

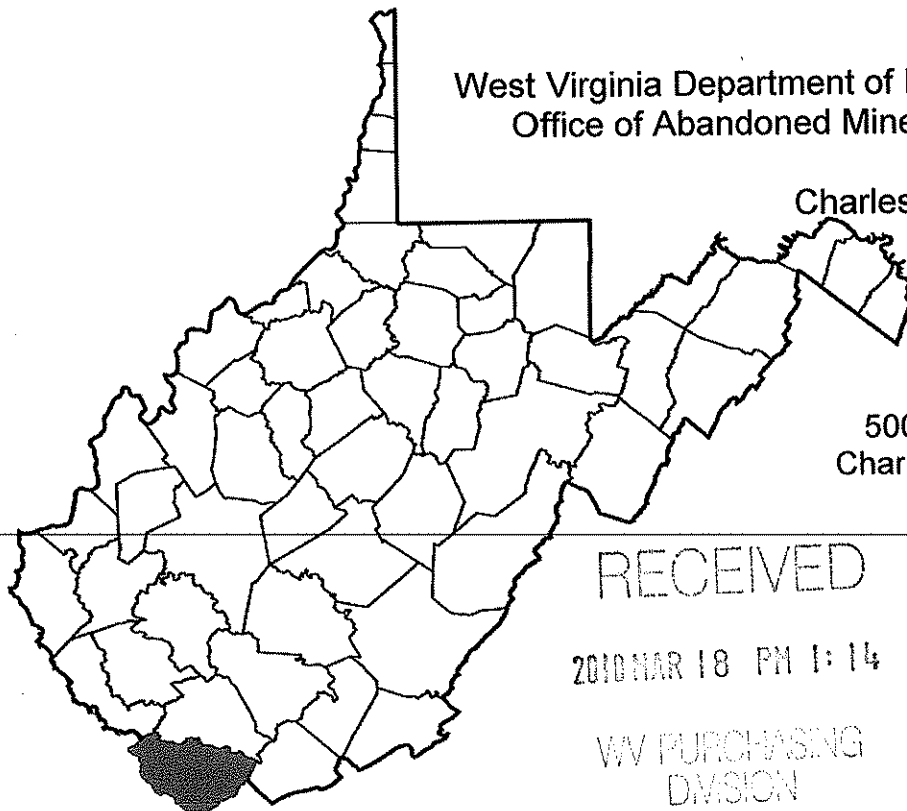


gai consultants

**EXPRESSION OF INTEREST
ENGINEERING SERVICES REQUIRED
FOR THE
COALDALE MOUNTAIN REFUSE PILE DESIGN
MCDOWELL COUNTY, WEST VIRGINIA
DEP14948**

Issuing Office:

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



By:

GAI Consultants, Inc.
500 Summers Street, 3rd Floor
Charleston, West Virginia 25301

(304) 926-8100

Project E100279

Mach 18, 2010

RECEIVED

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WV PURCHASING
DIVISION

. . . transforming ideas into reality

ORIGINAL

March 18, 2010

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

**RE: Expression of Interest
Engineering Services Required for the
Coaldale Mountain Refuse Pile Design
McDowell County, West Virginia
DEP14948**

Gentlemen:

GAI Consultants, Inc. (GAI) welcomes the opportunity to submit our proposal in response to your Request for Expression of Interest DEP14948 to provide professional engineering services. These services will result in the development of mapping, engineering drawings, contract specifications, and other contract documents required for **Coaldale Mountain Refuse Design** project in McDowell 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, 3rd Floor, Charleston, West Virginia 25301.

GAI has:

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

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

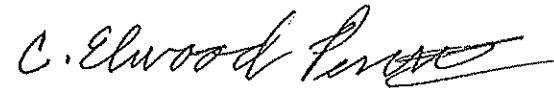
- Exceptional qualifications/previous 20 years of in-state AML experience,
- Local, Charleston presence with excellent access to the project site and AML offices, and
- Efficient and experienced personnel.

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

Sincerely,
GAI Consultants, Inc.



