

December 8, 2010

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

**RE: Expression of Interest  
Engineering Services Required for the  
Cartright Branch Refuse Pile Design  
DEP15232**

Gentlemen:

GAI Consultants, Inc. (GAI) welcomes the opportunity to submit our proposal in response to your Request for Expression of Interest DEP15232 to provide professional engineering services. These services will result in the development of mapping, engineering drawings, contract specifications, and other contract documents required for **Cartright Branch Refuse Pile Design** 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.

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2010 DEC -7 AM 9:42

Purchasing Division  
December 8, 2010

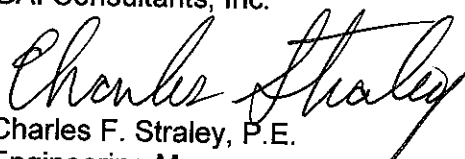
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In summary, GAI will provide the most favorable terms as a result of:

- 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

Enclosure

**EXPRESSION OF INTEREST  
ENGINEERING SERVICES REQUIRED  
FOR THE  
CARTRIGHT BRANCH REFUSE PILE DESIGN  
LOGAN COUNTY, WEST VIRGINIA  
DEP15232**

*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 E101392.00

December 8, 2010



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INC., FOR THE STATE OF WEST VIRGINIA.



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  
 DEP15232

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

VENDOR

RFQ COPY  
 TYPE NAME/ADDRESS HERE

GAI 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
11/03/2010				

BID OPENING DATE: 12/08/2010 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		906-29		
<p>CARTRIGHT BRANCH 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 CARTRIGHT BRANCH REFUSE PILE PROJECT IN LOGAN COUNTY, WEST VIRGINIA, PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS.</p> <p>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THE STATE MAY DEEM THIS CONTRACT NULL AND VOID, AND TERMINATE SUCH CONTRACT WITHOUT FURTHER ORDER.</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>Chuck Shales</i>	TELEPHONE 304.926.8100	DATE 12/08/2010
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'

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

PROJECT NAME Cartright Branch Refuse Pile Design - DEP15232	DATE (DAY, MONTH, YEAR) 08, December 2010	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
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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 / 304/926-8100 / Precha Yodhane, Ph.D., P.E., / 19 Charleston, 13 Pittsburgh

8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM  
Precha Yodhane, Ph.D., P.E., Managing Officer / Vice President  
8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS  
Gary M. DeJidas, P.E., President, 412/476-2000  
Anthony F. Morocco, P.E., Senior Vice President, 412/476-2000

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

- |                            |                        |                             |                         |
|----------------------------|------------------------|-----------------------------|-------------------------|
| 103 ADMINISTRATIVE         | 5 ECOLOGISTS           | 5 LANDSCAPE ARCHITECTS      | 18 STRUCTURAL ENGINEERS |
| 0 ARCHITECTS               | 2 ECONOMISTS           | 7 MECHANICAL ENGINEERS      | 17 <b>SURVEYORS</b>     |
| 7 <b>BIOLOGIST</b>         | 6 ELECTRICAL ENGINEERS | 1 <b>MINING ENGINEERS</b>   | 4 TRAFFIC ENGINEERS     |
| 47 <b>CADD OPERATORS</b>   | 33 ENVIRONMENTALISTS   | 0 PHOTOGRAMMETRISTS         | 189 OTHER               |
| 2 CHEMICAL ENGINEERS       | 8 ESTIMATORS           | 10 PLANNERS: URBAN/REGIONAL |                         |
| 70 <b>CIVIL ENGINEERS</b>  | 9 <b>GEOLOGISTS</b>    | 2 SANITARY ENGINEERS        |                         |
| 93 CONSTRUCTION INSPECTORS | 2 HISTORIANS           | 14 SOILS ENGINEERS          |                         |
| 32 DESIGNERS               | 3 HYDROLOGISTS         | 4 SPECIFICATION WRITERS     | 695 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 EO1) 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.

