



GAI Consultants, Inc.  
 Charleston Office  
 500 Summers Street 3<sup>rd</sup> Fl Charleston, WV 25301  
 Tel 304.926.8100 Fax 304.926.8180  
 www.gaiconsultants.com

To: **Purchasing Division**  
**2019 Washington Street, East**  
**Charleston, West Virginia 25305**

Date: August 25, 2009

Project No.: E0909845

Attn: **Chuck Bowman**

Re: **Expression of Interest**  
**Engineering Services Required for the**  
**McDowell County Landfill Leachate Tank**  
**McDowell County, West Virginia, DEP14735**

**VIA:**

Anticipated Arrival Date:

- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Next Morning Delivery | <input type="checkbox"/> Next Day Delivery | <input type="checkbox"/> Two-Day Delivery          | <input type="checkbox"/> Guaranteed     |
| <input type="checkbox"/> Ground Service        | <input type="checkbox"/> Regular U.S. Mail | <input checked="" type="checkbox"/> Hand Delivered | <input type="checkbox"/> Not Guaranteed |
| <input type="checkbox"/> Other: _____          |  |  |   |

**Action:**

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> For Approval            | <input type="checkbox"/> For Review & Comment       | <input type="checkbox"/> Resubmit _____ Copies for Approval   |
| <input checked="" type="checkbox"/> For Your Use | <input type="checkbox"/> Returned for Corrections   | <input type="checkbox"/> Submit _____ Copies for Distribution |
| <input type="checkbox"/> As Requested            | <input type="checkbox"/> Returning After Loan to Us | <input type="checkbox"/> Return _____ Corrected Prints        |
| <input type="checkbox"/> Other: _____            |   | <input type="checkbox"/> For Bids Due: _____                  |

**We are sending you the materials listed below:**

Copies	Dated	Description
1	8/25/2009	Expression of Interest
2	8/25/2009	CD Copy of Expression of Interest

cc:

Remarks:

Signed:

Name: **James Hemme, P.E., L.R.S.**

Title: **Environmental Services Manager**

RECEIVED

2009 AUG 25 PM 12:45

WV PURCHASING  
 DIVISION

**Transmittal Form**



gai consultants

**EXPRESSION OF INTEREST  
ENGINEERING SERVICES REQUIRED  
FOR THE  
MCDOWELL COUNTY LANDFILL LEACHATE TANK  
MCDOWELL COUNTY, WEST VIRGINIA  
DEP14735**

Issuing Office:

West Virginia Department of Environmental Protection  
Landfill Closure Assistance Program  
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 E090985

August 25, 2009

... transforming ideas into reality

**EXPRESSION OF INTEREST  
ENGINEERING SERVICES REQUIRED  
FOR THE  
McDOWELL COUNTY LANDFILL LEACHATE TANK  
McDOWELL COUNTY, WEST VIRGINIA  
DEP14735**



Issuing Office:

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By:

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500 Summers Street, 3<sup>rd</sup> Floor  
Charleston, West Virginia 25301  
304-926-8100

Project E090985

August 25, 2009



gai consultants

August 25, 2009

Project E090985

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

**RE: Expression of Interest  
Engineering Services Required for the  
McDowell County Landfill Leachate Tank  
McDowell County, West Virginia  
DEP14735**

To Whom It May Concern:

GAI Consultants, Inc. (GAI) welcomes the opportunity to submit our qualifications in response to your Request for Expression of Interest DEP14735 to provide professional engineering services. These services will result in the siting and design and construction quality control/quality assurance required for a leachate storage system at the McDowell County Landfill 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 value 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 landfill closure program since 1993. We have served the State on previous West Virginia Department of Environmental Protection – Landfill Closure Assistance Program (WVDEP-LCAP) open-end contracts and projects 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-LCAP.

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

GAI has:

- On staff four local and fifteen total West Virginia registered professional civil engineers with a combined experience of over 70 years on projects throughout West Virginia. These professionals are available to sign work contract documents and supervise personnel to provide the daily quality assurance and quality control services;
- Extensive Charleston staff experience with leachate and water storage tanks. The team proposed for this project have personally been involved with at least twelve (12) bolted steel tank designs and construction;
- Substantial experience in providing immediate response to questions from the field and in handling situations as they arise between the contractor and WVDEP-LCAP; and

Project E090985  
August 25, 2009

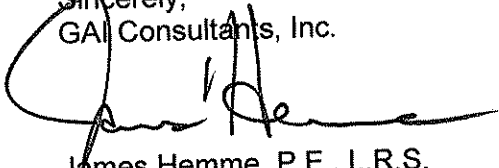
- extensive experience in landfills, environmental remediation, ecological principles, and contract administration.

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

- Exceptional qualifications (15 years of in-state LCAP experience most recently at Berkeley County Landfill),
- Local, Charleston presence with excellent access to LCAP offices and the McDowell County Landfill, and
- Efficient and experienced personnel who are familiar with WVDEP-LCAP requirements and staff.