Charles F. Straley, P.E.
Engineering Manager



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

Enclosure

**EXPRESSION OF INTEREST
ENGINEERING SERVICES REQUIRED
FOR THE
COALDALE MOUNTAIN REFUSE PILE DESIGN
MCDOWELL COUNTY, WEST VIRGINIA
DEP14948**

Issuing Office:

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

By:

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

Project E100279

March 18, 2010



gai consultants

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FIGURE 1 - PROJECT MANAGEMENT PLAN

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LIST OF ABANDONED MINE LANDS PROJECTS COMPLETED BY GAI CONSULTANTS,
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
 DEP14948

PAGE
 1

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

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
02/10/2010				

BID OPENING DATE: 03/18/2010 BID OPENING TIME: 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		906-29		
COALDALE MOUNTAIN REFUSE PILE DESIGN EXPRESSION OF INTEREST THE WEST VIRGINIA PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, IS SOLICITING EXPRESSIONS OF INTEREST FOR PROFESSIONAL ENGINEERING DESIGN SERVICES AND CONSTRUCTION MONITORING SERVICES AT THE COALDALE MTN. REFUSE PILE PROJECT IN MCDOWELL COUNTY, WEST VIRGINIA PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS. BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THE STATE MAY DEEM THE CONTRACT NULL AND VOID, AND TERMINATE SUCH CONTRACT WITHOUT FURTHER ORDER. ***** THIS IS THE END OF RFQ DEP14948 ***** TOTAL:						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>C. Elwood</i>	TELEPHONE 304.926.8100	DATE March 18, 2010
TITLE Asst. VP, Managing Officer	FEIN 25-1260999	ADDRESS CHANGES TO BE NOTED ABOVE

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

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

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

DEFINITIONS:

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

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

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

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

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: GAI Consultants, Inc.

Authorized Signature: *C. Elwood Brown* Date: March 18, 2010

State of West Virginia

County of Kanawha, to-wit:

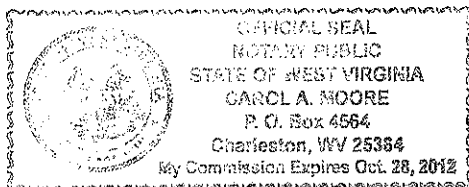
Taken, subscribed, and sworn to before me this 18 day of March, 2010.

My Commission expires October 28, 2012.

AFFIX SEAL HERE

NOTARY PUBLIC

Carla Moore



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

PROJECT NAME Coaldale Mountain Refuse Pile Design Project – DEP14948	DATE (DAY, MONTH, YEAR) 18, March 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
7. PRIMARY AML DESIGN OFFICE: ADDRESS/TELEPHONE/ PERSON IN CHARGE/ NO. AML DESIGN PERSONNEL EACH OFFICE 500 Summers Street, 3 rd Floor, Charleston, WV 25301 / 304/926-8100 / C. Elwood Penn, IV, P.E. / 19 Charleston, 13 Pittsburgh		
8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM C. Elwood Penn, IV, P.E., Managing Officer / Asst. Vice President	8a. NAME, TITLE, & TELEPHONE NUMBER - OTHER PRINCIPALS Gary M. DeJidas, P.E., President, 412/476-2000 Lawrence R. Dodds, P.E., Senior Vice President, 412/476-2000	
9. PERSONNEL BY DISCIPLINE (Bold Lettering Indicates Minimum Design Team Members)		
82 ADMINISTRATIVE 0 ARCHITECTS 8 BIOLOGIST 47 CADD OPERATORS 2 CHEMICAL ENGINEERS 40 CIVIL ENGINEERS 93 CONSTRUCTION INSPECTORS 32 DESIGNERS 0 DRAFTSMEN	4 ECOLOGISTS 2 ECONOMISTS 0 ELECTRICAL ENGINEERS 33 ENVIRONMENTALISTS 8 ESTIMATORS 9 GEOLOGISTS 2 HISTORIANS 3 HYDROLOGISTS	18 STRUCTURAL ENGINEERS 17 SURVEYORS 4 TRAFFIC ENGINEERS 145 OTHER
2 LANDSCAPE ARCHITECTS 1 MECHANICAL ENGINEERS 2 MINING ENGINEERS 0 PHOTOGRAMMETRISTS 10 PLANNERS: URBAN/REGIONAL 2 SANITARY ENGINEERS 18 SOILS ENGINEERS 4 SPECIFICATION WRITERS	590 TOTAL PERSONNEL	
TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 5 *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 EOJ) 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? <input type="checkbox"/> YES <input type="checkbox"/> NO NA		

