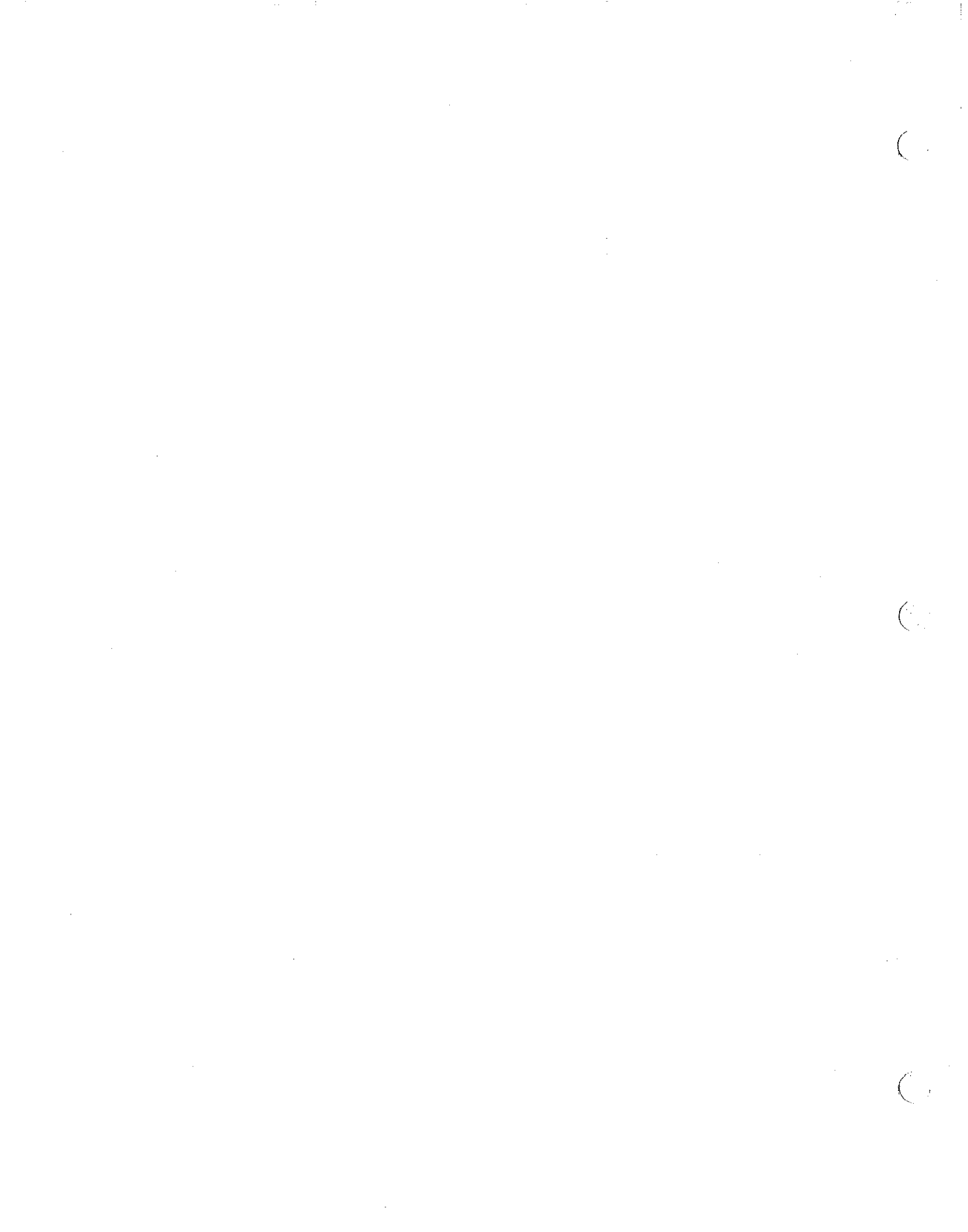
9. PERSONNEL BY DISCIPLINE (Bold Lettering Indicates Minimum Design Team Members)

82 ADMINISTRATIVE	4 ECOLOGISTS	4 LANDSCAPE ARCHITECTS	18 STRUCTURAL ENGINEERS
0 ARCHITECTS	2 ECONOMISTS	1 MECHANICAL ENGINEERS	17 SURVEYORS
8 BIOLOGIST	0 ELECTRICAL ENGINEERS	2 MINING ENGINEERS	4 TRAFFIC ENGINEERS
47 CADD OPERATORS	33 ENVIRONMENTALISTS	0 PHOTOGRAMMETRISTS	145 OTHER
2 CHEMICAL ENGINEERS	8 ESTIMATORS	10 PLANNERS: URBAN/REGIONAL	
40 CIVIL ENGINEERS	9 GEOLOGISTS	2 SANITARY ENGINEERS	
93 CONSTRUCTION INSPECTORS	2 HISTORIANS	18 SOILS ENGINEERS	
32 DESIGNERS	3 HYDROLOGISTS	4 SPECIFICATION WRITERS	590 TOTAL PERSONNEL
0 DRAFTSMEN			

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 4  
 \*RPES other than Civil and Mining must provide supporting documentation that qualifies them to supervise and perform this type of work.

GAI can field four separate teams (P.E. and CADD operator as defined by EOI) from its Charleston office. However, only one team is expected for this project. GAI has completed all of its AML projects since 1986 from the Charleston office.

10. HAS THIS JOINT-VENTURE WORKED TOGETHER BEFORE?  YES  NO  NA



11. OUTSIDE KEY CONSULTANTS/SUB-CONSULTANTS ANTICIPATED TO BE USED. Attach "AML Consultant Confidential Qualification Questionnaire" for each if copy is not on file with AML.

<p>NAME AND ADDRESS: None</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>
<p>NAME AND ADDRESS:</p>	<p>SPECIALTY:</p>	<p>WORKED WITH BEFORE  <input type="checkbox"/> Yes  <input type="checkbox"/> No</p>

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

**YES** Description and Number of Projects: GAI has completed 119 projects for the WV-AML Program (18 in the last five years). GAI has completed over 150 projects for all AML Programs (WV, PA, VA, MD, OSM). These projects include but are not limited to design of abandoned refuse piles, abandoned portals, demolition of facilities, design of drainage control structures, and revegetation plans.

NO

B. Is your firm experienced in Soil Analysis?

**YES** Description and Number of Projects: GAI has completed many (over 200) projects that required soil analysis for revegetation plans, acid/base counts, foundation, stability analysis, engineering properties, etc. Most of the 119 WV-AML projects required some type of soil analysis. GAI has completed some analysis in-house and used subconsultants at other times depending on requirements.

NO

C. Is your firm experienced in hydrology and hydraulics?

**YES** Description and Number of Projects: GAI has completed numerous (300+) projects which involve hydrology and hydraulics including projects that were AML/mining related. Most of the 119 WV-AML projects required hydrology and hydraulic evaluations and design for drainage control structures, mine hydraulic level, mainstream event, water transmission, sediment control, etc. GAI is also experienced and trained in natural stream restoration and wetland mitigation.

NO

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

**YES** Description and Number of Projects: GAI has produced contour mapping on most of its 119 AML projects. We subcontract our aerial photography, if none is available. We do not anticipate aerial photography being needed to complete this project.

NO

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

**YES** Description and Number of Projects: GAI has completed over 70 projects involving domestic waterline design of which 42 were for the WV-AML program. This has included aquifer degradation evaluation and waterline design, Public Service District interaction, PSC requirements, Health Department permits, etc. to include field surveys, field inspection, and public hearings and meetings. **Aquifer degradation and waterline design** was the primary components of these projects.

NO

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

**YES** Description and Number of Projects: GAI has completed over 100 AMD evaluations and abatement designs of which 25 were for the WV-AML program; however, AMD was a consideration on most of its 119 WV-AML projects. GAI is noted and published for some of its designs and projects to include grouting programs, SAP installations and other innovative abatement designs.

NO

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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.) Penn, IV, C. Elwood Branch Manager		YEARS OF AML DESIGN EXPERIENCE: 6	YEARS OF AML RELATED DESIGN EXPERIENCE: 26
YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 6		<p>Brief Explanation of Responsibilities</p> <p>Mr. C. Elwood Penn, IV, P.E., Branch Manager will serve as Contract Administrator. He will be responsible for the overall management and performance of the project. He will review the work directive, visit the site along with the WVDEP to better familiarize himself with site conditions and work requirements, and then guide the preparation of the scope of work and cost proposal by GAI staff. A written proposal including a detailed cost estimate (manhours and expenses associated with the project) will then be prepared and submitted to the WVDEP for their review. Upon WVDEP's approval of the proposal, Mr. Penn will arrange for the start of the work. Included will be project staffing, arrangement and detailing of the scope of services to be provided by GAI's subcontractors, and review of project budget and schedule. Mr. Penn will generally supervise the work in progress and review work products at intermediate points and finally prior to submittal to the WVDEP and will be responsible for maintaining liaison with the WVDEP Project Manager including project status reports as required.</p> <p>EDUCATION (Degree, Year, Specialization) B.S. 1985 Civil Engineering</p>	
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS American Society of Civil Engineers Society of American Military Engineers National Society of Professional Engineers			
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.) Straley, Charles F. Project Manager		YEARS OF AML DESIGN EXPERIENCE: 17	YEARS OF AML RELATED DESIGN EXPERIENCE: 23
YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 15		<p>Brief Explanation of Responsibilities</p> <p>Mr. Straley will be responsible for day-to-day project activities and guidance of the GAI staff. His main activities will include development of detailed step-by-step project work plans to ensure the project activities are completed on-budget and on-time, review of the work products at intermediate points and at project completion, providing guidance and direction to project staff, as well as engineering and design work. Mr. Straley will be responsible for preparation of construction drawings, technical specifications, calculations and cost estimates. He will oversee the geotechnical aspects of the project, including but not limited to subsurface exploration, foundation and embankment design, and slope stability.</p> <p>EDUCATION (Degree, Year, Specialization) B.S. 1986 Civil Engineering M.S. 1988 Geotechnical Engineering</p>	
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS Society of American Military Engineers			





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 AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Hemme, James A. Project Manager	11	19	11
Brief Explanation of Responsibilities			
Mr. Hemme will be responsible for preparation of construction drawings, technical specifications, calculations and cost estimates. He will oversee hydraulic/hydrology aspects of the project, including but not limited to stormwater management, erosion and sediment control, and mine discharge.			
EDUCATION (Degree, Year, Specialization)			
B.S. 1989 Civil Engineering			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS			
REGISTRATION (Type, Year, State) 1992 Professional Engineer (WV, KY, IN, OH) 2000 Licensed Remediation Specialist 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 AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Young, Mark D. Project Engineer	6	10	6
Brief Explanation of Responsibilities			
Mr. Young will be responsible for preparation of construction drawings, technical specifications, calculations and cost estimates. He will oversee hydraulic/hydrology aspects of the project, including but not limited to stormwater management, erosion and sediment control, and mine discharge.			
EDUCATION (Degree, Year, Specialization)			
B.S. 1998 Civil Engineering			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS			
REGISTRATION (Type, Year, State) 2002 Professional Engineer (WV, KY, IN, OH) National Environmental Protection (NEPA) Training			

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Prine, Joseph A., E. I. Project Engineer	6	1

Brief Explanation of Responsibilities  
 Mr. Prine will be responsible for preparation of construction drawings, technical specifications, calculations and cost estimates. He will oversee hydraulic/hydrology aspects of the project, including but not limited to stormwater management, erosion and sediment control, and mine discharge.

EDUCATION (Degree, Year, Specialization)  
 B.S. 2001 Civil Engineering

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS  
 REGISTRATION (Type, Year, State)  
 2000 Nicet  
 2006 40 hour Hazwoper

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 DOMESTIC WATERLINE DESIGN EXPERIENCE:
Green, Jason T. CADD Operator/Designer	13	13

Brief Explanation of Responsibilities  
 Mr. Green will be responsible for activities that will include development of project drawings, transferring survey data to project plans, and development of project details.