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

Sincerely,  
GAI Consultants, Inc.



James Hemme, P.E., L.R.S.  
Environmental Services Manager



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

JAH:CEP/cam

Enclosure

## **TABLE OF CONTENTS**

**REQUEST FOR QUOTATION DEP14735**

**AFFIDAVIT**

### **SECTION 1**

**CONSULTANT QUALIFICATION QUESTIONNAIRE**

- **GAI Consultants**

### **SECTION 2**

**BRIEF FIRM HISTORY AND EXPERIENCE**

- **INTRODUCTION**
- **BIDDER EXPERIENCE**
  - Surveying and Mapping
  - Subsurface Investigation
  - Laboratory Services
  - Siting and Design and Contract Document Preparation
  - Quality Assurance and Quality Control
- **QUALIFICATIONS OF PERSONNEL**
- **CORPORATE SPECIALIZED EXPERIENCE AND DEMONSTRATED ABILITIES**
- **MANAGEMENT PLAN & LOCATION OF FACILITIES**
  - Management Plan
  - Project Budget Control
  - Schedule Control
  - Location of Facilities
- **FIGURE 1 - PROJECT MANAGEMENT PLAN**



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  
 DEP14735

PAGE  
 1

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

**RFQ COPY**  
**TYPE NAME/ADDRESS HERE**  
 GAI Consultants, Inc.  
 500 Summers Street, Third Floor  
 Charleston, WV 25301

**SHIP TO**  
 ENVIRONMENTAL PROTECTION  
 DEPARTMENT OF  
 OFFICE OF WASTE MANAGEMENT  
 601 57TH STREET SE  
 CHARLESTON, WV  
 25304 304-926-0499

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B	FREIGHT TERMS
07/29/2009				

BID OPENING DATE: **08/25/2009** **BID OPENING TIME 01:30PM**

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	JB		962-73		
<p>MCDOWELL COUNTY LANDFILL LEACHATE TANK PROJECT</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 THE SIGHTING AND DESIGN OF A LEACHATE STORAGE TANK FOR LEACHATE GENERATED FROM THE MCDOWELL COUNTY LANDFILL LOCATED IN MCDOWELL COUNTY, WV, PER THE FOLLOWING BID REQUIREMENTS AND THE 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> <p>***** THIS IS THE END OF RFQ DEP14735 ***** TOTAL: _____</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE <i>C. Elwood</i>	TELEPHONE 304.926.8100	DATE August 25, 2009
TITLE 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****VENDOR OWING A DEBT TO THE STATE:**

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

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

If this is a solicitation for a public improvement construction contract, the vendor, by its signature below, affirms that it has a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the **West Virginia Code**. The vendor **must** make said affirmation with its bid submission. Further, public improvement construction contract may not be awarded to a vendor who does not have a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the **West Virginia Code** and who has not submitted that plan to the appropriate contracting authority in timely fashion. For a vendor who is a subcontractor, compliance with Section 5, Article 1D, Chapter 21 of the **West Virginia Code** may take place before their work on the public improvement is begun.

**ANTITRUST:**

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

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

**LICENSING:**

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

**CONFIDENTIALITY:**

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

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.

Vendor's Name: GAI Consultants, Inc.