NAME AND ADDRESS: None	SPECIALTY:	WORKED WITH BEFORE Yes _____ No _____
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes _____ No _____
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes _____ No _____
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes _____ No _____
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes _____ No _____
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NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes _____ No _____
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes _____ No _____
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE Yes _____ No _____

12. A. Are your firm's personnel experienced in Abandoned Mine Lands Remediation/Mine Reclamation Engineering?

**YES** Description and Number of Projects: GAI has completed **126** projects for the WV-AML Program (**13** 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. Are your firm's personnel 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 **126** 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. Are your firm's personnel 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 **126** 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 **126** 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. Are your firm's personnel experienced in domestic waterline design? (Include any experience in evaluation of aquifer degradation as a result of mining.)

**YES** Description and Number of Projects: GAI has completed over 76 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. Are your firm's personnel 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 **126** 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



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

<b>NAME &amp; TITLE (Last, First, Middle Int.)</b> Straley, Charles F. Project Manager	<b>YEARS OF AML DESIGN EXPERIENCE:</b> 18	<b>YEARS OF AML RELATED DESIGN EXPERIENCE:</b> 24	<b>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:</b> 16
	<b>YEARS OF EXPERIENCE</b>		

**Brief Explanation of Responsibilities**

*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.*

**EDUCATION (Degree, Year, Specialization)**  
 B.S. 1986 Civil Engineering  
 M.S. 1988 Geotechnical Engineering

**MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS**

Society of American Military Engineers

**REGISTRATION (Type, Year, State)**  
 1992 Professional Engineer (WV, OH, KY, IN)  
 1996 Professional Land Surveyor, WV

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

<b>NAME &amp; TITLE (Last, First, Middle Int.)</b> Hemme, James A. Project Manager	<b>YEARS OF AML DESIGN EXPERIENCE:</b> 12	<b>YEARS OF AML RELATED DESIGN EXPERIENCE:</b> 20	<b>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:</b> 12
	<b>YEARS OF EXPERIENCE</b>		

**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)**

<b>NAME &amp; TITLE</b> (Last, First, Middle Int.) <i>Prine, Joseph A., E.I.</i> <i>Project Engineer</i>	<b>YEARS OF EXPERIENCE</b>	
	<b>YEARS OF AML DESIGN EXPERIENCE:</b> 6	<b>YEARS OF AML RELATED DESIGN EXPERIENCE:</b> 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)**

<b>NAME &amp; TITLE</b> (Last, First, Middle Int.) <i>Brennan, Patrick B., E.I.</i>	<b>YEARS OF EXPERIENCE</b>	
	<b>YEARS OF AML DESIGN EXPERIENCE:</b> 1	<b>YEARS OF AML RELATED DESIGN EXPERIENCE:</b> 1

**Brief Explanation of Responsibilities**

*Mr. Brennan 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. 2010 Civil Engineering

**MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS**

REGISTRATION (Type, Year, State)

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Green, Jason T. CADD Operator/Designer	14	14

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**

Society of American Military Engineers

REGISTRATION (Type, Year, State)

NICET Level I & II

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Workman, David L. CADD Operator/Designer	9	2

Brief Explanation of Responsibilities

*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.*

EDUCATION (Degree, Year, Specialization)  
B.S. 2000 Industrial Engineering Technology

**MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS**

REGISTRATION (Type, Year, State)

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

<b>NAME &amp; TITLE</b> (Last, First, Middle Int.)  Reed, Krista L. Environmental Specialist	<b>YEARS OF EXPERIENCE</b>	
	<b>YEARS OF AML DESIGN EXPERIENCE:</b> 2	<b>YEARS OF AML RELATED DESIGN EXPERIENCE:</b> 2  <b>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:</b> 0

Brief Explanation of Responsibilities

*Ms. Reed 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.*

**EDUCATION** (Degree, Year, Specialization)

B.S. 2001 Molecular Biology

**MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS**

**REGISTRATION** (Type, Year, State)  
 U.S. Army Corps of Engineers Wetland Delineator Certification Program  
 WV Division of Highways  
 404-401 Permit Training Session  
 Environmental and Historic Preservation Workshop  
 NPDES-Phase II Stormwater New Construction Permits Requirement Seminar  
 WVSPE & ACEC/WV, Overview of WVU Natural Streams Program  
 Capitol, Western and Guyan Conservation Districts - Stormwater and Erosion Control Workshop