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

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

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

NO

B. 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 **119** WV-AML projects required some type of soil analysis. GAI has completed some analysis in-house and used subconsultants at other times depending on requirements.

NO

C. 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 **119** WV-AML projects required hydrology and hydraulic evaluations and design for drainage control structures, mine hydraulic level, mainstream event, water transmission, sediment control, etc. GAI is also experienced and trained in natural stream restoration and wetland mitigation.

NO

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

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

NO

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

NO

F. 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 **119** WV-AML projects. GAI is noted and published for some of its designs and projects to include grouting programs, SAP installations and other innovative abatement designs.

NO

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

<p>NAME & TITLE (Last, First, Middle Int.) Penn, IV, C. Elwood Managing Officer</p>	<p>YEARS OF AML DESIGN EXPERIENCE: 6</p>	<p>YEARS OF AML RELATED DESIGN EXPERIENCE: 26</p>	<p>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 6</p>
<p>Brief Explanation of Responsibilities Mr. C. Elwood Penn, IV, P.E., Branch Manager will serve as Contract Administrator. He will be responsible for the overall management and performance of the project. He will review the work directive, visit the site along with the WVDEP to better familiarize himself with site conditions and work requirements, and then guide the preparation of the scope of work and cost proposal by GAI staff. A written proposal including a detailed cost estimate (manhours and expenses associated with the project) will then be prepared and submitted to the WVDEP for their review. Upon WVDEP's approval of the proposal, Mr. Penn will arrange for the start of the work. Included will be project staffing, arrangement and detailing of the scope of services to be provided by GAI's subcontractors, and review of project budget and schedule. Mr. Penn will generally supervise the work in progress and review work products at intermediate points and finally prior to submittal to the WVDEP and will be responsible for maintaining liaison with the WVDEP Project Manager including project status reports as required.</p>			
<p>EDUCATION (Degree, Year, Specialization) B.S. 1985 Civil Engineering</p>			
<p>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS American Society of Civil Engineers Society of American Military Engineers National Society of Professional Engineers</p>			
<p>13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data but keep to essentials)</p>			
<p>NAME & TITLE (Last, First, Middle Int.) Straley, Charles F. Project Manager</p>	<p>YEARS OF AML DESIGN EXPERIENCE: 17</p>	<p>YEARS OF AML RELATED DESIGN EXPERIENCE: 23</p>	<p>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 15</p>
<p>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.</p>			
<p>EDUCATION (Degree, Year, Specialization) B.S. 1986 Civil Engineering M.S. 1988 Geotechnical Engineering</p>			
<p>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS Society of American Military Engineers</p>			
<p>REGISTRATION (Type, Year, State) 1992 Professional Engineer (WV, OH, KY, IN) 1996 Professional Land Surveyor, WV</p>			

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

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

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

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

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

NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE	
YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:	
6	1	1	
<p><i>Prine, Joseph A., E.I. Project Engineer</i></p> <p>Brief Explanation of Responsibilities</p> <p><i>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.</i></p>			
EDUCATION (Degree, Year, Specialization)			
B.S. 2001 Civil Engineering			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS			
REGISTRATION (Type, Year, State) 2000 Nicet 2006 40 hour Hazwoper			
<p>13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data but keep to essentials)</p>			
NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE	
YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:	
13	13	13	
<p><i>Green, Jason T. CADD Operator/Designer</i></p> <p>Brief Explanation of Responsibilities</p> <p><i>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.</i></p>			
EDUCATION (Degree, Year, Specialization)			
A.A.S., 2002, Engineering Technology			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS			
REGISTRATION (Type, Year, State) NICET Level I & II			
Society of American Military Engineers			