EDUCATION (Degree, Year, Specialization)  
 A.A.S., 2002, Engineering Technology

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS  
 REGISTRATION (Type, Year, State)  
 Society of American Military Engineers  
 NICET Level I & II

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data to keep to essentials)			
NAME & TITLE (Last, First, Middle Int.) <i>Workman, David L. CADD Operator/Designer</i>		YEARS OF AML DESIGN EXPERIENCE: <i>8</i>	YEARS OF AML RELATED DESIGN EXPERIENCE: <i>1</i>
YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: <i>8</i>			
Brief Explanation of Responsibilities <i>Mr. Workman will be responsible for activities that will include development of project drawings, transferring survey data to project plans, and development of project details.</i>			
EDUCATION (Degree, Year, Specialization) <i>B.S. 2000 Industrial Engineering Technology</i>			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS <i>REGISTRATION (Type, Year, State)</i>			
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.) <i>Pauley, Heather R. Environmental Specialist</i>		YEARS OF AML DESIGN EXPERIENCE: <i>1</i>	YEARS OF AML RELATED DESIGN EXPERIENCE: <i>1</i>
YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:		<i>0</i>	
Brief Explanation of Responsibilities <i>Ms. Pauley will be responsible for providing services related to natural resources, including but not limited to wetland delineation, benthic studies, wetland restoration or mitigation, endangered species and stream restoration.</i>			
EDUCATION (Degree, Year, Specialization) <i>B.S. 2007 Environmental Science/Geology</i>			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS <i>REGISTRATION (Type, Year, State)</i>			

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	
Turka, Robert J. Senior Staff Hydrogeologist		YEARS OF AML DESIGN EXPERIENCE: 20	YEARS OF AML RELATED DESIGN EXPERIENCE: 26
Brief Explanation of Responsibilities			
Mr. Turka will provide expertise in areas of coal refuse reclamation, mine subsidence and AMD remediation.			
EDUCATION (Degree, Year, Specialization)			
B.S. 1971 Earth Planetary Science MAT 1972 Secondary Education (Natural Science)			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State)	
American Institute of Professional Geologists Association of Engineering Geologist International Association of Engineering Geologists Pittsburg Geological Society National Ground Water Association		1989 Professional Geologist (PA) Certified Professional Geologist	
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	
Newman, F. Barry Manager - Geotechnical/Structural		YEARS OF AML DESIGN EXPERIENCE: 20	YEARS OF AML RELATED DESIGN EXPERIENCE: 38
Brief Explanation of Responsibilities			
Mr. Newman will provide expertise in the areas of geotechnical engineering, including but not limited to landslides, retaining wall design, slope stability and subsidence.			
EDUCATION (Degree, Year, Specialization)			
B.S. 1968 Civil Engineering M.S. 1970 Civil Engineering			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State)	
American Society of Civil Engineers		1974 Professional Engineer (PA, WV, CO, IN, MD, TX)	

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 AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Bruhn, Robert W. Staff Consultant	20	40	11
Brief Explanation of Responsibilities			
Mr. Bruhn will provide expertise in the areas of subsurface investigation, soil and rock mechanics, and subsidence.			
EDUCATION (Degree, Year, Specialization)			
B.S. 1967 Geology			
M.S. 1969 Civil Engineering			
A.B.D. Civil Engineering			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS			
American Society of Civil Engineers			
Association of Engineering Geologists			
Society of Mining Engineers			
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 AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Michalski, Stan R. Senior Staff Geologist	20	34	11
Brief Explanation of Responsibilities			
Mr. Michalski will provide expertise in the areas of geologic studies, mine fire investigations and impoundments.			
EDUCATION (Degree, Year, Specialization)			
B.S. 1967 Earth and Planetary Science			
M.A. 1975 Resource Management			
MLIS 2004 Library and Information Science			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS			
Association of Engineering Geologist			
REGISTRATION (Type, Year, State)			
1995 Professional Geologist, (PA)			

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data - it keep to essentials)			
NAME & TITLE (Last, First, Middle Int.)	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Frech, Kerry L. Senior Staff Engineer	11	26	11
Brief Explanation of Responsibilities			
Mr. Frech will provide expertise in the area of hydrology and hydraulics, including but not limited to stormwater management and modeling of drainage systems.			
EDUCATION (Degree, Year, Specialization)			
B.S. 1977 Civil Engineering M.Eng. 1978 Environmental Engineering			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS			
American Society of Civil Engineers American Water Resources Association			
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 AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Gower, Thomas R. Staff Geologist	17	31	11
Brief Explanation of Responsibilities			
Mr. Gower will provide expertise in the area of geology and subsurface investigations.			
EDUCATION (Degree, Year, Specialization)			
B.S. 1974 Geology			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS			
Association of Engineering Geologist			
REGISTRATION (Type, Year, State)			
Professional Geologist, 1989 (AR, PA)			

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

NAME & TITLE (Last, First, Middle Int.) Queen, Terry W. Senior Technician	YEARS OF AML DESIGN EXPERIENCE: 13	YEARS OF AML RELATED DESIGN EXPERIENCE: 30	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 13
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Brief Explanation of Responsibilities  
 Mr. Queen will be responsible for collecting field data including but not limited to water samples, soil borrow samples, refuse samples, and verification of mapping.

EDUCATION (Degree, Year, Specialization)  
 1986 Math and Physical Education Classwork  
 1992 Drafting and Design

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS  
 REGISTRATION (Type, Year, State)  
 Troxler Nuclear Densometer Certification  
 WVDOT Portland Cement Concrete and Compaction

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.) Foster, Mark E. Technician	YEARS OF AML DESIGN EXPERIENCE: 2	YEARS OF AML RELATED DESIGN EXPERIENCE: 2	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0
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Brief Explanation of Responsibilities  
 Mr. Foster will be responsible for collecting field data including but not limited to water samples, soil borrow samples, refuse samples, and verification of mapping.

EDUCATION (Degree, Year, Specialization)  
 B.A. Regents, Bachelor of Arts  
 A.S. Applied Science (Occupational Development)

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS  
 REGISTRATION (Type, Year, State)  
 10 Hour OSHA, OSHA Construction Safety & Health,  
 Foreman Leadership, Blueprint Reading, Line & Grade,  
 Hazardous Waste Worker, Nuclear Radiation Safety,  
 Portable Gage Safety Training, Pipelaying, Lead  
 Abatement Worker, Asbestos Abatement Worker





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

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
Whites Run Highwall & Portals Randolph County, WV	WV Department of Environmental Protection Office of Abandoned Mine Lands and Reclamation	Preparation of reclamation plan	\$1,000,000	99%
Romney Bridge Romney, WV	WV Division of Highways	Design of Bridge	15,000,000	95%
King Coal Highway Mingo County, WV	WE Division of Highways	Design of Roadway	\$60,000,000	80%
Willow Wood Bridge Summer County, WV	WV Division of Highways	Design of Bridge	\$5,200,000	90%
Heizer Creek Drainage/ Wolfpen Landslide Putnam County, WV	WV Department of Environmental Protection Office of Abandoned Mine Lands and Reclamation	Preparation of reclamation plan	\$2,500,000	0%

TOTAL ESTIMATED CONSTRUCTION COSTS: \$83,700,000.00

TOTAL NUMBER OF PROJECTS: 5 (primary office)



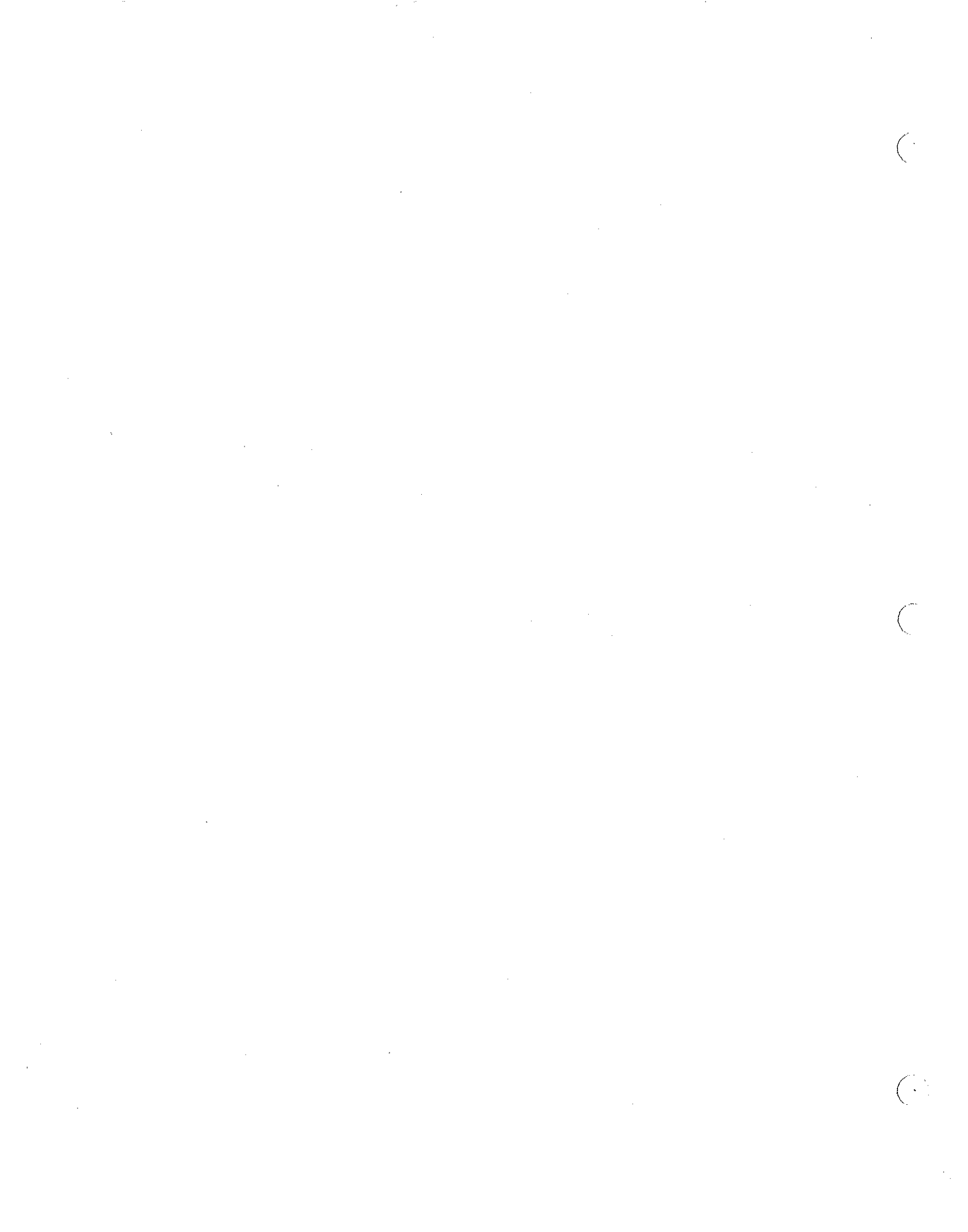
17. CC	ETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD	PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST (in thousands)	YEAR	CONSTRUCTED (YES OR NO)
	<p>Logan (Marcum) Drainage Emergency Project, Logan County, West Virginia</p> <p>The scope of work involves emergency evaluation and investigation to develop a method to collect and discharge the seepage from the coal seam and conveyance to a downstream drainage system. Construction plans and specifications were developed.</p>	<p>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program Charleston, West Virginia</p>	<p>\$47 (Fee)</p>	<p>2006</p>	<p>YES</p>	
	<p>Bud/Alpoca Waterline Extension Feasibility Study, Wyoming County, West Virginia</p> <p>The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.</p>	<p>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program Charleston Nitro, West Virginia</p>	<p>\$32 (Fee)</p>	<p>2006</p>	<p>NA</p>	
	<p>Nuriva/Maben Waterline Extension Feasibility Study, Wyoming County, West Virginia</p> <p>The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.</p>	<p>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program Charleston, West Virginia</p>	<p>\$32 (Fee)</p>	<p>2006</p>	<p>NA</p>	