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

<b>NAME &amp; TITLE</b> (Last, First, Middle Int.)  Shank, Shannon C. Environmental Specialist	<b>YEARS OF EXPERIENCE</b>	
	<b>YEARS OF AML DESIGN EXPERIENCE:</b> 2	<b>YEARS OF AML RELATED DESIGN EXPERIENCE:</b> 2  <b>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:</b> 0

Brief Explanation of Responsibilities

*Mr. Shank 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.*

**EDUCATION** (Degree, Year, Specialization)

B.S. Landscape Architecture, College of Agriculture & Forestry, Minor in Geography/Geographical Information Systems (GIS), 2005 West Virginia University  
 A.S. Architectural Drafting 2001, West Virginia State College

**MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS**

**REGISTRATION** (Type, Year, State)  
 U.S. Army Corps of Engineers Wetland Delineator Certification Program

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:
Turka, Robert J. Senior Staff Hydrogeologist	21	27

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  
 American Institute of Professional Geologists  
 Association of Engineering Geologist  
 International Association of Engineering Geologists  
 Pittsburgh Geological Society  
 National Ground Water Association

REGISTRATION (Type, Year, State)  
 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	
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:
Newman, F. Barry Manager – Geotechnical/Structural	21	39

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  
 American Society of Civil Engineers

REGISTRATION (Type, Year, State)  
 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 EXPERIENCE	
Bruhn, Robert W. Staff Consultant		YEARS OF AML DESIGN EXPERIENCE: 21	YEARS OF AML RELATED DESIGN EXPERIENCE: 41
			YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 12

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

REGISTRATION (Type, Year, State)  
 1982 Professional Engineer, (PA)

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	
Michalski, Stan R. Senior Staff Geologist		YEARS OF AML DESIGN EXPERIENCE: 21	YEARS OF AML RELATED DESIGN EXPERIENCE: 35
			YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 12

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 but keep to essentials)**

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE		YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 12
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	
Frech, Kerry L. Senior Staff Engineer	12	27	

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

**REGISTRATION (Type, Year, State)**  
 1983 Professional Engineer, (PA)

**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: 12
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	
Gower, Thomas R. Staff Geologist	18	32	

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 but keep to essentials)**

<b>NAME &amp; TITLE</b> (Last, First, Middle Int.)  Queen, Terry W. Senior Technician	<b>YEARS OF AML DESIGN EXPERIENCE:</b> 14	<b>YEARS OF AML RELATED DESIGN EXPERIENCE:</b> 31	<b>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:</b> 14
	<b>Brief Explanation of Responsibilities</b>  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.		

<b>EDUCATION</b> (Degree, Year, Specialization) 1986 Math and Physical Education Classroom 1992 Drafting and Design	<b>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS</b>  REGISTRATION (Type, Year, State) Troxler Nuclear Densometer Certification WVDOH Portland Cement Concrete and Compaction
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**13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data but keep to essentials)**

<b>NAME &amp; TITLE</b> (Last, First, Middle Int.)  Foster, Mark E. Technician	<b>YEARS OF AML DESIGN EXPERIENCE:</b> 3	<b>YEARS OF AML RELATED DESIGN EXPERIENCE:</b> 3	<b>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:</b> 1
	<b>Brief Explanation of Responsibilities</b>  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.		