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:
Workman, David L. CADD Operator/Designer	8	1
Brief Explanation of Responsibilities		
<i>Mr. Workman will be responsible for activities that will include development of project drawings, transferring survey data to project plans, and development of project details.</i>		
EDUCATION (Degree, Year, Specialization)		
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)

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:
Reed, Krista L. Environmental Specialist	1	0
Brief Explanation of Responsibilities		
<i>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.</i>		
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 WV 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)

NAME & TITLE (Last, First, Middle Int.)		YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Turka, Robert J. Senior Staff Hydrogeologist		20	26	11
Brief Explanation of Responsibilities				
<i>Mr. Turka will provide expertise in areas of coal refuse reclamation, mine subsidence and AMD remediation.</i>				
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 Pittsburg 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 AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Newman, F. Barry Manager – Geotechnical/Structural		20	38	11
Brief Explanation of Responsibilities				
<i>Mr. Newman will provide expertise in the areas of geotechnical engineering, including but not limited to landslides, retaining wall design, slope stability and subsidence.</i>				
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	
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Bruhn, Robert W. Staff Consultant	20	11
Brief Explanation of Responsibilities		
Mr. Bruhn will provide expertise in the areas of subsurface investigation, soil and rock mechanics, and subsidence.		
EDUCATION (Degree, Year, Specialization)		
B.S. 1967 Geology		
M.S. 1969 Civil Engineering		
A.B.D. Civil Engineering		
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		
American Society of Civil Engineers		
Association of Engineering Geologists		
Society of Mining Engineers		
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	
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE:
Michalski, Stan R. Senior Staff Geologist	20	11
Brief Explanation of Responsibilities		
Mr. Michalski will provide expertise in the areas of geologic studies, mine fire investigations and impoundments.		
EDUCATION (Degree, Year, Specialization)		
B.S. 1967 Earth and Planetary Science		
M.A. 1975 Resource Management		
MLJS 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 AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:
Frech, Kerry L. Senior Staff Engineer	11	26
Brief Explanation of Responsibilities		
<i>Mr. Frech will provide expertise in the area of hydrology and hydraulics, including but not limited to stormwater management and modeling of drainage systems.</i>		
EDUCATION (Degree, Year, Specialization)		
B.S. 1977 Civil Engineering M. Eng. 1978 Environmental Engineering		
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		
American Society of Civil Engineers American Water Resources Association		

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

NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPERIENCE	
	YEARS OF AML DESIGN EXPERIENCE:	YEARS OF AML RELATED DESIGN EXPERIENCE:
Gower, Thomas R. Staff Geologist	17	31
Brief Explanation of Responsibilities		
<i>Mr. Gower will provide expertise in the area of geology and subsurface investigations.</i>		
EDUCATION (Degree, Year, Specialization)		
B.S. 1974 Geology		
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		
Association of Engineering Geologist		

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

<p>NAME & TITLE (Last, First, Middle Int.) Queen, Terry W. Senior Technician</p>	<p>YEARS OF AML DESIGN EXPERIENCE: 13</p>	<p>YEARS OF AML RELATED DESIGN EXPERIENCE: 30</p>	<p>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 13</p>
<p>Brief Explanation of Responsibilities</p>			
<p><i>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.</i></p>			
<p>EDUCATION (Degree, Year, Specialization) 1986 Math and Physical Education Classroom 1992 Drafting and Design</p>			
<p>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS</p>			
<p>REGISTRATION (Type, Year, State) Troxler Nuclear Densometer Certification WVDOH Portland Cement Concrete and Compaction</p>			
<p>13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR AML PROJECT DESIGN (Furnish complete data but keep to essentials)</p>			
<p>NAME & TITLE (Last, First, Middle Int.) Foster, Mark E. Technician</p>	<p>YEARS OF AML DESIGN EXPERIENCE: 2</p>	<p>YEARS OF AML RELATED DESIGN EXPERIENCE: 2</p>	<p>YEARS OF DOMESTIC WATERLINE DESIGN EXPERIENCE: 0</p>
<p>Brief Explanation of Responsibilities</p>			
<p><i>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.</i></p>			
<p>EDUCATION (Degree, Year, Specialization) B.A. Regents, Bachelor of Arts A.S. Applied Science (Occupational Development)</p>			
<p>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS</p>			
<p>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</p>			