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<p>Herndon Heights Waterline Extens Feasibility Study Wyoming County, West Virginia</p> <p>The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.</p>	<p>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program, Charleston, West Virginia</p>	<p>\$32 (Fee)</p>	<p>2006</p>	<p>NA</p>
<p>Handley/Upper Creek Drainage Project, Kanawha County, West Virginia</p> <p>The reclamation plan included dewatering the underground impoundment(s) and creating diversion ditches to redirect the drainage around structures to the nearby stream. Regrading the areas behind the retaining wall, revegetating, and providing proper drainage for all disturbed areas is also included in the plan.</p>	<p>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program, Charleston, West Virginia</p>	<p>\$61 (Fee)</p>	<p>2005</p>	<p>YES</p>
<p>Iatrobe (Gibson) Landslide Emergency Project, Logan County, West Virginia</p> <p>The scope of work involved emergency evaluation and investigation to develop alternatives to reduce slopes, eliminate instability, and provide for controlled drainage. Once an alternative was selected, construction plans and specifications were developed.</p>	<p>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program, Charleston, West Virginia</p>	<p>\$76 (Fee)</p>	<p>2005</p>	<p>YES</p>



	West Virginia Division of Environmental Protection, Abandoned Mine Lands Program Charleston, West Virginia	\$135 (Fee)	2007	No
<p>Ven's Park Maintenance Project Harrison, County, West Virginia</p> <p>The scope of work involves stabilizing the slopes and provide for controlled drainage. It is GAI's initial approach to the abatement of the landslide is to provide a proposed reclamation plan that will grade the slide in place as much as practical and not conduct a total removal of material.</p>	<p>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program Charleston, West Virginia</p>	<p>\$39 (Fee)</p>	<p>2007</p>	<p>YES</p>
<p>Community of Preston - State Route 72 Waterline, Preston County, West Virginia</p> <p>The scope of work included the preparation of construction documents for a water transmission line. The total length of waterline is approximately 1.1 miles.</p>	<p>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program Charleston, West Virginia</p>	<p>\$121 (Fee)</p>	<p>2005</p>	<p>YES</p>
<p>Kingwood 52/6 Water Supply Extension, Preston County, West Virginia</p> <p>The scope of work included the preparation of construction documents for a water transmission line. Included in the distribution system is a 96,000 gallon water storage and a booster pump station. The total length of waterline is approximately 13 miles.</p> <p>Helen Portals, Raleigh County, West Virginia</p> <p>The scope of work included the preparation of construction documents for four sites, consisting of abandoned mine portals, small unstable refuse piles, small impoundment, and demolition of a mining related structure. The project also included re-establishing a stream by natural stream techniques.</p>	<p>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program Charleston, West Virginia</p>	<p>\$71 (Fee)</p>	<p>2004</p>	<p>YES</p>

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18. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM HAS BEEN A SUB-CONSULTANT TO OTHER FIRMS (INDICATE PHASE OF WORK FOR WHICH YOUR FIRM WAS RESPONSIBLE)

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST OF YOUR FIRM'S PORTION	YEAR	CONSTRUCTED (YES OR NO)	FIRM ASSOCIATED WITH
NA					

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.

Please see attached "Brief Firm History and Experience" for more details of qualifications.

20. The foregoing is a statement of facts.

Signature: Charles Stanley Jr

Printed Name: C. Elwood Penn, IV, P.E.

Title: Assistant Vice President

Date: September 18, 2008

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



AML and RELATED PROJECT EXPERIENCE MATRIX														PRIMARY STAFF PARTICIPATION/CAPACITY *** M=Management P=Professional							
PROJECT	Exp. Basis C=Corp. P=Personnel	Additional Info Provided in Section(s)	PROJECT EXPERIENCE REQUIREMENTS																		
			Abandoned Surface Mine Reclamation	Abandoned Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Investigation/ Replacement	Construction/Management	Water Treatment	Equipment/Structure Removal	Stream Restoration	Geotechnical/Stability	Mapping			
Heizer Creek Drainage	C/P		X	X	X	X	X										X	M	M/P	James A. Hemme, PE	P
Wolfpen Landslide	C/P		X	X	X	X	X										X	M	M/P	Charles F. Straley, PE	P
Hornity Creek	C/P	3	X			X	X										X	M	M/P		P
Logan (Marcum) Drainage	C/P	3	X	X	X	X	X										X	M	M/P		
Bud Apoca	C/P	3				X	X										X	M/P	M/P		P
Nuriva Maben	C/P	3				X	X										X	M/P	M/P		P
Herrndon Heights	C/P	3				X	X										X	M	M/P		P
Handley/Upper Creek	C/P	3	X	X	X	X	X										X	M	M/P		
Titus Road	C/P		X			X	X										X	M	M/P		
American Legion	C/P		X			X	X										X	M	M/P		P
Cogar	C/P					X	X										X	M	M/P		P
East Branch Phase II	C/P		X			X	X										X	M	M/P		P
West Branch Headwaters	C/P		X	X	X	X	X		X								X	M	M/P		P
Lake Milton Reclamation	C/P		X			X	X										X	M	M/P		
Middleton Run Reclamation	C/P		X			X	X										X	M	M/P		
Latrobe (Gibson) Landslide	C/P	3	X	X	X	X	X										X	M	M/P		
Lodestar Energy	C/P		X	X	X	X	X										X	M	M/P		
Ven's Run Maintenance	C/P	3	X			X	X										X	M	M/P		
War Waterline	C/P	3															X	M/P			
Clarks Gap	C/P	3				X	X										X	M/P			
War (Dash) Impoundment	C/P	3				X	X										X	M	M/P		
Whites Run	C/P	3	X	X	X	X	X										X	M	M/P		P
Helen Portals	C/P	3	X	X	X	X	X										X	M	M/P		
Bearwallow Branch	C/P	3	X	X	X	X	X										X	M	M/P		P

\* List whether project experience is corporate or personnel based or both  
 \*\* Use this area to provide specific sections or pages if needed for reference  
 \*\*\* List Primary Design personnel and their functional capacity for the projects listed

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AML and RELATED PROJECT EXPERIENCE MATRIX											PRIMARY STAFF PARTICIPATION/CAPACITY *** M=Management P=Professional													
PROJECT	Exp. Basis C=Corp. P=Personnel	Additional Info Provided in Section(s) **	Abandoned Surface Mine Reclamation	Abandoned Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Reuse Fire Abatement	Subsidence Investigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/Replacement	Construction/Management	Water Treatment	Equipment/Structure Removal	Stream Restoration	Geotechnical/Stability	Mapping						
Urso Subside	C/P	3	X						X		X						X			Mapping	C. Elwood Penn, IV, PE	Charles F. Straley, PE	James A. Hemme, PE	
Mill Creek Phase II	C/P	3							X		X	X					X							
Duncan Hill Subside	C/P	3	X						X		X						X							
Cora Mine Drainage II	C/P	3	X		X						X	X			X									
Covey Creek Mine	C/P	3	X					X			X						X							
Vivian	C/P	3	X			X	X				X						X							
Kimball	C/P	3	X			X	X				X						X							
Hampden Bridge	C/P	3				X					X						X							
Bear Run Refuse	C/P	3	X			X	X				X						X							
Beaver Creek	C/P	3				X	X				X						X							
Charleston Landslide	C/P	3	X								X						X							
Garrison Complex	C/P	3		X		X					X						X							
Cassity Fork	C/P	3				X					X						X							
Mulberry Fork Landslide	C/P	3	X								X						X							
Beckley Subside	C/P	3		X					X		X						X							
Courtright Highway	C/P	3	X								X						X							

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

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

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

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## INTRODUCTION

GAI Consultants, Inc., (GAI) proposes to provide engineering services to the West Virginia Department of Environmental Protection, Office of Abandoned Mine Lands and Reclamation (WVDEP - AML). These services will result in the development of mapping, engineering drawings, contract specifications, and other contract documents as may be required for the letting of construction project for the Mallory Refuse Pile project. The project will include construction of site grading for stabilized refuse pile, access road, stream bank protection, drainage, and revegetation.

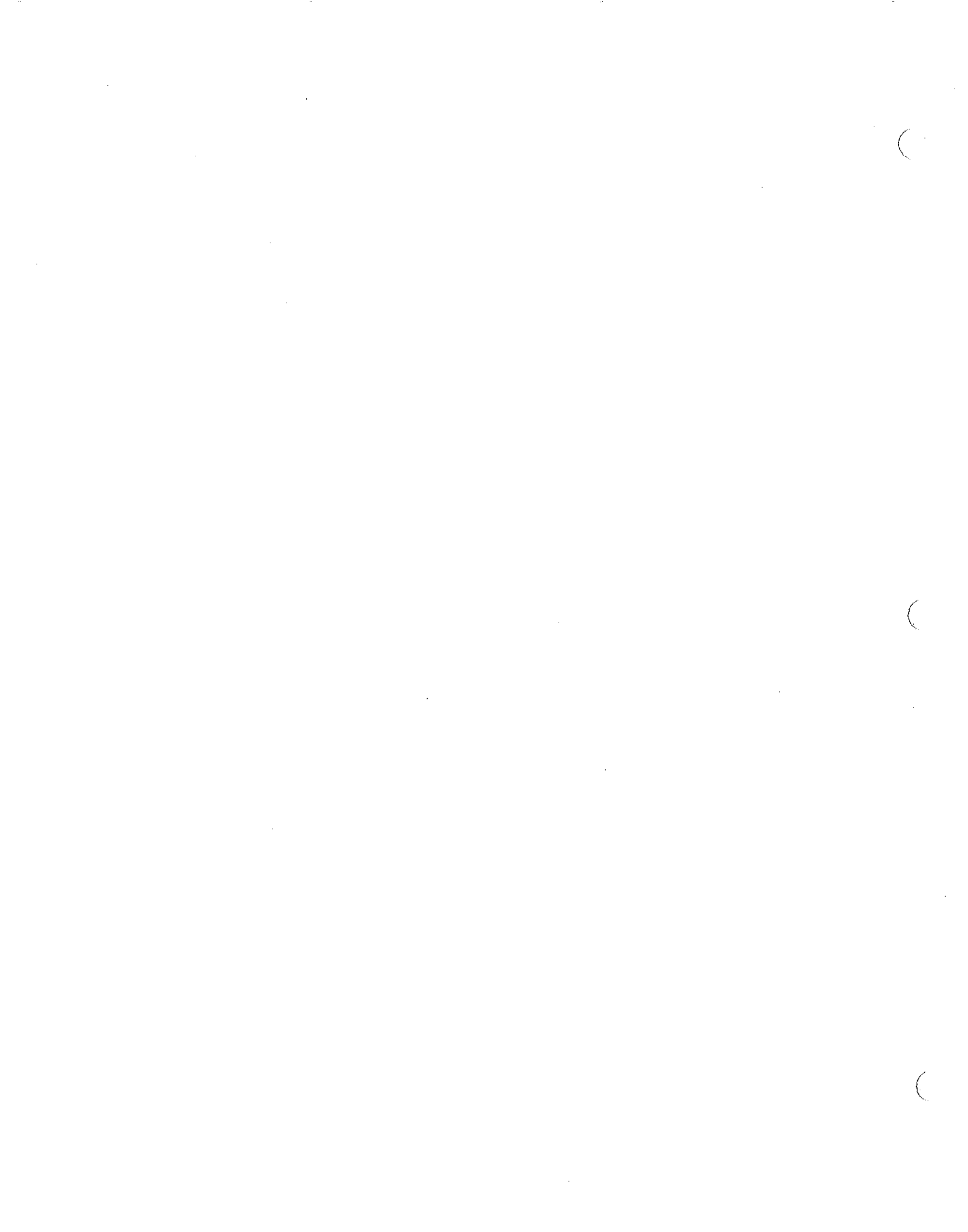
This Expression of Interest is **formatted** in a clear, concise manner with the briefest description as possible conveying our expertise and knowledge. All components of the proposal follow in narrative and highlighted sections and as outlined in the AML Consultant Confidential Qualification Questionnaire (CCQQ).