Authorized Signature:  Date: August 25, 2009



**WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
LANDFILL CLOSURE CONSULTANT QUALIFICATION QUESTIONNAIRE**

PROJECT NAME McDowell County Landfill Leachate Tank (DEP 14735)	DATE (DAY, MONTH, YEAR) 25, August, 2009	FEIN 25-1260999	
1. FIRM NAME GAI Consultants, Inc.	2. HOME OFFICE BUSINESS ADDRESS 385 East Waterfront Drive Homestead, PA 15120-5005	3. FORMER FIRM NAME NA	
4. HOME OFFICE TELEPHONE  304-926-8100	5. ESTABLISHED (YEAR)  1958	6. TYPE OWNERSHIP INDIVIDUAL, CORPORATION, PARTNERSHIP, JOINT-VENTURE Corporation	
6A. WV REGISTERED DBE (DISADVANTAGED BUSINESS ENTERPRISE)  NO			
7. PRIMARY OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. (name particular type) PERSONNEL EACH OFFICE 500 Summers Street, 3 <sup>rd</sup> Floor, Charleston, WV 25301 / C. Elwood Penn, IV, P.E. / 19 Charleston, 13 Pittsburgh 304/926-8100			
8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM C. Elwood Penn, IV, P.E., Assistant Vice President	8a. NAME, TITLE, & TELEPHONE NUMBER-OTHER PRINCIPALS Gary M. DeJidas, P.E., President, Anthony Morocco, P.E., Senior Vice President, 412/476-2000		
9. NUMBER OF PERSONNEL BY DISPLACE ( <b>Bold Lettering Indicates Minimum Design Team Members</b> ) <b>Detailed information On Team To Be Included</b>			
<b>90 ADMINISTRATIVE</b>	<b>6 ECOLOGISTS</b>	<b>7 LANDSCAPE ARCHITECTS</b>	<b>21 STRUCTURAL ENGINEERS</b>
<u>1 ARCHITECTS</u>	<u>0 ECONOMISTS</u>	<u>2 MECHANICAL ENGINEERS</u>	<b>27 SURVEYORS</b>
<b>6 BIOLOGIST</b>	<u>4 ELECTRICAL ENGINEERS</u>	<u>1 MINING ENGINEERS</u>	<b>237 OTHER</b>
<b>32 CADD OPERATORS</b>	<b>24 ENVIRONMENTALISTS</b>	<u>0 PHOTOGRAMMETRISTS</u>	<u>5 PLANNERS:</u>
<u>2 CHEMICAL ENGINEERS</u>	<b>10 ESTIMATORS</b>	<u>5 PLANNERS:</u>	<b>647 TOTAL PERSONNEL</b>
<b>42 CIVIL ENGINEERS</b>	<u>10 GEOLOGIST</u>	<u>URBAN/REGIONAL</u>	
<b>65 CONSTRUCTION INSPECTORS</b>	<u>2 HISTORIANS</u>	<u>0 SANITARY ENGINEERS</u>	
<u>31 DESIGNERS</u>	<b>2 HYDROLOGISTS</b>	<b>14 SOILS ENGINEERS</b>	
<u>0 DRAFTSMEN</u>		<u>4 SPECIFICATION WRITERS</u>	
<b>TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: <u>4</u></b> <b>*RPEs other than Civil must provide supporting documentation that qualifies them to supervise and perform this type of work.</b>			
<i>GAI can field the entire project team from its Charleston office. GAI's Charleston office can field two separate design teams from its location. However, only one team is expected for this project. GAI has completed all of its LCAP projects since 1993 from the Charleston office.</i>			
10. If submittal is by joint venture, list participating firms & outline specific areas of responsibility (including administrative, technical, & financial) for each firm. Each participating firm must complete a "Consultant Confidential Qualification Questionnaire". NA			
10a. 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.		
NAME AND ADDRESS: <i>Enviroprobe, Inc. Woman owned D.B.E. 630 Cross Lanes Drive Nitro, WV 25143</i>	SPECIALTY: <i>Environmental Direct Push Sampling, and Geotechnical Drilling.</i>	WORKED WITH BEFORE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
NAME AND ADDRESS: <i>Keddal Aerial Mapping 1121 Boyce Road, Suite 1300 Pittsburgh, PA 15241</i>	SPECIALTY: <i>Aerial Mapping Services</i>	WORKED WITH BEFORE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
NAME AND ADDRESS: <i>REIC Laboratory 225 Industrial Park Road Beaver, WV 25813-9307</i>	SPECIALTY: <i>Water and Soil Chemistry Testing</i>	WORKED WITH BEFORE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> YES <input type="checkbox"/> NO
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> YES <input type="checkbox"/> NO
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> YES <input type="checkbox"/> NO
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> YES <input type="checkbox"/> NO
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE <input type="checkbox"/> YES <input type="checkbox"/> NO

12. A. Is your firm experienced in Siting and Designing Leachate Storage Tanks?

**YES Description and Number of Projects:** *GAI has completed projects for nine landfills and four State Wide projects at all 29 landfills within the WVDEP-LCAP Program. GAI designed the closure for Kanawha Western, Central, Mingo, Fayette County, Berkeley County, and other landfills within the LCAP system. GAI has completed numerous projects for several commercial and industrial landfills. These projects include but are not limited to siting, environmental assessments, designs, geotechnical, hydrogeologic, water quality, ground water, quality assurance/quality control and closures. As part of the landfill designs, GAI has implemented collection of leachate in tanks. We also have utilized tanks for leachate collection at active landfills.*

*Mr. Hemme has been involved in the closure design of the Moundsville Landfill, Fleming Landfill, Wyoming County Landfill and Jackson County Landfill under the LCAP program. In addition, he has prepared closure plans and designs for at least 12 other landfills in West Virginia, and been involved with over 10 closure designs in the State of Virginia.*

*Mr. Straley has been involved in the closure design of the Kanawha Western Landfill, Mingo County Landfill, and Berkeley County Landfill under the LCAP program. In addition, he has prepared closure plans and designs for several other landfills in West Virginia.*

**NO**

B. Is your firm experienced in Solid Waste Landfill Leachate flow assessment and evaluation?

**YES Description and Number of Projects:** *GAI has completed site characterizations for the five WVDEP-LCAP landfills which we completed the closure designs. This included Berkeley County Landfill, Kanawha Western Landfill, Mingo County Landfill, Central West Virginia Refuse and Fayette County Landfill. GAI has performed leachate modeling at each of these facilities using the HELP model. In addition, leachate flow assessments have been performed as part of landfill designs.*