<b>EDUCATION</b> (Degree, Year, Specialization) B.A. Regents, Bachelor of Arts A.S. Applied Science (Occupational Development)	<b>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS</b>  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
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14. PROVIDE A LIST OF SOFTWARE AND EQUIPMENT AVAILABLE IN THE PRIMARY OFFICE WHICH WILL BE USED TO COMPLETE AML DESIGN SERVICES

Equipment: HP 1050C Plotter Software: AutoCAD

Digital Planimeters (2) MicroStation

HP Digital Cameras Microsoft Word

Minolta Photocopier/Printer Microsoft Excel

Nikon DTM-450 Total Stations Water CAD

Nikon DTM-550 Total Stations Sewer CAD

Gorman Global Positioning Unit Flowmaster

TR-55

Numerous Hydrology/Hydraulic Models

Maptech (Professional)

REAME (Slope Stability)

Hydrocalc Hydraulics

GeoPack Design

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
Route 60 Drainage Fayette County, WV	WV Department of Environmental Protection Office of Abandoned Mine Lands and Reclamation	Preparation of reclamation plan	\$500,000	95%
Greystone Mine Drainage Monongalia County, WV	WV Department of Environmental Protection Office of Abandoned Mine Lands and Reclamation	Preparation of reclamation plan	\$500,000	50%
Earling Refuse Logan County, WV	WV Department of Environmental Protection Office of Abandoned Mine Lands and Reclamation	Preparation of reclamation plan	\$300,000	25%
City of Wheeling Landfill Closure Ohio County, WV	WV Department of Environmental Protection Landfill Closure Assistance Program	Preparation of findings report and closure design plan	\$3,000,000	20%
TOTAL NUMBER OF PROJECTS: 4 (primary office)			TOTAL ESTIMATED CONSTRUCTION COSTS: \$4,300,000.00	



17. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM WAS THE DESIGNATED ENGINEER OF RECORD

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST (in thousands)	YEAR	CONSTRUCTED (YES OR NO)
<p>Lynch Run Highway Harrison County, WV The scope of work involves providing seals for the collapsed portals, backfilling the highwalls, reclamation of the refuse pile, and providing proper controlled drainage including natural stream design. Construction plans and technical specifications were developed.</p>	<p>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program Charleston, West Virginia</p>	<p>\$50K (Fee)</p>	<p>2010</p>	<p>NO</p>
<p>Duck Creek Landslide Logan County, WV The scope of work involves the design of stabilization measures for the slide and design of seepage and stormwater drainage controls. Construction plans and technical specifications were developed.</p>	<p>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program Charleston, West Virginia</p>	<p>\$100K (Fee)</p>	<p>2009</p>	<p>YES</p>
<p>Mallory Refuse Logan County, WV The scope of work involves regarding the refuse pile, sealing the mine portal(s), and design of drainage control measures. Construction plans and technical specifications were developed.</p>	<p>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program Charleston, West Virginia</p>	<p>\$60K (Fee)</p>	<p>2010</p>	<p>NO</p>
<p>Coalburg Water Study Kanawha County, WV 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>\$15K (Fee)</p>	<p>2010</p>	<p>NA</p>
<p>Logan (Marcum) Drainage Emergency Project, Logan County, WV 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 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>Nuriva/Maben Waterline Extension Feasibility Study, Wyoming County, WV 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>Herndon Heights Waterline Extension Feasibility Study, Wyoming County, WV 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>Ven's Run Maintenance Project, Harrison, County, West Virginia 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>\$135 (Fee)</p>	<p>2007</p>	<p>YES</p>
<p>Community of Preston - State Route 72 Waterline, Preston County, West Virginia 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>\$39 (Fee)</p>	<p>2007</p>	<p>YES</p>

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: 

Title: Engineering Manager

Printed Name: Charles F. Straley, P.E.