The highlighted sections following are:

- Bidders Experience
- Subcontractors Discussion on:
  - Surveying and Mapping
  - Subsurface Investigation
  - Laboratory Services
- Design Engineering and Contract Document Preparation
- Qualifications of Personnel
- Corporate Specialized Experience and Demonstrated Experience
- Management Plan and Location of Facilities

GAI's Charleston, West Virginia office is exceptionally well qualified to provide the State with the above referenced services. GAI's Charleston office has a staff of **Four Professional Engineers, One Professional Surveyor**, and a team of geologists/hydrologists, environmental scientists, biologists, technicians, CADD operators, word processor operators, secretaries, and draftspersons. GAI's Charleston office has served the WVDEP on **previous** AML open-end and other contracts from 1986 to the present as well as several other pre-1986 AML projects. These **projects** include:

- Coal refuse pile reclamation,
- Coal refuse reprocessing evaluations,
- Stream Restoration,
- Acid mine drainage (AMD) evaluation and treatment,
- Landslide investigations and repair,
- Demolition plans,
- Mine portal reclamation,
- Burning coal refuse piles, coal seams and underground mines,
- Subsidence investigations and stabilization plans,
- Water quality surveys and feasibility reports,
- Water supply system reviews,



- Water supply system designs,
- Wetlands replacement and development, and
- Environmental liability assessments.

GAI also provides engineering services to the mining industry including:

- Stream Restoration,
- Design of coal refuse disposal piles including impoundment structures,
- Hydrologic/hydraulic design of erosion and sediment control devices,
- Soil analysis and revegetation plans,
- Coal refuse reprocessing evaluations including mining and reclamation plans,
- Construction monitoring services,
- Design of excess overburden disposal fills, both conventional and durable rock fills,
- Detailed reclamation plans,
- Detailed subsurface/geotechnical investigations for foundation, subsidence, slope stability, and reserve analysis,
- Mine closure plans/post-reclamation land use,
- Permitting for deep and surface mine applications, NPDES, U.S. Army Corps of Engineers Section 404 permits, West Virginia Public Lands permits, air pollution control permits, etc.,
- Probable hydrologic consequences (PHC) statement preparation,
- Reclamation/environmental liability assessments in conjunction with property transfers, and
- Subsidence control plans.

As a result of this experience, GAI will provide the required expertise to complete reclamation projects in a timely, economical, and efficient manner and will not require any subconsultants to be utilized on this project. Our direct knowledge of the AML program guidelines and personnel will also benefit the State.

GAI will perform the work under this contract in our **Charleston, West Virginia** office.



## BIDDER EXPERIENCE

GAI Consultants, Inc., provides consulting services in geotechnical engineering, civil engineering, environmental engineering, mining-related design engineering, geology, hydrogeology, environmental science, economics, transportation systems and land-use planning, urban and site engineering, structural engineering, engineering mechanics, agronomy, anthropology and archaeology, and various related professional disciplines. The firm has experienced steady growth in both size and capabilities; and for the past fourteen years has been **rated among the top 200 engineering** and environmental firms in the nation by Engineering News Record (ENR).

GAI Consultants, Inc., is a full service civil, environmental and mining engineering firm headquartered in suburban Pittsburgh, Pennsylvania, with offices in Charleston, West Virginia; Philadelphia, Pennsylvania; Ft. Wayne, Indiana; Orlando and Jacksonville, Florida; Cincinnati, Ohio; and Richmond, Virginia. Established in 1958, GAI and its subsidiaries comprise an organization of over 500 engineers, scientists, and support personnel. With our in-house soils laboratories, surveying services and competent staff of professionals, GAI offers a comprehensive approach to engineering problems requiring a wide range of interdisciplinary skills. In the past 40+ years, we have designed and monitored the construction of numerous facilities and have conducted thousands of related geotechnical and hydrological investigations, many of which involved reclamation of abandoned mine lands. By successfully completing so many reclamation projects, GAI has obtained "expertise" status on an international basis for many type projects. For example, GAI recently completed a very large investigation into delineating the extent of the world's largest mine fire in the country of India. GAI was selected for the country of India mine fire project based upon qualifications only.

GAI's Charleston, West Virginia office opened in 1985. Since opening, our Charleston office has experienced steady growth. Currently, the Charleston office has four registered professional engineers and other experienced disciplines on staff. Clients served by the Charleston office include mining and industrial companies; federal, state, and local governmental agencies; engineers and architects; and private developers.

GAI has successfully served the WVDEP on previous AML contracts from 1986 to the present. We propose to utilize most of the same Charleston and Pittsburgh staff. See attached CCQQ.

### Surveying and Mapping

To provide cost efficient and timely services for this contract, surveying services will be conducted by GAI's in-house surveyors. GAI routinely performs the following types of surveys which are relevant to the work possibly associated with this project.

- Aerial mapping control surveys including horizontal and vertical control and reference monuments,
- Topographic and planimetric surveys,
- Construction surveys including work layout staking, establishment of baselines and cross sections, profiles, etc.,
- Construction quantity measurement surveys,
- Detailed as-built documentation surveys,
- Property surveys including both surface and mineral estates, and
- Oil and gas surveying.





GAI presently operates up to three survey crews. GAI has made a commitment to provide timely surveying services.

GAI's survey crew utilizes Nikon DTM-450 and Nikon DTM-550 Total Stations. This is complimented by data collectors and Autocad workstations to generate plan views, profiles, cross sections and other engineering drawings. These CAD-generated drawings can then be utilized by GAI's CAD-drafting/design department for design.

All surveys conducted by GAI are completed under the supervision of a West Virginia licensed land surveyor. Surveying will also be performed under the general direction of a West Virginia registered professional engineer, the GAI project engineer and project manager. All surveys and mapping are completed to the standards as outlined by the National Map Standards, as well as other applicable quality standards to include AML specifications.

### **Subsurface Investigation**

Based upon the information provided in the Expression of Interest, GAI is not proposing the use of any subsurface investigation subcontractor. If a subsurface exploration subcontractor is required, we have relationships with several drilling firms to provide an economical and available contractor to complete the project. Borrow area investigations will be conducted by GAI personnel, as has been the case in past projects.

### **Laboratory Services**

GAI operates full-service soils and materials laboratories in our Philadelphia, Pennsylvania office.

GAI has the capability to analyze natural materials such as soil and rock, manufactured materials such as concrete and steel, and industrial waste materials. The soils and industrial waste analysis capabilities include classification tests, moisture content, grain size analysis, Atterberg limits, specific gravity, unit weight determinations, and chemical analyses. The characteristic test capabilities include relative density equipment for sample particle sizes to 3 inches in diameter; apparatus for constant- and falling-head permeability measurements in both horizontal and vertical directions, and for moisture-density relationships for both modified and standard densities. The compressibility of materials can be determined in a 2.5-inch diameter, one-dimensional consolidometer or a 2.5-inch diameter, one-dimensional Anteus consolidometer with back pressure and pore pressure capability. Also, volumetric consolidation can be determined isotropically or anisotropically. The strength parameters of soils and industrial/coal waste materials can be determined by unconfined compression, direct shear, or triaxial shear tests. The rock-testing capabilities include classification by visual inspections and petrographic analysis, unconfined compression, direct shear, and triaxial shear tests. GAI also maintains several nuclear densometer testing gauges to monitor field compaction.

Based upon the information provided in the Expression of Interest, GAI is not proposing the use of any other laboratory services.

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### **Design Engineering and Contract Document Preparation**

GAI has extensive experience in design engineering and the preparation of contract documents for AML reclamation and related projects. GAI prides itself in development of **simple, yet innovative, cost-efficient designs** that are easily implemented in the field during construction. Our experience gained on various types of West Virginia AML projects during the past 22 years will ensure this quality engineering continues.

GAI has prepared **over 80** construction packages for WVDEP-AML since 1985. Other West Virginia AML projects completed by GAI did not result in the preparation of construction drawings such as water quality surveys and feasibility reports and landslide investigations where it was determined that the problems were not mining related. GAI is completely familiar with WVDEP's guidelines for preparing construction drawings, technical specifications, and supporting documents. We are able to draw on a large collection of typical construction details contained within our computer aided drafting (CAD) library for the above types of AML projects. GAI also has various master specifications which we are able to draw from to create project specific specifications.

During the design engineering phase of our projects, GAI develops alternatives for the reclamation program and schedules meetings with WVDEP-AML to review options and select a mutually acceptable plan. We feel that this approach results in a more workable plan at an ultimately lower cost. We also perform a constructability review of each construction package by technical staff familiar with actual methods of construction. This review also expedites the overall reclamation plan.

## QUALIFICATIONS OF PERSONNEL

GAI has a staff of over 500 technical support personnel. GAI's staff is particularly well suited to investigate problems associated with abandoned mine lands. We propose to utilize a staff of engineers (civil and mining), geologists, biologists, surveyors, and CADD operators to conduct the investigatory and design work backed by a group of management professionals.

**Mr. C. Elwood Penn, IV, P.E.**, Branch Manager will serve as Contract Administrator in the Charleston office. Mr. Penn has worked with the industry and their related problems for **25 years**. Mr. Penn is very knowledgeable with WVDEP - AML guidelines and project expectations. His qualifications will result in direct benefits to the State in terms of quality and cost efficient completion of the project.

**Mr. Charles F. Straley, P.E.** will serve as a Project Manager. Mr. Straley has managed and participated in the design and development of reclamation plans and feasibility studies for over **45** abandoned mine land projects for the WVDEP, Abandoned Mine Lands and Reclamation Program. Mr. Straley has a complete understanding of WVDEP - AML guidelines, specifications, and project expectations. He has a good working relationship with many of the AML staff.

**Mr. James A. Hemme, P.E.** will serve as a Project Manager. Mr. Hemme has participated in the design and development of reclamation plans and feasibility studies for over **5** abandoned mine land projects for the WVDEP, Abandoned Mine Lands and Reclamation Program. Mr. Hemme has a complete understanding of WVDEP - AML guidelines, specifications, and project expectations. He has a good working relationship with many of the AML staff.

**Mr. Mark D. Young, P.E.** will serve as a Project Engineer. Mr. Young has participated in the design and development of reclamation plans and feasibility studies for **8** abandoned mine land projects for the WVDEP, Abandoned Mine Lands and Reclamation Program. Mr. Young has a complete understanding of WVDEP - AML guidelines, specifications, and project expectations.

**Mr. Joseph A. Prine, E.I.** will serve as a Project Engineer. Mr. Prine has participated in the design and development of reclamation plans and feasibility studies for **3** abandoned mine land projects for the WVDEP, Abandoned Mine Lands and Reclamation Program. Mr. Prine has a complete understanding of WVDEP - AML guidelines, specifications, and project expectations.

All have relevant direct experience with mine reclamation, grading/drainage, feasibility studies, water study and design, stream restoration, and preparation of construction documents.

A team of staff engineers, geologists/hydrologists, environmental scientists, biologists, technicians, CADD operators, word processor operators, secretaries, and draftspersons will provide the expertise and manpower to complete the project. For special needs we can call on planners, land use specialists, natural resource specialists, soil scientists, archaeologists, architectural historians, and structural and material engineers.

**CORPORATE SPECIALIZED EXPERIENCE  
AND DEMONSTRATED ABILITIES**

GAI has provided a wide variety of services to governmental agencies related to the reclamation of AML problems. GAI has served the WVDEP on open-end and other contracts from 1986 to the present. We have also completed numerous projects for the Office of Surface Mining, Reclamation and Enforcement (OSMRE) and AML programs in Pennsylvania, Ohio, Maryland, and Virginia.