*Mr. Hemme was involved in the leachate modeling for the Fleming and Wyoming County Landfills under the LCAP program. In addition, he was extensively involved in a multitude of site characterizations where abutment/expansions to existing landfills were being proposed including City of Charleston Landfill, Sycamore Landfill, and Nicholas County Landfill locally. He was also the project manager and lead remediation designer for the Marshall University Clinical Education and outreach center site design that was constructed over a 1920's era landfill.*

*Mr. Straley was involved in the leachate modeling for the Kanawha Western Landfill, Mingo County Landfill, and Berkeley County Landfill under the LCAP program. In addition, he was extensively involved in a multitude of site characterizations where abutment/expansions to existing landfills were being proposed including S&S Landfill and Sycamore Landfill.*

**NO**

C. Is your firm experienced in developing Solid Waste Landfill Leachate tank construction plans and specifications?

**YES Description and Number of Projects:** *GAI has completed projects for nine landfills and four State Wide projects at all 29 landfills within the WVDEP-LCAP Program. GAI designed the closure for Kanawha Western, Central, Mingo, Fayette County, Berkeley County, and other landfills within the LCAP system. GAI has completed numerous projects for several commercial and industrial landfills. These projects include but are not limited to siting, environmental assessments, designs, geotechnical, hydrogeologic, water quality, ground water, quality assurance/quality control and closures. Construction plans and specifications were developed for all of these projects.*

*Mr. Hemme has been involved in the closure design of the Moundsville Landfill, Fleming Landfill, Wyoming County Landfill and Jackson County Landfill under the LCAP program. In addition, he has prepared closure plans and designs for at least 12 other landfills in West Virginia, and been involved with over 10 closure designs in the State of Virginia.*

*Mr. Straley has been involved in the closure design of the Kanawha Western Landfill, Mingo County Landfill, and Berkeley County Landfill under the LCAP program. In addition, he has prepared closure plans and designs for several other landfills in West Virginia.*

**NO**

D. Is your firm experienced in Solid Waste Leachate tank construction inspection?

**YES Description and Number of Projects:** *GAI has performed construction inspection for the five WVDEP-LCAP closures as described above and for multiple commercial and industrial clients for new landfills, expansions and closure of landfills. We have personnel trained in field testing for landfill closures (e.g. soil tests, concrete tests, synthetic liners, etc.) The proposed project manager and senior engineer have combined work on over 70 solid waste facilities including 9 LCAP projects. The proposed inspector(s) for the project recently completed a two construction monitoring assignment for American Electric Power that involved more than 20 acres of geosynthetic installation, hundreds of thousands of cubic yards in earthwork and an extensive drainage and leachate collection system. Each of these projects has included leachate collection systems including tanks and/or ponds.*

**NO**

E. Is your firm experienced in Solid Waste Landfill Leachate tank cost estimating?

**YES Description and Number of Projects:** *GAI has developed construction cost estimates for hundreds of projects including the five WVDEP-LCAP landfills which we complete closure designs. In addition, GAI completed the WVDEP-LCAP Update in 2000 which developed budgetary estimates for closure and post closure for all 29 of the WVDEP-LCAP Landfills. GAI has also stayed current with the explosion in material prices related to steel, hydraulic cement, fuel, etc. These increases have been seen in all of our projects since 2005 and are being accounted for in on-going projects. These projects have included leachate tanks.*

*Data (including historic unit prices) pricing trends are maintained by GAI to make sure budgets are met. The project manager, lead engineer and engineer intern have all been responsible for projecting budgets and establishing construction estimates for landfill closure costs.*

**NO**

**13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE for Siting and Designing Leachate Storage Tanks (Furnish complete data but keep to essentials)**

NAME & TITLE (Last, first, Middle Int.) <i>Penn, IV, C. Elwood Assistant Vice President/ Managing Officer</i>	YEARS OR EXPERIENCE		
	YEARS OF LANDFILL CLOSURE DESIGN EXPERIENCE: <b>0</b>	YEARS OF LCAP EXPERIENCE: <b>0</b>	YEARS OF QA/QC EXPERIENCE: <b>21</b>

**Brief Explanation of Responsibilities:**

*Mr. C. Elwood Penn, IV, P.E., Managing Officer, 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 with GAI's project team and 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.*

**EDUCATION (DEGREE, YEAR, SPECIALIZATION)**  
B.S. 1985 Civil Engineering

<b>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS:</b> <i>Society of American Military Engineers National Society of Professional Engineers</i>	<b>REGISTRATION (Type, Year, State)</b> 1990 Professional Engineer (VA, WV, MD, AR, NC, OH, KY)
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**13a. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE for Siting and Designing Leachate Storage Tanks (Furnish complete data but keep to essentials)**