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
Romney Bridge Romney, WV	WV Division of Highways	Design of Bridge	\$15,000,000	98%
King Coal Highway Mingo County, WV	WE Division of Highways	Design of Roadway	\$60,000,000	90%
Willow Wood Bridge Summer County, WV	WV Division of Highways	Design of Bridge	\$5,200,000	98%
Route 60 Drainage Fayette Counties, WV	WV Department of Environmental Protection Office of Abandoned Mine Lands and Reclamation	Preparation of reclamation plan	\$1,500,000	75%
TOTAL NUMBER OF PROJECTS: 5 (primary office)			TOTAL ESTIMATED CONSTRUCTION COSTS: \$81,700,000.00	

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

<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>No</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>
<p>Kingwood 52/6 Water Supply Extension, Preston County, West Virginia The scope of work included the preparation of construction documents for a water transmission line. Included in the distribution system is a 96,000 gallon water storage and a booster pump station. The total length of waterline is approximately 13 miles.</p>	<p>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program Charleston, West Virginia</p>	<p>\$121 (Fee)</p>	<p>2005</p>	<p>YES</p>
<p>Helen Portals, Raleigh County, West Virginia 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.</p>	<p>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program Charleston, West Virginia</p>	<p>\$71 (Fee)</p>	<p>2004</p>	<p>YES</p>

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: C. Elwood Penn Title: Assistant Vice President, Managing Officer

Printed Name: C. Elwood Penn, IV, P.E. Date: March 18, 2010

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													C. Elwood Penn, IV, PE	Charles F. Straley, PE	James A. Henne, PE		
			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
Route 60 Drainage	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M	M/P	P
Mallory Refuse	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M	M/P	P
Lynch Run Highway #6	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M	M/P	P
Duck Creek Landslide	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M	M/P	M/P
Heizer Creek Drainage	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M	M/P	P
Wolfpen Landslide	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M	M/P	P
Hominy Creek	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M	M/P	P
Logan (Marcum) Drainage	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M	M/P	P
Bud Apoca	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M/P	M/P	P
Nuriva Maben	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M/P	M/P	P
Herndon Heights	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M	M/P	P
Handley/Upper Creek	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M	M/P	P
Titus Road	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M	M/P	P
American Legion	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M	M/P	P
Cogar	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M	M/P	P
East Branch Phase II	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M	M/P	P
West Branch Headwaters	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M	M/P	P
Lake Milton Reclamation	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M	M/P	P
Middleton Run Reclamation	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M	M/P	P
Latrobe (Gibson) Landslide	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M	M/P	P
Lodestar Energy	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M	M/P	P
Ven's Run Maintenance	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M	M/P	P
War Waterline	C/P	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M	M/P	P

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

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 **Coaldale Mountain Refuse Pile Design** project. The project will include creating diversion channels, ditches and/or under drains to transport drainage, installing wet seal, re-grading refuse areas, and reclaim and re-vegetate 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 **Five 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 500 engineers, scientists, and support personnel. With our in-house soils laboratories, surveying services and competent staff of professionals, GAI offers a comprehensive approach to engineering problems requiring a wide range of interdisciplinary skills. In the past 40+ years, we have designed and monitored the construction of numerous facilities and have conducted thousands of related geotechnical and hydrological investigations, many of which involved reclamation of abandoned mine lands. By successfully completing so many reclamation projects, GAI has obtained "expertise" status on an international basis for many type projects. For example, GAI recently completed a very large investigation into delineating the extent of the world's largest mine fire in the country of India. GAI was selected for the country of India mine fire project based upon qualifications only.