## MANAGEMENT PLAN & LOCATION OF FACILITIES

### Management Plan

GAI's proposed project management plan is presented on Figure 1. The work will be performed in **GAI's Charleston, West Virginia office** which will allow ready access to the project area. Assistance, if and when needed will be provided by staff located in the Pittsburgh, Pennsylvania office of GAI. GAI's Charleston location is also convenient with respect to the WVDEP's Charleston location.

GAI's professional, technical and support staff have extensive experience on AML and related design projects and are extremely well qualified to serve the WVDEP on this contract. GAI stands ready to commit the personnel and resources required to complete the project in a timely, technically sound and cost efficient manner.

Contract Administration will be provided by **Mr. C. Elwood Penn, IV, P.E.** as shown in Figure 1. Mr. Penn will be responsible for overall management and performance of the project. He will review the work directive, visit the site along with the WVDEP to better familiarize himself with site conditions and work requirements accompanied by Mr. Gray or other appropriate staff, and then guide the preparation of the scope of work and cost proposal by GAI staff. He will also generally supervise the work in progress and review work products at intermediate points and finally prior to submittal to the WVDEP. In addition, Mr. Fioravante will be in charge of any contractual negotiations necessary through the process of the project.

Project Management will be provided by **Mr. Charles F. Straley, P.E., P.S. or Mr. James A. Hemme, P.E.** as shown in Figure 1. Mr. Straley will be responsible for the day to day management and performance of the project. He will review the work directive and prepare the scope of work and cost proposal. A written proposal including a detailed cost estimate (manhours and expenses associated with the project) will then be prepared and submitted to the WVDEP for their review. Upon WVDEP's approval of the proposal, the Project Manager will arrange for the start of the work. Included will be project staffing, arrangement and detailing of the scope of services to be provided by GAI, and review of project budget and schedule. The Project Manager will generally supervise the work in progress and review work products at intermediate points and finally prior to submittal to the WVDEP and will be responsible for maintaining liaison with the WVDEP Project Manager including project status reports, as required.

Day-to-day project activities will be performed under the direction of the Project Manager by one of the **Project Engineers (Messrs. Mark D. Young, P.E. and Joseph A. Prine, E.I.)** as shown in Figure 1. They will be responsible for guidance of the GAI staff. Their main activities will include development of detailed step-by-step project work plans to ensure the project activities are completed on-budget and on-time, review of the work products at intermediate points and at project completion, providing guidance and direction to project staff, as well as engineering and design work.

GAI's large experienced staff permits us to respond quickly, provides flexibility, and permits high level input to the project's staff from in house experts. However, our method of staffing projects, as evidenced by our performance on prior projects for WVDEP-AML, is to assign a small team with total responsibility for completion of the work to the clients satisfaction and budget. Where necessary the team can draw on the expertise available within GAI's large staff.

### **Project Budget Control**

The Project Manager will be responsible for monitoring the project budget. GAI's staff submits time sheets on a weekly basis. All charges including labor hours and other project expenses to a particular project are compiled in our data center and are distributed to the Project Manager by Wednesday of the following week. In this manner, we can keep close track of our project costs.

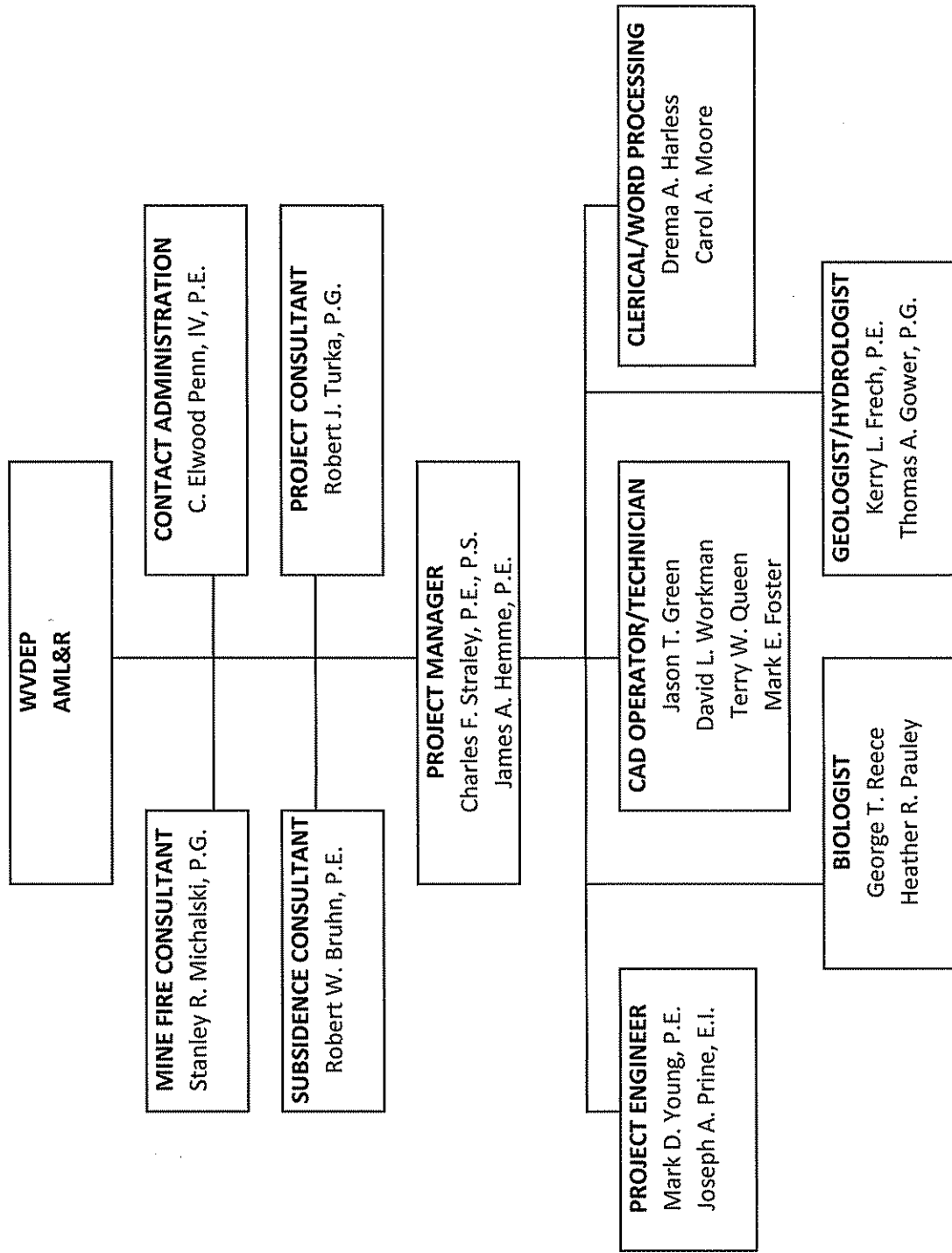
### **Schedule Control**

Direct responsibility for schedule control lies with the Project Manager. Initially, the Project Manager will review the work directive schedule requirements to see if they can be complied with given the anticipated scope of work. As the project progresses, the Project Manager will monitor progress and compare it with the established schedule on a weekly basis. In this manner, the Project Manager can make staff adjustments to maintain the project schedule. If circumstances develop that make it impossible to maintain the project schedule, the Project Manager will contact the WVDEP Project Manager to develop a mutually acceptable adjustment to the schedule.

### **Location of Facilities**

GAI proposes to complete work under this contract in our **Charleston, West Virginia office**. We feel that our close proximity to the WVDEP's Charleston office and the project area will allow the project to be completed in a timely, efficient manner.

**FIGURE 1**





**AML PROJECTS  
WEST VIRGINIA DIVISION OF ENVIRONMENTAL PROTECTION**

Project No.: E080354.02  
Title: Wolfpen (McBurney) Landslide  
Location: Kanawha County, West Virginia  
Tasks: The scope of work involves stabilizing a slope, providing seals for collapsed portals, and providing controlled drainage. Construction plans and technical specifications were developed.

Project No.: E08054.01  
Title: Heizer Creek (Lett-Zitselberger) Drainage  
Location: Putnam County, West Virginia  
Tasks: The scope of work involves stabilizing a slope, providing seals for collapsed portals, and providing controlled drainage. Construction plans and technical specifications were developed.

Project No.: E070607.00  
Title: Hominy Creek Area Waterline Extension Feasibility Study  
Location: Nicholas County, West Virginia  
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Project No.: E060330.10  
Title: Logan (Marcum) Drainage Emergency Project  
Location: Logan County, West Virginia  
Tasks: The scope of work involves emergency evaluation and investigation to develop a method to collect and discharge the seepage from the coal seam and conveyance to a downstream drainage system. Construction plans and specifications were developed.

Project No.: E060185.10  
Title: Bud/Alpoca Waterline Extension Feasibility Study  
Location: Wyoming County, West Virginia  
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Project No.: E060184.10  
Title: Nuriva/Maben Waterline Extension Feasibility Study  
Location: Wyoming County, West Virginia  
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Project No.: E060183.10  
Title: Herndon Heights Waterline Extension Feasibility Study  
Location: Wyoming County, West Virginia  
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Project No.: E050470.10  
Title: Handley/Upper Creek Drainage Project  
Location: Kanawha County, West Virginia  
Tasks: The reclamation plan included dewatering the underground impoundment(s) and creating diversion ditches to redirect the drainage around structures to the nearby stream. Regrading the areas behind the retaining wall, revegetating, and providing proper drainage for all disturbed areas is also included in the plan.

Project No.: E050287.10  
Title: Latrobe (Gibson) Landslide Emergency Project  
Location: Logan County, West Virginia  
Tasks: The scope of work involved emergency evaluation and investigation to develop alternatives to reduce slopes, eliminate instability, and provide for controlled drainage. Once an alternative was selected, construction plans and specifications were developed.

Project No.: E050212.10  
Title: Ven's Run Maintenance Project  
Location: Harrison, County, West Virginia  
Tasks: The scope of work involves stabilizing the slopes and provide for controlled drainage. It is GAI's initial approach to the abatement of the landslide is to provide a proposed reclamation plan that will grade the slide in place as much as practical and not conduct a total removal of material.

Project No.: E050126.10  
Title: War Waterline Extension Feasibility Study  
Location: McDowell County, West Virginia  
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Project No.: E050123.10  
Title: Clark's Gap Waterline Extension Feasibility Study  
Location: Mercer and Wyoming Counties, West Virginia  
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Project No.: 2004-134-10  
Title: War (Dash) Impoundment  
Location: McDowell County, West Virginia  
Tasks: The scope of work included providing aerial mapping and ground survey for verification of two sites consisting of a small impoundment, several mine portals, and coal refuse disposal. In addition, stability analyses were performed on various scenarios for the elimination of the impoundment including subsurface investigation.

Project No.: 2003-485-10  
Title: Whites Run Highwall and Portal  
Location: Randolph County, West Virginia  
Tasks: The scope of work consist of preparing construction documents for the reclamation of 6,000 linear feet of highwall, three deep mine portals, a coal refuse spoil area, and treatment of acid mine drainage (AMD). The treatment of the AMD will utilize passive treatment techniques. The project also includes re-establishment of a stream by natural stream techniques.

Project No.: 2003-439-10  
Title: Helen Portals  
Location: Raleigh County, West Virginia  
Tasks: The scope of work included the preparation of construction documents for four sites, consisting of abandoned mine portals, unstable refuse piles, small impoundment, and demolition of a mining related structure. The project also included re-establishing a stream by natural stream techniques.