NAME & TITLE (Last, First, Middle Int.) <i>Hemme, James A. Project Manager</i>	YEARS OF EXPERIENCE		
	YEARS OF LANDFILL CLOSURE DESIGN EXPERIENCE: <b>18</b>	YEARS OF LCAP EXPERIENCE: <b>3</b>	YEARS OF QA/QC EXPERIENCE: <b>18</b>

**Brief Explanation of Responsibilities:**

*Mr. Hemme will be responsible for day-to-day project management activities and design 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 on a weekly basis; and at project completion, providing guidance and direction to project staff, as well as engineering and design work. He will review the construction drawings, technical specifications, calculations estimates and the QA/QC plan. He will also provide day-to-day contact with the WVDEP Project Manager and develop project status reports as required.*

*Mr. Hemme will also provide expertise in the area of landfill engineering and environmental assessment program establishment. Having worked on LCAP projects. He is experienced in LCAP protocol and desired format and will be instrumental in developing the overall written assessment reports. Mr. Hemme will be the senior engineer responsible for the environmental aspects of the project.*

**EDUCATION (Degree, Year, Specialization)**  
B.S. 1989 Civil Engineering

<b>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS</b> <i>WVUIT Civil Engineering Advisory Board Member</i>	<b>REGISTRATION (Type, Year, State)</b> 1994 Professional Engineer (WV) 1999 Licensed Remediation Specialist (WV) 2007-2008 Professional Engineer (PA, OH, KY, IN, NY) OSHA 40 Hour Hazwopper
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**13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE for Siting and Designing Leachate Storage Tanks (Furnish complete data but keep to essentials)**

NAME & TITLE (Last, first, Middle Int.) <i>Straley, Charles, F.</i> <i>Project Manager/Surveyor/Geotechnical Engineer</i>	YEARS OR EXPERIENCE		
	YEARS OF LANDFILL CLOSURE DESIGN EXPERIENCE: <b>21</b>	YEARS OF LCAP EXPERIENCE: <b>15</b>	YEARS OF QA/QC EXPERIENCE: <b>21</b>

**Brief Explanation of Responsibilities:**

*Mr. Straley will be responsible for day-to-day project management activities and design 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 on a weekly basis; and at project completion, providing guidance and direction to project staff, as well as engineering and design work. He will review the construction drawings, technical specifications, calculations estimates and the QA/QC plan. He will also provide day-to-day contact with the WVDEP Project Manager and develop project status reports as required.*

*Mr. Straley will also provide expertise in the area of drilling program and environmental assessment program establishment. Having worked on every LCAP project GAI has performed, he is experienced in LCAP protocol and desired format and will be instrumental in developing the overall written assessment reports. Mr. Straley will be the senior engineer responsible for 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*

<b>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS:</b> <i>Society of American Military Engineers</i>	<b>REGISTRATION (Type, Year, State)</b> <i>1992 Professional Engineer WV, OH, KY, IN</i> <i>1996 Professional Surveyor, WV</i> <i>OSHA 40 Hour Hazwopper</i>
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**13a. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE for Siting and Designing Leachate Storage Tanks (Furnish complete data but keep to essentials)**

NAME & TITLE (Last, First, Middle Int.) <i>Prine, Joseph A.</i> <i>Project Engineer</i>	YEARS OF EXPERIENCE		
	YEARS OF LANDFILL CLOSURE DESIGN EXPERIENCE: <b>5</b>	YEARS OF LCAP EXPERIENCE: <b>0</b>	YEARS OF QA/QC EXPERIENCE: <b>6</b>

**Brief Explanation of Responsibilities:**

*Mr. Prine will be responsible for daily project design activities that will include drainage design, cap design, development of project drawings, transferring survey data to project plans, and development of project details.*

**EDUCATION (Degree, Year, Specialization)**  
*B.S. 2001 Engineering Technology with Civil Emphasis*  
*A.S. 2001 Drafting and Design*  
*A.S. 2001 Civil Engineering Technology*