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

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

Surveying and Mapping

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

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

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

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

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

Subsurface Investigation

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

Laboratory Services

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

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

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

Design Engineering and Contract Document Preparation

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

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

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

QUALIFICATIONS OF PERSONNEL

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

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

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

Mr. Joseph A. Prine, E.I. will serve as a Project Engineer. Mr. Prine has participated in the design and development of reclamation plans and feasibility studies for **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.

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

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

**CORPORATE SPECIALIZED EXPERIENCE
AND DEMONSTRATED ABILITIES**

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

MANAGEMENT PLAN & LOCATION OF FACILITIES

Management Plan

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

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

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

Project Management will be provided by **Mr. Charles F. Straley, P.E., P.S. or Mr. James A. Hemme, P.E., 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. Mark D. Young, P.E. and Joseph A. Prine, E.I.)** as shown in Figure 1. They will be responsible for guidance of the GAI staff. Their main activities will include development of detailed step-by-step project work plans to ensure the project activities are completed on-budget and on-time, review of the work products at intermediate points and at project completion, providing guidance and direction to project staff, as well as engineering and design work.

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

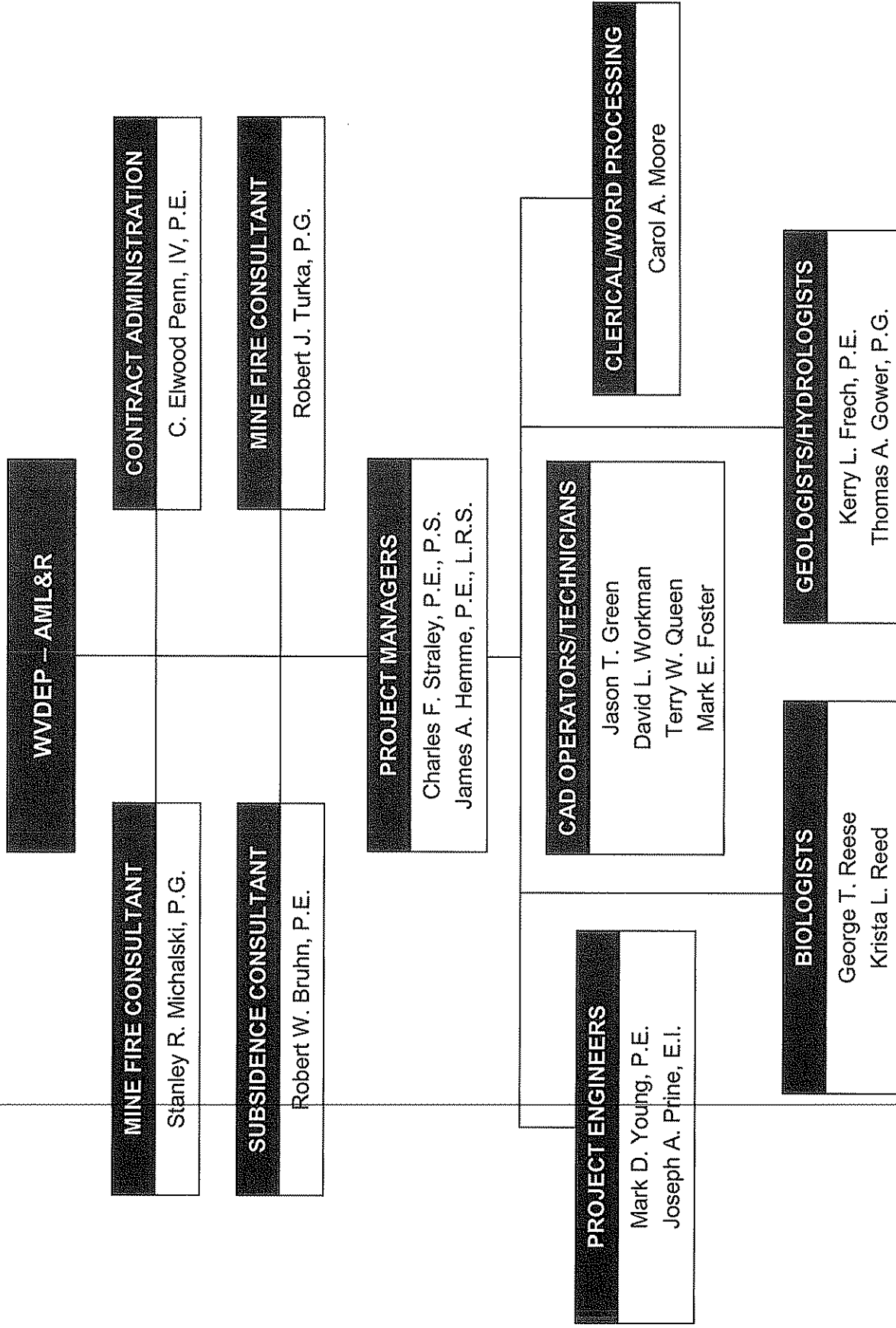


FIGURE 1

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

Project No.: E08194.00
Title: **Route 60 Drainage**
Location: Fayette County, West Virginia
Tasks: The scope of work involves providing seals for the collapsed portals, design of controlled drainage, and design of a pneumatic concrete wall for a rock highwall. Construction plans and technical specifications were developed.

Project No.: E081338.00
Title: **Lynch Run Highwall #6**
Location: Harrison County, West Virginia
Tasks: 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.

Project No.: E081094.00
Title: **Mallory Refuse Pile**
Location: Logan County, West Virginia
Tasks: 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.

Project No.: E080494.00
Title: **Duck Creek (Jenkins) Landslide**
Location: Logan County, West Virginia
Tasks: 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.

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.: E050470.10
Title: **Handley/Upper Creek Drainage Project**
Location: Kanawha County, West Virginia
Tasks: The reclamation plan included dewatering the underground impoundment(s) and creating diversion ditches to redirect the drainage around structures to the nearby stream. Regrading the areas behind the retaining wall, revegetating, and providing proper drainage for all disturbed areas is also included in the plan.