- Project No.: 2003-174-10  
Title: Ned's Branch Impoundment (Phase II)  
Location: Mingo County, West Virginia  
Tasks: The scope of work included this preparation of construction documents for reclamation of the failed impoundment. The scope of work included regrading of refuse, eliminating impoundment capability, sealing of mine portals, stream restoration, highway relocation and construction management services for the above activities.
- Project No.: 2003-154-10  
Title: Bearwallow Branch Refuse Pile  
Location: McDowell County, West Virginia  
Tasks: The scope of work included the preparation of construction documents for reclamation of seven sites. The various sites consist of unstable refuse piles, abandoned mine portals, small impoundments, and miscellaneous structures.
- Project No.: 2002-282-10  
Title: Community of Preston - State Route 72 Waterline  
Location: Preston County, West Virginia  
Tasks: The scope of work included the preparation of construction documents for a water transmission line. The total length of waterline is approximately 1.1 miles.
- Project No.: 2002-144-10  
Title: Anchor Road Waterpumping, Storage and Distribution Feasibility Study  
Location: Logan County, West Virginia  
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.
- Project No.: 2002-143-10  
Title: Standard, Paint Creek, Collinsdale Waterline Extension Feasibility Study  
Location: Kanawha County, West Virginia  
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.
- Project No.: 2002-138-10  
Title: McAlpin Eroding Dump - Phase II  
Location: Raleigh County, West Virginia  
Tasks: The scope of work included the preparation of construction documents for eleven sites. The sites consisted of ten coal refuse piles (one of which is burning), numerous mine openings (both collapsed and open), old mine buildings, possible AMD, and various mine related debris.

Project No.: 2001-489-10  
Title: McAlpin Eroding Dump - Phase I  
Location: Raleigh County, West Virginia  
Tasks: The scope of work included the preparation of construction documents for six sites. The sites consisted of six coal refuse piles, numerous mine openings (both collapsed and open), old mine buildings, possible AMD, and various mine related debris.

Project No.: 96-554-27  
Title: Kingwood 52/6 Water Supply Extension  
Location: Preston County, West Virginia  
Tasks: The scope of work included the preparation of construction documents for a water transmission line. Included in the distribution system is a 96,000 gallon water storage and a booster pump station. The total length of waterline is approximately 13 miles.

Project No.: 96-554-26  
Title: Micajah Ridge - Herndon Heights/Irtman Waterline Extension Feasibility Study  
Location: Wyoming County, West Virginia  
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Project No.: 96-554-25  
Title: Water Feasibility Study, Glen Rogers Study Area  
Location: Wyoming County, West Virginia  
Tasks: Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the investigation in a report.

Project No.: 96-554-24  
Title: Rt. 20 / Gould Community Waterline Extension Feasibility Study  
Location: Upshur County, West Virginia  
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Project No.: 96-554-23  
Title: Water Feasibility Study, Elkins/Buckhannon Study Area  
Location: Upshur County, West Virginia  
Tasks: Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the investigation in a report.

Project No.: 96-554-22  
Title: Laurel Creek Subdivision Subsidence  
Location: Raleigh County, West Virginia  
Tasks: Preparation of construction documents for the Laurel Creek Subdivision Subsidence project in Beckley, West Virginia. Project involved subsurface investigation (including borehole camera work); sampling of mine water; injection plan layout for grouting under over 40 residences; surface water drainage structure, preparation of technical specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre-construction meetings.

Project No.: 96-554-21  
Title: Superior (PocaLand) Complex  
Location: McDowell County, West Virginia  
Tasks: The assessment included a site reconnaissance, asbestos observations and sample analysis, lead-based paint observations and analysis, and limited surficial soil sample analysis. The assessment was concluded in a report to aid in evaluating the existing subsurface soil quality in the area to better understand the costs involved during reclamation efforts.

Project No.: 96-554-20  
Title: Washington Heights to Jeffrey Waterline Extension  
Location: Boone County, West Virginia  
Tasks: The project involved a technical review plans and specifications presented by the WVAWC as part of the Boone County Public Service District: Regional Water Supply System. The plans included a total of seven contracts. The scope of work was to identify areas of the contracts that were within project limits set by a Phase II Water Feasibility Study conducted for the WVDEP and to determine the amount of the contract costs that were the responsibility of the WVDEP. Included were field reconnaissance, review of plans, hydraulic calculations, and cost estimating.

Project No.: 96-554-19  
Title: Water Feasibility Study, Gaymont, Edmond, and Winona Study Area  
Location: Fayette County, West Virginia  
Tasks: Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the investigation in a report.

Project No.: 96-554-17  
Title: Water Feasibility Study, Hominy Creek Study Area  
Location: Nicholas County, West Virginia  
Tasks: Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the investigation in a report.

Project No.: 96-554-16  
Title: Elk Creek / Verner Waterline Extension Feasibility Study  
Location: Logan County, West Virginia  
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Project No.: 96-554-15  
Title: Orlando Mining Facility  
Location: Gilmer County, West Virginia  
Tasks: The scope of work included preparation of a report identifying the results from an investigation/evaluation of the facilities and equipment at the site. The investigation included determining the value, usefulness and/or condition of the facilities and equipment.

Project No.: 96-554-14  
Title: Scotch Hill / Miller Hill Water Supply Extension  
Location: Preston County, West Virginia  
Tasks: The scope of work included the preparation of construction documents for a water transmission line beginning at the existing hydropneumatic booster station. Included in the distribution system is 96,000 gallon water storage. The total length of waterline is approximately 7.5 miles.

Project No.: 96-554-13  
Title: Camp Run AMD  
Location: Barbour County, West Virginia  
Tasks: The scope of work included the preparation of construction documents for two sites. The sites consisted of ten to fifteen mine portals and mine drainage seep locations, one pond (to be drained), concrete tramway abutments (and debris), coal refuse, and various areas of saturated soil from mine drainage (one of which is sliding).

Project No.: 96-554-12  
Title: Mahan Tipple and Refuse Maintenance  
Location: Fayette County, West Virginia  
Tasks: The scope of work included the preparation of construction documents for the repair of a sliding reclaimed coal refuse pile. The project consisted of installing a rock toe buttress and drainage channels

Project No.: 96-554-11  
Title: Johnsons Knob  
Location: Fayette County, West Virginia  
Tasks: The scope of work included the preparation of construction documents for four sites. The sites consisted of five coal refuse piles totaling approximately twenty acres, numerous mine openings (consisting of auger hole and portals, both collapsed and open), six old mine buildings, possible AMD, and various mine related debris (including two old conveyors and a collapsed tipple).

Project No.: 96-554-10  
Title: Carolina Refuse  
Location: Marion County, West Virginia  
Tasks: The project consisted of two sites. The sites consisted of a refuse pile totaling approximately three acres, various non-mine related debris, and two concrete mine shafts with some various debris.

Project No.: 96-554-09  
Title: Omega Mine Complex Project  
Location: Monongalia County, West Virginia  
Tasks: The project involved writing a final report to the Electric Power Research Institute to include a comparison of the pre- and post-injection water quality data, the results of a post-construction benthic survey, and the results of an analysis of data from injection operations.

Project No.: 96-554-08  
Title: Omega Mine Complex Completion  
Location: Monongalia County, West Virginia  
Tasks: The scope of work included the preparation of construction documents for a booster station upgrade as part of the Omega Mine Complex project. Hydraulic analyses were performed, new pumps were selected, and a demonstration was made that the new pumps had higher efficiencies than the old pumps. Construction documents for the booster station upgrade and pressure reducing assembly were prepared.



Project No.: 96-554-06  
Title: Hutchinson Subsidence  
Location: Fairmont, West Virginia  
Tasks: Preparation of construction documents for the Hutchinson Subsidence project in Fairmont, West Virginia. Project involved subsurface investigation (including borehole camera work); sampling of mine water; injection plan layout for grouting under three residences; preparation of technical specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre-construction meetings.

Project No.: 96-554-05  
Title: Fairmont (Grandstaff) Subsidence  
Location: Fairmont, West Virginia  
Tasks: Evaluation of potential subsidence effects for the Grandstaff Subsidence project in Fairmont, West Virginia. Project involved subsurface investigation (including borehole camera work); sampling of mine water; and preparation of a report describing the findings of the above investigations.

Project No.: 96-554-04  
Title: City of Summersville (Rt. 39)  
Location: Nicholas County, West Virginia  
Tasks: The project included the review of another consultants water feasibility study report and determination if the findings of the report were accurate.

Project No.: 96-554-03  
Title: Reynoldsville, Wallace, and Clarksburg Water Supply Extension Project  
Location: Harrison County, West Virginia  
Tasks: The project included a feasibility/rate analysis, design of 9,400 feet of 8-inch water line, 33,000 feet of 6-inch water line, 12,200 feet of 2-inch water line, a 96,000 gallon (nominal) water storage tank, and other appurtenances, selection, surveying, and geotechnical investigation of a water storage tank site, and preparation of construction documents, regulatory permit applications, and an engineer's report.

Project No.: 96-554-02  
Title: Mill Creek Regional Water Supply Extension Project  
Location: Logan County, West Virginia  
Tasks: Preparation of construction documents for the construction of water transmission lines, a water distribution system, two water storage tanks, a booster station, two hydropneumatic tanks, and a water treatment plant. The total length of water line to be constructed was approximately 34 miles.

Project No.: 96-554-01  
Title: Majesty Mine Complex  
Location: Barbour County, West Virginia  
Tasks: Preparation of construction documents for the reclamation of the Majesty Mine Complex. The Majesty Mine Complex was an abandoned mine site which included old mine structures, open mine portals, unreclaimed refuse piles and an extensive highwall, existing wetlands and ponds, and numerous seeps producing acid mine drainage (AMD).

Project No.: 93-198-25  
Title: Phase II Water Feasibility Study, Washington Heights to Jeffrey Study Area  
Location: Boone County, West Virginia  
Tasks: Phase II water feasibility study for private water supplies in the Washington Heights to Jeffrey Study Area in Boone County, West Virginia. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report. Work was completed on a "fast track" schedule.

Project No.: 93-198-24  
Title: Evaluation of Construction Documents, Gauley River Water Line Extension  
Location: Fayette and Nicholas Counties, West Virginia  
Tasks: Evaluation of construction documents for the Gauley River Water Line Extension, to be funded by AML. Evaluation included a review of technical specifications and drawings; evaluation of hydraulics; completion of letter summarizing the evaluation; and meetings to discuss the evaluation.

Project No.: 93-198-23  
Title: Evaluation of Construction Documents, Heizer/Manila Creek Water Line Extension  
Location: Putnam County, West Virginia  
Tasks: Evaluation of construction documents for the Heizer/Manila Creek Water Line Extension, to be funded by AML. Evaluation included a review of technical specifications and drawings; evaluation of hydraulics; completion of letter summarizing the evaluation; and meetings to discuss the evaluation.

Project No.: 93-198-22  
Title: Owings Mine Complex  
Location: Harrison County, West Virginia  
Tasks: (1) Evaluation of water quality and potential passive AMD treatment system design at the Owings Mine Complex Site. Project included identification of monitoring points (streams and AMD discharges); sampling and analysis of monitoring points for a 3-month period; preparation of a report summarizing the findings; and conceptual design of passive AMD treatment system including costs.  
  
(2) Preparation of construction documents including subsurface investigation; surveying; refuse processing evaluation; grading and drainage design for

four refuse piles and various other refuse areas; design of seals for eighteen mine portals; and preparation of technical specifications, drawings, and engineer's cost estimate.

- Project No.: 93-198-21  
Title: Omega Mine Complex  
Location: Monongalia County, West Virginia  
Tasks: Preparation of construction documents for the Omega Mine Complex project in Monongalia County, West Virginia. The project involved the injection of coal combustion byproduct grouts into mine workings to help alleviate the generation of AMD. Work included subsurface investigation; surveying; grout mix evaluation; acid-base accounting analysis of overburden and coal; and preparation of drawings, technical specifications and engineer's cost estimate.
- Project No.: 93-198-20  
Title: Mill Creek - Isom Community  
Location: Logan County, West Virginia  
Tasks: Design of water system to service approximately 800 residents of the Mill Creek-Isom Community in Logan County, West Virginia. Work included sizing of water treatment plant, 4 water tanks, 4 booster stations, 1 pressure reducing valve, and approximately 23 miles of water line. Construction cost was estimated at approximately \$5,500,000.
- Project No.: 93-198-19  
Title: Phase II Water Feasibility Study, Weaver-Junior Study Area  
Location: Randolph and Upshur Counties, West Virginia  
Tasks: Phase II water feasibility study for private water supplies in the Weaver-Junior Study Area in Randolph and Upshur Counties, West Virginia. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the investigation in a report.
- Project No.: 93-198-18  
Title: Phase II Water Feasibility Study, Reynoldsville, Wallace, and Clarksburg Study Area  
Location: Harrison County, West Virginia  
Tasks: Phase II water feasibility study for private water supplies in the Reynoldsville, Wallace, and Clarksburg Study Area in Harrison County, West Virginia. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the investigation in a report.