Date: December 8, 2010

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

AML and RELATED PROJECT EXPERIENCE MATRIX		Additional Info Provided in Section(s) **	Exp. Basis C=Corp. P=Personnel *	PROJECT EXPERIENCE REQUIREMENTS															PRIMARY STAFF PARTICIPATION/ CAPACITY *** M=Management P=Professional	
PROJECT				Abandoned Surface Mine Reclamation	Abandoned Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation	Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/Replacement	Construction Inspection/Management	Water Treatment	Equipment/Structure Removal	Stream Restoration	Geotechnical/Stability	Mapping
Greystone Mine Drainage	C/P	3	X	X								X					X	X	M/P	P
Rambling Hills Water Study	C/P	3	X									X							M/P	P
Davis Creek Water Study	C/P	3	X									X							M/P	P
Coalburg Water Study	C/P	3	X									X							M/P	P
Wallace 353 Water Study	C/P	3	X									X							M/P	P
Wallace 354 Water Study	C/P	3	X									X							M/P	P
Route 60 Drainage	C/P	3	X	X							X						X	X	M/P	P
Maillory Refuse	C/P	3	X								X						X	X	M/P	P
Lynch Run Highway #6	C/P	3	X								X						X	X	M/P	P
Duck Creek Landslide	C/P	3	X								X						X	X	M/P	M/P
Heizer Creek Drainage	C/P	3	X	X							X						X	X	M/P	P
Wolfpen Landslide	C/P	3	X	X							X						X	X	M/P	P
Hominy Creek	C/P	3	X								X								M/P	P
Logan (Marcum) Drainage	C/P	3	X	X							X						X	X	M/P	P
Bud Alpoqa	C/P	3										X							M/P	P
Nuriva Maben	C/P	3										X							M/P	P
Herridon Heights	C/P	3										X							M/P	P
Handley/Upper Creek	C/P	3	X	X							X						X	X	M/P	
Titus Road	C/P		X								X						X	X	M/P	
American Legion	C/P		X								X						X	X	M/P	
Cogar	C/P			X									X						M/P	
East Branch Phase II	C/P		X								X						X	X	M/P	P
West Branch Headwaters	C/P		X	X				X				X					X	X	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

AML and RELATED PROJECT EXPERIENCE MATRIX													PROJECT EXPERIENCE REQUIREMENTS					PRIMARY STAFF PARTICIPATION/ CAPACITY		
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/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Allegation/ Replacement	Construction Inspection/Management	Water Treatment	Equipment/Structure Removal	Stream Restoration	Geotechnical/Stability	Mapping	James A. Hemme, PE	Charles T. Straley, PE
Lake Milton Reclamation	C/P		X			X					X	X					X	X	M/P	M/P
Middleton Run Reclamation	C/P		X			X					X	X					X	X	M/P	M/P
Latrobe (Gibson) Landslide	C/P	3	X	X	X	X					X					X	X	X	M/P	M/P
Lodestar Energy	C/P		X	X	X	X					X					X	X	X	M/P	M/P
Ven's Run Maintenance	C/P	3	X			X					X						X	X	M/P	M/P
War Waterline	C/P	3										X							M/P	M/P
Clarks Gap	C/P	3				X						X							M/P	M/P
War (Dash) Impoundment	C/P	3				X											X	X	M/P	M/P
Whites Run	C/P	3	X	X	X	X	X				X	X				X			M/P	M/P
Helen Portals	C/P	3	X	X	X	X	X				X				X	X			M/P	M/P
Bearwallow Branch	C/P	3	X	X	X	X	X				X					X			M/P	M/P
Ned's Branch Impoundment	C/P	3	X		X	X					X					X			P	P
McAlpin Phase II & III	C/P	3	X	X	X	X	X			X	X	X			X	X			M/P	M/P
McAlpin Phase I	C/P	3	X	X	X	X	X				X	X			X	X			M/P	M/P
Community of Preston	C/P	3				X					X						X	X	M/P	M/P
Kingwood 52/6	C/P	3				X					X						X		M/P	M/P
Micajah Ridge	C/P	3				X						X							M/P	M/P
Glen Rogers	C/P	3				X						X							M/P	M/P
Rt. 20 / Gould	C/P	3				X						X							M/P	M/P
Elkins/Buckhannon	C/P	3				X						X							M/P	M/P
Laurel Creek	C/P	3	X	X	X	X		X			X				X	X			M/P	M/P
Superior	C/P	3								X									P	P
Wash. Heights Review	C/P	3				X						X							P	P
Gaymont	C/P	3				X						X							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