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

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

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

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

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

Project No.: 2002-143-10
Title: **Standard, Paint Creek, Collinsdale Waterline Extension Feasibility Study**
Location: Kanawha County, West Virginia
Tasks: The scope of work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Project No.: 2002-138-10
Title: **McAlpin Eroding Dump - Phase II**
Location: Raleigh County, West Virginia
Tasks: The scope of work included the preparation of construction documents for eleven sites. The sites consisted of ten coal refuse piles (one of which is burning), numerous mine openings (both collapsed and open), old mine buildings, possible AMD, and various mine related debris.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Project No.: 93-198-25
Title: **Phase II Water Feasibility Study, Washington Heights to Jeffrey Study Area**
Location: Boone County, West Virginia
Tasks: Phase II water feasibility study for private water supplies in the Washington Heights to Jeffrey Study Area in Boone County, West Virginia. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial

- Project No.: 93-198-20
Title: **Mill Creek - Isom Community**
Location: Logan County, West Virginia
Tasks: Design of water system to service approximately 800 residents of the Mill Creek-Isom Community in Logan County, West Virginia. Work included sizing of water treatment plant, 4 water tanks, 4 booster stations, 1 pressure reducing valve, and approximately 23 miles of water line. Construction cost was estimated at approximately \$5,500,000.
- Project No.: 93-198-19
Title: **Phase II Water Feasibility Study, Weaver-Junior Study Area**
Location: Randolph and Upshur Counties, West Virginia
Tasks: Phase II water feasibility study for private water supplies in the Weaver-Junior Study Area in Randolph and Upshur Counties, West Virginia. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the investigation in a report.
- Project No.: 93-198-18
Title: **Phase II Water Feasibility Study, Reynoldsville, Wallace, and Clarksburg Study Area**
Location: Harrison County, West Virginia
Tasks: Phase II water feasibility study for private water supplies in the Reynoldsville, Wallace, and Clarksburg Study Area in Harrison County, West Virginia. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the investigation in a report.
- Project No.: 93-198-17
Title: **Mainella Subsidence**
Location: Marion County, West Virginia
Tasks: Preparation of construction documents for the Mainella Subsidence project in Fairmont, West Virginia. Project involved subsurface investigation (including borehole camera work); sampling of mine water; injection plan layout for grouting under three residences; preparation of technical specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre-construction meetings. Approximately 15 injection holes were proposed at an estimated construction cost of approximately \$138,000.
-
- Project No.: 93-198-15
Title: **Glen Morgan Subsidence**
Location: Raleigh County, West Virginia
Tasks: Preparation of construction documents for the Glen Morgan Subsidence project near Beckley, West Virginia. Project included subsurface investigation (including borehole camera work); base mapping development; sampling of mine water; injection plan layout for grouting under one residence; preparation of technical specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre-construction meetings. Estimated construction cost was approximately \$164,000.

specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre-construction meetings. Bid construction cost was approximately \$680,000.

- Project No.: 93-198-08
Title: **Phase II Water Feasibility Study, New Haven Study Area**
Location: Fayette County, West Virginia
Tasks: Phase II water feasibility study for private water supplies in the New Haven Study Area in Fayette County, West Virginia. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report. Conceptual design of water system included sizing a water treatment plant, 1 booster station, 5 water tanks, and approximately 87 miles of water line. Estimated construction cost was approximately \$13,800,000.
- Project No.: 93-198-07
Title: **Phase II Water Feasibility Study, Gauley River Study Area**
Location: Fayette and Nicholas Counties, West Virginia
Tasks: Phase II water feasibility study for private water supplies in the Gauley River Study Area in Fayette and Nicholas Counties, West Virginia. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the investigation in a report.
- Project No.: 93-198-06
Title: **Phase II Water Feasibility Study, Heizer and Manila Creek Community**
Location: Putnam County, West Virginia
Tasks: Phase II water feasibility study for private water supplies in the Heizer and Manila Creek Community in Putnam County, West Virginia. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.
- Project No.: 93-198-05
Title: **Phase I Water Feasibility Study, Reynoldsville, Wallace, & Clarksburg Study Area**
Location: Harrison County, West Virginia
Tasks: ~~Phase I water feasibility study of the Reynoldsville, Wallace, & Clarksburg Study Area in Harrison County, West Virginia to evaluate the potential for pre-1977 mining activity to have degraded the water supplies of residents. Work included interviews, record searches, field reconnaissance, and preparation of remedial action cost estimates. A report summarizing the findings was submitted.~~

documenting findings and providing a cost estimate for extending public water supply systems.

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

Project No.: 88-460-22
Title: **Phase II Water Feasibility Study, Godby Branch Community**
Location: Logan County, West Virginia
Tasks: Phase II water feasibility study for private water supplies in the Godby Branch Community in Logan County, West Virginia. Work included interviewing local residents and government officials; collecting and analyzing surface and private water supply samples; researching water quality records; designing and costing remedial measures; calculating the percentage of wells that had been degraded by mining activity; and summarizing the findings in a report.

Project No.: 88-460-21
Title: **Madison Street/Fairview Route 218 Portals**
Location: Marion County, West Virginia
Tasks: Preparation of construction documents for the Madison Street/Fairview Route 218 Portals project. Work included subsurface investigation; surveying; design of wet mine seals and associated drains at multiple sites; preparation of technical specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre-construction meetings.

Project No.: 88-460-20
Title: **Summerlee Refuse Project**
Location: Fayette County, West Virginia
Tasks: Preparation of construction documents for the Summerlee Refuse pile project. Project included subsurface investigation; surveying; water quality sampling; grading and drainage design for regrading and revegetation of 60 acre refuse pile, 2 impoundments, and 2 ponds; preparation of technical specifications, drawings, and engineer's cost estimate; and participation in pre-bid and pre-construction meetings.

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

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

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

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

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

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

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

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

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

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

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

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

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.