Project No.: 93-198-17  
Title: Mainella Subsidence  
Location: Marion County, West Virginia  
Tasks: Preparation of construction documents for the Mainella Subsidence project in Fairmont, West Virginia. Project involved subsurface investigation (including borehole camera work); sampling of mine water; injection plan layout for grouting under three residences; preparation of technical specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre-construction meetings. Approximately 15 injection holes were proposed at an estimated construction cost of approximately \$138,000.

Project No.: 93-198-15  
Title: Glen Morgan Subsidence  
Location: Raleigh County, West Virginia  
Tasks: Preparation of construction documents for the Glen Morgan Subsidence project near Beckley, West Virginia. Project included subsurface investigation (including borehole camera work); base mapping development; sampling of mine water; injection plan layout for grouting under one residence; preparation of technical specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre-construction meetings. Estimated construction cost was approximately \$164,000.

Project No.: 93-198-14  
Title: Harris AMD  
Location: Harrison County, West Virginia  
Tasks: Preparation of construction documents for the Harris AMD site in Harrison County, West Virginia. Project included subsurface investigation; surveying; sampling of mine discharges; design of channels, wet seals, and drain pipes; preparation of technical specifications, drawings and engineer's cost estimate; and participation in pre-bid and pre-construction meetings. Bid construction cost was approximately \$65,000.

Project No.: 93-198-13  
Title: Lefthand Fork (See) Burning Refuse  
Location: Logan County, West Virginia  
Tasks: Preparation of construction documents for Lefthand Fork (See) Burning Refuse project. Project included subsurface investigation including temperature probe readings; surveying; refuse processing evaluation; grading and drainage design for regrading of refuse pile; delineation of burning refuse areas; design of excess material disposal site; completion of IBR for relocating existing bonded haul road; preparation of technical specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre-construction meetings. Bid construction cost was approximately \$940,000.

Project No.: 93-198-12  
Title: Madison Street/Fairview Route 218 Portals  
Location: Marion County, West Virginia  
Tasks: Work performed on this project was an extension of activities as described on Project No. 88-460-21.

Project No.: 93-198-11  
Title: Summerlee Refuse - Post Construction Water Quality  
Location: Fayette County, West Virginia  
Tasks: Water sample collection, analysis, and evaluation at the reclaimed Summerlee Refuse site. Findings were summarized in a report.

Project No.: 93-198-10  
Title: Cow Creek - Sarah Ann Water Supply Extension Project  
Location: Logan County, West Virginia  
Tasks: Preparation of construction documents for the Cow Creek - Sarah Ann Water Supply Extension project in Logan County, West Virginia. Project included subsurface investigation; design of three water tanks, three booster stations, one master meter assembly, and approximately 19 miles of waterline; preparation of technical specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre-construction meetings. Bid construction cost was approximately \$4,800,000.

Project No.: 93-198-09  
Title: Godby Branch Water Supply Extension  
Location: Logan County, West Virginia  
Tasks: Preparation of construction documents for the Godby Branch Water Supply Extension project. Project included subsurface investigation; surveying; design of water tank, booster station, and approximately 2.5 miles of water line; preparation of technical specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre-construction meetings. Bid construction cost was approximately \$680,000.

Project No.: 93-198-08  
Title: Phase II Water Feasibility Study, New Haven Study Area  
Location: Fayette County, West Virginia  
Tasks: Phase II water feasibility study for private water supplies in the New Haven Study Area in Fayette County, West Virginia. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report. Conceptual design of water system included sizing a water treatment plant, 1 booster station, 5 water tanks, and approximately 87 miles of water line. Estimated construction cost was approximately \$13,800,000.

- Project No.: 93-198-07  
Title: Phase II Water Feasibility Study, Gauley River Study Area  
Location: Fayette and Nicholas Counties, West Virginia  
Tasks: Phase II water feasibility study for private water supplies in the Gauley River Study Area in Fayette and Nicholas Counties, West Virginia. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the investigation in a report.
- Project No.: 93-198-06  
Title: Phase II Water Feasibility Study, Heizer and Manila Creek Community  
Location: Putnam County, West Virginia  
Tasks: Phase II water feasibility study for private water supplies in the Heizer and Manila Creek Community in Putnam County, West Virginia. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.
- Project No.: 93-198-05  
Title: Phase I Water Feasibility Study, Reynoldsville, Wallace, & Clarksburg Study Area  
Location: Harrison County, West Virginia  
Tasks: Phase I water feasibility study of the Reynoldsville, Wallace, & Clarksburg Study Area in Harrison County, West Virginia to evaluate the potential for pre-1977 mining activity to have degraded the water supplies of residents. Work included interviews, record searches, field reconnaissance, and preparation of remedial action cost estimates. A report summarizing the findings was submitted.
- Project No.: 93-198-04  
Title: Phase I Water Feasibility Study, Weaver-Junior Study Area  
Location: Randolph and Upshur Counties, West Virginia  
Tasks: Phase I water feasibility study of the Weaver-Junior Study Area in Randolph and Upshur Counties, West Virginia to evaluate the potential for pre-1977 mining activity to have degraded the water supplies of residents. Work included interviews, record searches, field reconnaissance, and preparation of remedial action cost estimates. A report summarizing the findings was submitted.
- Project No.: 93-198-03  
Title: Phase I Water Feasibility Study, Matheny Hill Study Area  
Location: Harrison County, West Virginia  
Tasks: Phase I water feasibility study of the Matheny Hill Study Area in Harrison County, West Virginia to evaluate the potential for pre-1977 mining activity to have degraded the water supplies of residents. Work included interviews, record searches, field reconnaissance, and preparation of remedial action cost estimates. A report summarizing the findings was submitted.

Project No.: 93-198-02  
Title: Duncan Hill Subsidence No. 2  
Location: Harrison County, West Virginia  
Tasks: Completed subsidence evaluation investigation at the Duncan Hill Subsidence No. 2 project site in Clarksburg, West Virginia. Work included subsurface investigation; mapping development; surveying; records review; water sampling; and preparation of a report summarizing the findings. The report did not recommend stabilization for the structures in the project area, due to a lack of evidence that subsidence was causing problems.

Project No.: 93-198-01  
Title: Urso Subsidence  
Location: Fairmont, West Virginia  
Tasks: Field reconnaissance, resident interviews, videotape surveys of existing conditions, subsurface investigation, surveying, and subsequent evaluation to determine if mine subsidence was affecting structures within a several block area of Fairmont. Ultimately, stabilization program was limited to 5.4 acre area with approximately 28 residences and businesses. Construction documents, including drawings, technical specifications, and engineer's cost estimate were prepared. Proposed construction included approximately 140 injection holes and 18,000 cubic yards of injection material. Construction cost was estimated at approximately \$1,200,000.

Project No.: 88-460-24  
Title: Phase I Water Feasibility Studies  
Location: Brooke County, along Gauley River in Fayette County & Nicholas Counties, and New Haven area (around Hico) in Fayette County, West Virginia.  
Tasks: Preliminary investigation of 3 separate communities to evaluate the possibility that pre-1977 mining activity degraded water supplies. The investigation included a review of mining records, existing water quality data, and conductance of resident interviews to assess possible impacts. Separate reports were prepared for each community, documenting findings and providing a cost estimate for extending public water supply systems.

Project No.: 88-460-23  
Title: Phase II Water Feasibility Study, Mill Creek Study Area  
Location: Boone, Lincoln, and Logan Counties, West Virginia  
Tasks: Phase II water feasibility study for private water supplies in the Boone County Community, Lincoln County Community, and Logan County Community all encompassed in the Mill Creek Study Area. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in separate reports for each community. Estimated construction cost for extending a public water supply to residents of the Mill Creek Study Area was approximately \$15,400,000 and included 1 water treatment plant, 1 booster station, 7 water storage tanks, and approximately 40 miles of water line.

- Project No.: 88-460-22  
Title: Phase II Water Feasibility Study, Godby Branch Community  
Location: Logan County, West Virginia  
Tasks: Phase II water feasibility study for private water supplies in the Godby Branch Community in Logan County, West Virginia. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.
- Project No.: 88-460-21  
Title: Madison Street/Fairview Route 218 Portals  
Location: Marion County, West Virginia  
Tasks: Preparation of construction documents for the Madison Street/Fairview Route 218 Portals project. Work included subsurface investigation; surveying; design of wet mine seals and associated drains at multiple sites; preparation of technical specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre-construction meetings.
- Project No.: 88-460-20  
Title: Summerlee Refuse Project  
Location: Fayette County, West Virginia  
Tasks: Preparation of construction documents for the Summerlee Refuse pile project. Project included subsurface investigation; surveying; water quality sampling; grading and drainage design for regrading and revegetation of 60 acre refuse pile, 2 impoundments, and 2 ponds; preparation of technical specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre-construction meetings.
- Project No.: 88-460-19  
Title: Putnam County Phase I Water Studies  
Location: Two communities in Putnam County, West Virginia  
Tasks: Preliminary investigation of the Manila Creek and Heizer Creek areas of Putnam County to determine the possibility of pre-1977 mining activity degrading water supplies. Study included review of historical mining records, geological data, and resident interviews to assess possible impacts. Report prepared documenting findings and a cost estimate for extending public water supply system.
- Project No.: 88-460-18  
Title: Boone County Phase I Water Studies  
Location: Various communities in Boone County, West Virginia  
Tasks: Preliminary investigation of the Greenvew/Big Branch, Ramage/Six Mile Creek, Secoal/Jeffrey/Obes Branch, Hewett Creek/Missouri Fork, and Meadowfork communities of Boone County to determine the possibility of pre-1977 mining activity degrading water supplies. Study included review of historical mining records, geological data, and resident interviews to assess possible impacts. Reports prepared documenting findings and cost estimates for extending public water supply systems.



Project No.: 88-460-17  
Title: Duncan Hill Subsidence  
Location: Clarksburg, West Virginia  
Tasks: Field reconnaissance, resident interviews, videotape surveys of existing conditions, subsurface investigation, borehole video camera surveys, and surveying to determine whether subsidence was affecting numerous homes, water tank, and YMCA over a 16 acre area. Development of report documenting that damages to water tank and YMCA were not subsidence related. Preparation of stabilization plan including plans, specifications, etc. for residential area.

Project No.: 88-460-16  
Title: Phase II Logan Water Feasibility Study  
Location: Logan County, West Virginia  
Tasks: Investigation to determine the percentage of residents in the Cow Creek, Crooked Creek and Upper Rum Creek communities whose ground water supplies had been degraded by pre-1977 mining activity. Field reconnaissance, mine map and mine permit records search, interviews, water sampling and analysis, and classification via piper diagrams were conducted.

Project No.: 88-460-15  
Title: Cora Mine Drainage No. II  
Location: Logan County, West Virginia  
Tasks: Mine drainage abatement project included drilling and water analysis with subsequent design of several mine seals with piping and channels to convey flow to the receiving stream. Project included boring and jacking pipeline under railroad.

Project No.: 88-460-14  
Title: Covey Creek Mine  
Location: Logan County, West Virginia  
Tasks: Field reconnaissance, historical records review, and subsurface investigation to determine extent of mine fire and to develop options for remediation.