<b>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS</b> <i>American Society of Civil Engineers</i>	<b>REGISTRATION (Type, Year, State)</b> <i>2002 Engineering Intern, WV</i> <i>OSHA 40 hour Hazwopper Training</i>
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13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE for Siting and Designing Leachate Storage Tanks (Furnish complete data but keep to essentials)			
NAME& TITLE (Last, first, Middle Int.)	YEARS OR EXPERIENCE		
	YEARS OF LANDFILL CLOSURE DESIGN EXPERIENCE:	YEARS OF LCAP EXPERIENCE:	YEARS OF QA/QC EXPERIENCE:
<i>Young, Mark D. Project Engineer</i>	10	2	10
Brief Explanation of Responsibilities:  <i>Mr. Young will be responsible for daily project design activities that will include drainage design, cap design, development of project drawings, transferring survey data to project plans, and development of project details.</i>			
EDUCATION (DEGREE, YEAR, SPECIALIZATION)  <i>B.S., Civil Engineering, West Virginia Institute of Technology</i>			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS: <i>American Society of Civil Engineers Society of American Military Engineers National Environmental Protection (NEPA) Training</i>		REGISTRATION (Type, Year, State) <i>Professional Engineer, WV, OH, KY, IN, PA</i>	
13a. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE for Siting and Designing Leachate Storage Tanks (Furnish complete data but keep to essentials)			
NAME& TITLE (Last, first, Middle Int.)	YEARS OR EXPERIENCE		
	YEARS OF LANDFILL CLOSURE DESIGN EXPERIENCE:	YEARS OF LCAP EXPERIENCE:	YEARS OF QA/QC EXPERIENCE:
<i>Clauto, Brian M. Biologist</i>	8	6	6
Brief Explanation of Responsibilities:  <i>Mr. Clauto will be responsible for providing services related to natural resources, including but not limited to wetland delineation, benthic studies, wetland restoration or mitigation, endangered species and stream restoration.</i>			
EDUCATION (DEGREE, YEAR, SPECIALIZATION)  <i>B.S. Environmental Studies, 2000</i>			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS:		REGISTRATION (Type, Year, State) <i>U.S. Army Corps of Engineers Wetland Delineator Certification Program</i>	

**13a. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE for Siting and Designing Leachate Storage Tanks (Furnish complete data but keep to essentials)**

NAME& TITLE (Last, first, Middle Int.) <i>Doyle, Michael P.</i> <i>Designer</i>	YEARS OR EXPERIENCE		
	YEARS OF LANDFILL CLOSURE DESIGN EXPERIENCE: <b>0</b>	YEARS OF LCAP EXPERIENCE: <b>0</b>	YEARS OF QA/QC EXPERIENCE: <b>8</b>

Brief Explanation of Responsibilities:  
*Mr. Doyle 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.S. 1994 Specialized Computer Aided Drafting and Design*

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS:	REGISTRATION (Type, Year, State)
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**13a. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE for Siting and Designing Leachate Storage Tanks (Furnish complete data but keep to essentials)**

NAME & TITLE (Last, First, Middle Int.) <i>Workman, David L.</i> <i>Designer</i>	YEARS OF EXPERIENCE		
	YEARS OF LANDFILL CLOSURE DESIGN EXPERIENCE: <b>2</b>	YEARS OF LCAP EXPERIENCE: <b>0</b>	YEARS OF QA/QC EXPERIENCE: <b>1</b>

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. Mr. Workman is highly skilled in 3D modeling of surfaces that will allow GAI to evaluate numerous grading scenarios in the same time it typically takes to evaluate one option.*

EDUCATION (Degree, Year, Specialization)  
*B.S. 2000 Industrial Engineering Technology*  
*A.S. 1997 Drafting and Design Engineering Technology*

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State)
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13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE for Siting and Designing Leachate Storage Tanks (Furnish complete data but keep to essentials)			
NAME & TITLE (last, first, middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF LANDFILL CLOSURE DESIGN EXPERIENCE: 14	YEARS OF LCAP EXPERIENCE: 14	YEARS OF QA/QC EXPERIENCE: 14
<p><i>Queen, Terry, W.</i> Senior Construction Inspector</p>			
<p>Brief Explanation of Responsibilities: Mr. Queen will perform the QA/QC services. He will be responsible for field testing and daily reports. Mr. Queen will be responsible for collecting field data including but not limited to, water samples, soil borrow samples, subsurface exploration monitoring, and verification of mapping.</p>			
<p>EDUCATION (Degree, Year, Specialization) 1980 Math and Physical Education Classwork 1992 Drafting and Design Classwork</p>			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State) Troxler Nuclear Densometer Certification	
13a. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE for Siting and Designing Leachate Storage Tanks (Furnish complete data but keep to essentials)			
NAME & TITLE (last, first, middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF LANDFILL CLOSURE DESIGN EXPERIENCE: 2	YEARS OF LCAP EXPERIENCE: 0	YEARS OF QA/QC EXPERIENCE: 2
<p><i>Foster, Mark</i> Construction Inspector</p>			
<p>Brief Explanation of Responsibilities: Mr. Foster will assist with QA/QC services. He will be responsible for field testing and daily reports. He will be responsible for collecting field data including but not limited to, water samples, soil borrow samples, subsurface exploration monitoring, and verification of mapping.</p>			
<p>EDUCATION (Degree, Year, Specialization) B.A. 2007 Regents Bachelor of Arts A.S. 1998 Applied Science (Occupational Development)</p>			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State) Portable Gage Safety Training, OSHA Certification, Blueprint Reading, Line & Grade, Pipelaying	