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													Mapping	Charles F. Straley, PE	James A. Hemme, PE
			Mine Reclamation	Abandoned Deep Mine Reclamation	Portal/Shaft Closure	Hydrologic/Hydraulic Design/Eval.	Remining Evaluation	Mine/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/Replacement	Construction Inspection/Management	Water Treatment	Equipment/Structure Removal			
Harris AMD	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	P	
Lethand Fork	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	P	
Madison Street/Fairview	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	P	
Summerlee	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M/P	
Cow Creek	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	P	
Godby Branch	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	P	
New Haven Phase II	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	P	
Gauley River Phase II	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Heizer and Manlia Ph. II	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M/P	
Matheny Hill Phase I	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M/P	
Duncan Hill No. 2	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M/P	
Urso Subsidence	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M/P	
Mill Creek Phase II	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M/P	
Duncan Hill Subsidence	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M/P	
Cora Mine Drainage II	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M/P	
Covey Creek Mine	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	P	
Vivian	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	P	
Kimball	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	P	
Hampden Bridge	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	P	
Bear Run Refuse	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Beaver Creek	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Charleston Landslide	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Garrison Complex	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
Cassity Fork	C/P	3	X	X	X	X	X	X	X	X	X	X	X	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

AML and RELATED PROJECT EXPERIENCE MATRIX		PROJECT EXPERIENCE REQUIREMENTS														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/Refuse Fire Abatement	Subsidence Investigation Mitigation	Hazardous Waste Disposal	Project Specifications	Water Quality Evaluation/Mitigation/Replacement	Construction Inspection/Management	Water Treatment	Equipment/Structure Removal	Stream Restoration	Geotechnical/Stability	Mapping	Charles F. Straley, PE	James A. Hemme, PE
Mulberry Fork Landslide	C/P	3	X								X						X			
Beckley Subsidence	C/P	3		X					X		X						X			
Courtright Highwall	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

## 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 **Cartright Branch Refuse Pile Design** project. The project includes maintaining access road; create diversion channels, ditches and/or under drains to transport drainage; install stream bank stabilization; design of mine seal(s); provide for the removal/demolition of abandoned structure(s); reclaim/re-grade refuse piles; and re-vegetate and condition all areas disturbed during construction.

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,
- Wetlands replacement and development,

- Environmental liability assessments,
- Water quality surveys and feasibility reports,
- Water supply system reviews, and
- Water supply system designs.

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 fifteen 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 700 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.

### **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 85** 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 700 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. Charles F. Straley, P.E., P.S.** 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., L.R.S.** will serve as a Project Manager. Mr. Hemme has participated in the design and development of reclamation plans and feasibility studies for over **five (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. 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 **three (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.

**Mr. Patrick B. Brennan, E.I.** will serve as a Project Engineer. Mr. Brennan has participated in the design and development of reclamation plans and feasibility studies for **two (2)** abandoned mine land projects for the WVDEP, Abandoned Mine Lands and Reclamation Program. Mr. Brennan 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.

Project Management will be provided by **Mr. Charles F. Straley, P.E., P.S. or Mr. James A. Hemme, P.E., L.R.S.** 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. Joseph A. Prine, E.I. and Patrick B. Brennan, 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 client's 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.