Project No.: 88-460-13  
Title: Logan Phase I Water Study  
Location: Logan County, West Virginia  
Tasks: Preliminary investigation of the Clothier, Cow Creek, Crooked Creek, Godby Branch, Godby Heights, Upper Rum Creek, and Whitman Creek/Holden communities to determine the possibility of pre-1977 mining activity degrading the water supplies of the communities. Field reconnaissance, interviews, and mining and water quality record searches were conducted, and a remedial cost estimate was provided with reports summarizing the findings for each community.

Project No.: 88-460-12  
Title: Vivian Refuse Pile  
Location: Vivian, West Virginia  
Tasks: Subsurface investigation, surveying, and design for reclamation of a large coal refuse pile and two mine entries. Plans, specifications, cost estimate, coal refuse reprocessing evaluation, and supporting documents for regrading over 150,000 cubic yards of refuse, surface water control, mine seals, and riprap toe protection were completed.

Project No.: 88-460-11  
Title: Kimball Refuse Piles  
Location: Kimball, West Virginia  
Tasks: Subsurface investigation, surveying and design for reclamation of 3 coal refuse piles and six mine entries. Design included replacement of a water well and related supply piping for the town of Kimball. Completed preparation of plans, specifications, cost estimate, coal refuse reprocessing report, West Virginia Department of Health permit for new well, and other supporting documents for reclaiming this large site with over ½ million cubic yards of regrading.

Project No.: 88-460-10 & 88-460-09  
Title: Hampden (Smith) Bridge  
Location: Mingo County, West Virginia  
Tasks: Design of metal arch culvert to replace a bridge to allow access to a landslide repair project. Development of plans and specifications were on a fast-track schedule.

Project No.: 88-460-08  
Title: Bear Run Refuse  
Location: Gilmer County, West Virginia  
Tasks: Field reconnaissance to establish project limits, develop reclamation options, and collect water quality information to design a wetlands reclamation project. Subsurface investigation, surveying, and development of aerial mapping for 160 acres were conducted. Plans, specifications, cost estimate, reprocessing evaluation and report, and permit application assistance to develop reclamation plan for 13 former coal refuse disposal ponds/impoundments and 3 refuse piles were completed. Plan included developing and enhancing wetlands.

Project No.: 88-460-07  
Title: Beaver Creek Waterline Extension  
Location: Barbour and Randolph Counties, West Virginia  
Tasks: The project included design of a 1.5 mile, 6-inch diameter water line extension including fire hydrants, stream crossings, and service to 13 residents. Preparation of plans, specifications, cost estimate, and supporting documents were completed.

Project No.: 88-460-06  
Title: Charleston (Ratcliffe) Landslide  
Location: Kanawha County, West Virginia  
Tasks: The project included subsurface investigation; research of mine mapping; and determination if the slide was due to mining.

Project No.: 88-460-05  
Title: Garrison Complex  
Location: Garrison, Boone County, West Virginia  
Tasks: Subsurface investigation, surveying, and design for the removal of a railroad embankment posing a water impounding hazard were conducted. Project also included several mine entries and surface water runoff control channels. Plans, specifications, cost estimate, and supporting documents were prepared.

Project No.: 88-460-04  
Title: Cassity Fork Water Supply Extension  
Location: Randolph County, West Virginia  
Tasks: The project consisted of a water study to document existing water quality and impacts due to mining, subsurface investigations, surveying, and design of an 8-mile waterline extension including booster station, reservoir, pressure reducing valves, and provision for fire flow. Preparation of plans, specifications, cost estimate and supporting documents, and a review of contractor submittals during construction were conducted.

Project No.: 88-460-03  
Title: Mulberry Fork (Stover) Landslide  
Location: Fayette County, West Virginia  
Tasks: The project included subsurface investigation and design of corrective measures for a landslide.

Project No.: 88-460-02  
Title: Beckley (Queen Street) Subsidence  
Location: Beckley, West Virginia  
Tasks: Subsurface investigation to determine if mine subsidence was responsible for damages experienced by a home was conducted. Preparation of a report documenting that subsidence was not responsible for the observed damage was completed.

Project No.: 88-460-01  
Title: Courtright Highwall  
Location: Bridgeport, West Virginia  
Tasks: Work performed on this project was an extension of activities as described for 86-181-23.

Project No.: 86-181-23  
Title: Courtright Highwall  
Location: Bridgeport, West Virginia  
Tasks: The project included a subsurface investigation to determine extent of landslide and whether mining related, field surveying to establish topographic mapping and control, and subsequent design of landslide repair alternatives. Design ultimately selected included a reinforced slope using stabilizing grid. Landslide contained 400,000 cubic yards of material.

Project No.: 86-181-22  
Title: Jonben (Haga) Subsidence  
Location: Jonben, West Virginia  
Tasks: Subsidence control on an emergency basis including sinkhole backfilling and drainage control. Project included drilling to determine the extent of mining and subsidence, field surveying to develop topographic mapping, and development of a backfilling and drainage plan.

Project No.: 86-181-21  
Title: Belle (Malcolm) Landslide  
Location: Belle, West Virginia  
Tasks: Landslide stabilization including excavation of slide mass, sealing of several mine entries, and drainage controls. Project included drilling, sampling, and piezometer installation and monitoring to develop project plans and specifications.

Project No.: 86-181-20  
Title: Holden (Padgett) Subsidence  
Location: Whitman Junction, West Virginia  
Tasks: The project included subsurface investigation to determine extent of mine workings, development of stabilization plan including drainage channels/pipes, and mine seals. Construction documents were prepared, and participation in pre-bid and pre-construction meetings was completed.

Project No.: 86-181-19  
Title: Minden Mine Fire  
Location: Minden, West Virginia  
Tasks: The project included subsurface investigation to determine source and extent of underground fire.

**AML PROJECTS  
WEST VIRGINIA DEPARTMENT OF ENERGY**

Project No.: 86-181-18  
Title: Williamson (Elias) Landslide - Emergency  
Location: Williamson, West Virginia  
Tasks: Subsurface investigation and determination of whether or not a landslide threatening 1 home was mining related with subsequent development of plans for a retaining wall were conducted.

Project No.: 86-181-17  
Title: Kitchen/Gibson Landslide - Emergency  
Location: Boone County, West Virginia  
Tasks: Subsurface investigation and determination of whether or not a landslide threatening 4 homes was mining related were conducted.

Project No.: 86-181-16  
Title: Doug Gray Subsidence  
Location: Fairmont, West Virginia  
Tasks: Subsidence control by injecting grout to fill mine voids. Project included exploratory drilling and sampling including both vertical and angle borings with the subsequent development of a grouting program to support homes and businesses in Fairmont, West Virginia.

Project No.: 86-181-15  
Title: St. John's Road Subsidence  
Location: Brooke County, West Virginia  
Tasks: Subsurface investigation and development of specifications and construction drawings for remedial work on mine subsidence affecting 30 acres and 50 homes were conducted.

Project No.: 86-181-14  
Title: High Coal Tipple  
Location: Boone County, West Virginia  
Tasks: The project included development of specifications and construction drawings for remedial work on 16 mine portals and an abandoned tipple and its several associated structures.

Project No.: 86-181-12  
Title: Route 19/28 Subsidence  
Location: Harrison County, West Virginia  
Tasks: The project included subsurface investigation and development of construction specifications and drawings, and topographic mapping for remedial work on mine subsidence affecting a road.

Project No.: 86-181-10  
Title: Omar Refuse Piles  
Location: Logan County, West Virginia  
Tasks: The project included subsurface investigation and development of specifications and construction drawings for remedial work on regrading 5 refuse piles with over 330,000 cubic yards of earthwork, and sealing 6 mine portals and a large vertical shaft.

Project No.: 86-181-09  
Title: Mt. Hope (Sawyer) Subsidence  
Location: Fayette County, West Virginia  
Tasks: The project included subsurface investigation and development of construction specifications and drawings, and topographic mapping for remedial work on mine subsidence affecting 1 home.

Project No.: 86-181-08  
Title: Morgantown Airport Drainage  
Location: Morgantown, West Virginia  
Tasks: The project included subsurface investigation and development of construction specifications and drawings, and some topographic mapping for remedial work on mine subsidence effecting a day care center and an airport access road, and for closure of 4 mine portals below the end of a runway.

Project No.: 86-181-07  
Title: Logan Drainage Project  
Location: Logan, West Virginia  
Tasks: The project included subsurface investigation and development of construction specifications and drawings, and some topographic mapping for remedial work on 4 mine portals, a mine seep, and 400 feet of abandoned conveyor with its headhouse and loadout platform.

Project No.: 86-181-06  
Title: Huffman Street Subsidence  
Location: Fairmont, West Virginia  
Tasks: The project included subsurface investigation and development of construction specifications and drawings for remedial work on mine subsidence affecting 20 homes.

Project No.: 86-181-05  
Title: Switzer/Adams/Robinson Drainage  
Location: Logan County, West Virginia  
Tasks: The project included subsurface investigation and development of construction specifications, drawings, and topographic mapping for remedial work on 3 mine portals, including the design of an energy dissipator with associated piping under railroad and state highway.

Project No.: 86-181-04  
Title: Follansbee (Hultsburg) Drainage  
Location: Brooke County, West Virginia  
Tasks: The project included subsurface investigation and development of construction specifications and drawings for remedial work on acid mine drainage problems.

Project No.: 86-181-03  
Title: Fairmont East Subsidence  
Location: Fairmont, West Virginia  
Tasks: The project included subsurface investigation and development of construction specifications and drawings for remedial work on mine subsidence affecting 125 homes on 20 acres.

Project No.: 86-181-02  
Title: Fairmont IV  
Location: Fairmont, West Virginia  
Tasks: The project included subsurface investigation to determine if subsidence of 3 homes was related to mining and subsequent development of construction specifications and drawings for remedial work on the subsidence.

Project No.: 86-181-01  
Title: Hawkins AMD  
Location: Harrison County, West Virginia  
Tasks: The project included subsurface investigation and development of construction specifications, drawings and topographic mapping for remedial work on acid mine drainage emanating from mine portals following a "blow-out" and causing a large saturated area above 5 homes.

Project No.: 86-107  
Title: Kistler Refuse and Mine Fire Extinguishment Program  
Location: Logan County, West Virginia  
Tasks: The project included subsurface investigation and development of construction specifications and drawings for extinguishment through grout injection, and subsequent construction monitoring.

Project No.: 85-354  
Title: Rebrook Street Drainage  
Location: Clarksburg, West Virginia  
Tasks: The project included subsurface investigation and development of construction specifications and drawings for remedial work on acid mine drainage from 2 mine portals which was effecting a house and its garage, and subsequent construction monitoring.

Project No.: 85-289  
Title: Hurricane Fork/Five-Mile Fork Burning Coal Seams  
Location: Kanawha County, West Virginia  
Tasks: The project included subsurface investigation and development of costs which would be associated with extinguishment.

Project No.: 84-192  
Title: Duck Creek Landslide  
Location: Gilmer County, West Virginia  
Tasks: The project included subsurface investigation, development of construction specifications and drawings, and construction monitoring for remedial work on a landslide resulting from uncompacted strip bench spoils.



**AML PROJECTS**  
**WEST VIRGINIA DEPARTMENT OF NATURAL RESOURCES**

Project No.: 85-113  
Title: Kingmont Complex Reclamation  
Location: Marion County, West Virginia  
Tasks: The project included development of specifications and construction drawings for sealing 4 mine portals and demolishing a steel river truss and buildings associated with an abandoned deep-mine complex.

Project No.: 84-289  
Title: Fairmont No. 2 Subsidence  
Location: Fairmont, West Virginia  
Tasks: The project included report with recommendations after a subsurface investigation to determine whether or not subsidence of 3 homes was mining related, and subsequent development of specifications and construction drawings.

Project No.: 84-265 and 266  
Title: Green's Run Highwall and Marrara Spoil Area Reclamation Projects  
Location: Preston County, West Virginia  
Tasks: The project included subsurface investigation with test-pits and development of specifications and construction drawings for reclaiming 30 acres of strip mine with 3 highwalls, 6 refuse piles, and 2 access roads.