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

Equipment:	<i>HP 1050C Plotter</i>	Software:	<i>AutoCAD w/Land Desktop</i>
	<i>Digital Planimeters (2)</i>		<i>MicroStation</i>
	<i>HP Digital Cameras</i>		<i>Microsoft Word</i>
	<i>Minolta Photocopier/Printer</i>		<i>Microsoft Excel</i>
	<i>Nikon DTM-450 Total Stations</i>		<i>Water CAD</i>
	<i>Nikon DTM-550 Total Stations</i>		<i>Sewer CAD</i>
	<i>Gorman Global Positioning Unit</i>		<i>Flowmaster</i>
			<i>TR-55</i>
			<i>Numerous Hydrology/Hydraulic Models</i>
			<i>Maptech (Professional)</i>
			<i>REAME (Slope Stability)</i>
			<i>Hydrocalc Hydraulics</i>
			<i>GeoPack Design</i>
			<i>CAD Hydrologic &amp; Pond Design Software</i>

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
<i>Fly Ash Landfill</i>	<i>Reliant Energy Canonsburg, PA</i>	<i>On-Going Construction Monitoring</i>	<i>Varies 1.5 Million</i>	<i>GAI is called back every 1 to 2 years to monitor expansion construction.</i>
<i>Fly Ash Landfill</i>	<i>Reliant Energy Canonsburg, PA</i>	<i>On-Going Construction Monitoring</i>	<i>Varies 1.5 Million</i>	<i>GAI is called back every 1 to 2 years to monitor expansion construction.</i>
<i>John Amos Gypsum Landfill</i>	<i>Gary Zych American Electric Power 1 Riverside Plaza Columbus, OH 43215</i>	<i>Design Permitting and Construction Monitoring</i>	<i>\$10 million</i>	<i>Permit 100% Construction 90%</i>
<i>Fly Ash Landfill</i>	<i>Gary Zych American Electric Power 1 Riverside Plaza Columbus, OH 43215</i>	<i>Design Permitting and Construction Monitoring</i>	<i>\$9 million</i>	<i>Permit 100% Construction 0%</i>
<i>Conesville Fly Ash Landfill</i>	<i>Gary Zych American Electric Power 1 Riverside Plaza Columbus, OH 43215</i>	<i>Design Permitting and Construction Monitoring</i>	<i>\$11 million</i>	<i>Permit 100% Construction 0%</i>
TOTAL NUMBER OF PROJECTS:			TOTAL ESTIMATED CONSTRUCTION COSTS:	
# <u>5</u>			\$ <u>\$ 33 million</u>	

16. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS SERVING AS A SUB-CONSULTANT TO OTHERS.					
PROJECT NAME, TYPE, AND LOCATION	NATURE OF FIRMS RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CONSTRUCTION COST:	
				ENTIRE PROJECT	YOUR FIRMS RESPONSIBILITY
<i>None</i>					

17. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM WAS THE DESIGNATED ENGINEER OF RECORD (List 5 to 7)				
PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST (THOUSANDS)	YEAR	CONSTRUCTED (YES OR NO)
<i>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.</i>	<i>W V Division of Environmental Protection, Abandoned Mine Lands Program Charleston, W V</i>	<i>\$47 (Fee)</i>	<i>2006</i>	<i>Yes</i>
<i>Berkeley County Landfill Berkeley County, WV Closure design and QA/QC services</i>	<i>W V Division of Environmental Protection, Landfill Closure Assistance Program Charleston, W V</i>	<i>\$4,600</i>	<i>2004</i>	<i>YES</i>
<i>McAplin Phase I Raleigh County, WV Reclamation design for five sites including refuse piles, mine drainage and mine seals</i>	<i>W V Division of Environmental Protection, Abandoned Mine Lands Program Charleston, W V</i>	<i>\$660</i>	<i>2004</i>	<i>YES</i>
<i>Ned's Branch Refuse Impoundment Mingo County, WV Emergency reclamation design for a failed slurry impoundment including buttress toe, mine seals, storm water control and relocating roadway</i>	<i>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program Charleston, W V</i>	<i>\$4,000</i>	<i>2004</i>	<i>YES</i>
<i>Richard Mine AMD Treatment Alternatives and Assessment for a 500+ gpm discharge into Deckers Creek near Morgantown, West Virginia. Project included dispersion modeling and on going full time flow monitoring for a 12 month period</i>	<i>West Virginia Conservation Agency, Keyser, West Virginia in cooperation with Natural Resource Conservation Service, Morgantown, W V</i>	<i>\$70 (fee)</i>	<i>2007</i>	<i>No (study only)</i>
<i>Berkeley County Solid Waste Authority Grapevine Road Siting Study and Potential Land Use Plan</i>	<i>Mr. Clint Hogbin Berkeley County Solid Waste Authority</i>	<i>\$40 (fee)</i>	<i>2007-2008</i>	<i>No (study only)</i>

18. COMPLETED WORK WITHIN LAST 5 YEARS IN WHICH YOUR FIRM HAS BEEN A SUBCONSULTANT TO OTHER FIRMS (INDICATE PHASE OF WORK WHICH YOUR FIRM WAS RESPONSIBLE) LIST 5 TO 7.