# PROJECT MANAGEMENT PLAN

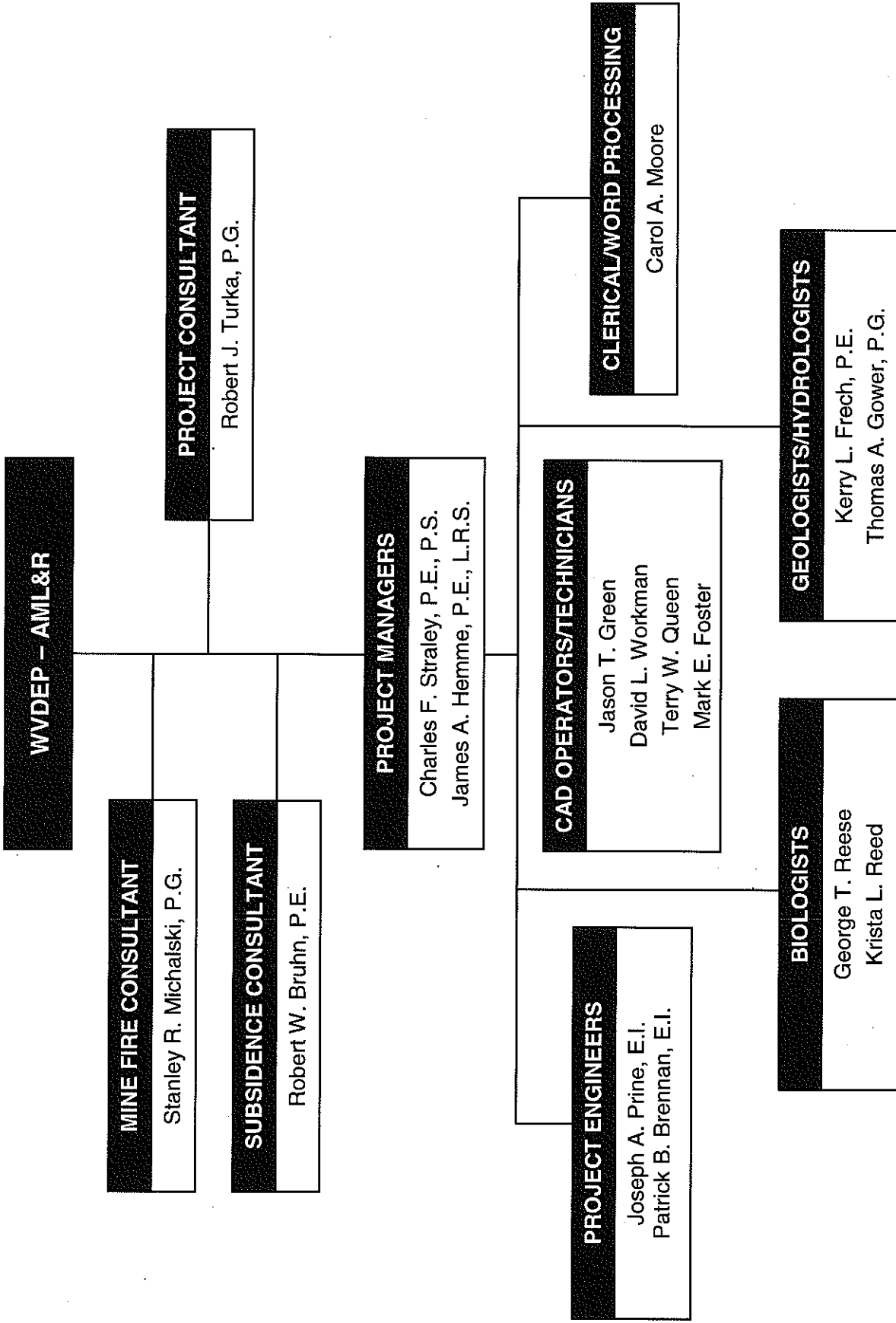


FIGURE 1

**ABANDONED MINE LAND PROJECTS  
WEST VIRGINIA DIVISION OF ENVIRONMENTAL PROTECTION**

- Project No.: E100281.00  
Title: **Erbacon CR9 Webster County WL Feasibility Study (ID#376)**  
Location: Webster 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.: E091306.01  
Title: **Kanawha Rambling Hills Water Study**  
Location: 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.: E091306.02  
Title: **Davis Creek Water 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.: E091306.03  
Title: **Coalburg Water 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.: E091306.04  
Title: **Wallace 353 Water Study**  
Location: Harrison and Wetzel 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.: 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.: 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.: 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.

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

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.: 93-198-15  
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

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

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 Greenview/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.: 88-460-08  
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.: 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.



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.: 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.

STATE OF WEST VIRGINIA  
Purchasing Division

**PURCHASING AFFIDAVIT**

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

**DEFINITIONS:**

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

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

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

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

**WITNESS THE FOLLOWING SIGNATURE**

Vendor's Name: GAI Consultants, Inc.

Authorized Signature: *Charles Straley* Date: December 8, 2010

State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 8 day of December, 2010.

My Commission expires October 28, 2012.

**AFFIX SEAL HERE**

NOTARY PUBLIC *Carol Moore*