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST OF YOUR FIRM'S PORTION (THOUSANDS)	YEAR	CONSTRUCTED (YES OR NO)	FIRM ASSOCIATED WITH
<i>Chesapeake Energy Multiple Field Offices in WV, PA, and KY. Site Work and Permitting</i>	<i>Chesapeake Energy, LLC Charlie Boggs 900 Pennsylvania Avenue (10<sup>th</sup> Floor) Charleston, WV 25302</i>	<i>\$6,000</i>	<i>2007-2008</i>	<i>Yes</i>	<i>Elliott and Associates &amp; Silling Associates</i>
<i>Chesapeake Eastern Regional H-Q Site Design and Permitting</i>	<i>Chesapeake Energy, LLC Charlie Boggs 900 Pennsylvania Avenue (10<sup>th</sup> Floor) Charleston, WV 25302</i>	<i>\$2,500</i>	<i>2007</i>	<i>No (project suspended by Client)</i>	<i>Elliott and Associates &amp; Silling Associates</i>
<i>Morgan County Courthouse Site Design, Permitting and Geothermal HVAC Intake</i>	<i>Bill Clark County Administrator Fairfax Street Berkeley Springs, WV 23411</i>	<i>\$70</i>	<i>2008</i>	<i>No (under construction)</i>	<i>Silling Associates</i>
<i>Raleigh County Courthouse Site Design, Maintenance of Traffic and Permitting</i>	<i>Raleigh County Commission Beckley, WV</i>	<i>\$50</i>	<i>2008</i>	<i>No (under construction)</i>	<i>Silling Associates</i>
<i>Public Debt Mail Facility Innovative Storm Water Management Design and Permitting</i>	<i>U.S. Bureau of Public Debt Parkersburg, WV</i>	<i>\$10</i>	<i>2008</i>	<i>No (under construction)</i>	<i>C.L. Pifer Associates</i>

19. Use this space to provide any additional information or description of resources supporting your firm's qualifications to perform work for the WV Department of Environmental Protection.

*In summary:*

- *GAI's extensive landfill experience and previous work at the McDowell County Landfill gives us unique knowledge of the geology and soils in the area.*
- *The location of this landfill presents a tremendous opportunity for a demonstration project. GAI has numerous ideas on how the WVDEP can utilize this project for public outreach and education and as a test area for innovative technologies.*
- *GAI's staff stays up-to-date on solid waste technologies and trends. We bring the experience of industrial, government and commercial solid waste projects to this endeavor.*
- *GAI's staff for the project is located within 10 minutes of WVDEP's office in Charleston.*
- *GAI's listed staff is available to start on this work immediately.*

*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: August 25, 2009

## BRIEF FIRM HISTORY AND EXPERIENCE

### INTRODUCTION

GAI Consultants, Inc., (GAI) proposes to provide engineering services to the West Virginia Department of Environmental Protection, Landfill Closure Assistance Program (WVDEP - LCAP). These services will result in the development of siting and design, engineering drawings, contract specifications, and other contract documents for the letting of construction project, and providing quality assurance and quality control during construction for the McDowell County Landfill Leachate Tank project.

The highlighted sections following are:

- Bidders Experience
  - Surveying and Mapping
  - Subsurface Investigation
  - Laboratory Services
  - Siting and Design and Contract Document Preparation
  - Quality Assurance and Quality Control
- 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 designers, estimators, surveyors, secretaries, and field technicians. GAI's Charleston office has served the WVDEP on previous LCAP open-end contracts from 1993 to the present. These projects have included:

- Leachate analysis;
- Ground water investigations;
- Surface water investigations and analyses;
- Site characterizations;
- Gas monitoring plans;
- LCAP-2000 system update;
- Leachate collection, treatment and disposal systems;
- Cap (clay and synthetic) designs;
- Storm water control; and
- Quality assurance and quality control.

**GAI provided site characterization, closure design and QA/QC services for the Kanawha Western, Central West Virginia Refuse, Fayette County, Mingo County, and Berkeley County Landfills for the LCAP program. Included has been leachate collection siting and design with tanks.**



GAI also provides engineering services to the landfill industry including:

- Siting and Feasibility Studies;
- Environmental Assessments;
- Permit Applications;
- Detailed Facility Design;
- Plans and Specifications;
- Geotechnical, Hydrogeologic, and Water-Quality Investigations;
- Water-Quality Statistical Analyses;
- Ground Water Sampling and Analyses;
- Wetland and Ecological Studies;
- Develop Recycling Programs;
- By-product Marketing Studies;
- Construction Monitoring and Certifications;
- Community Relations; and
- Government Liaison.

As a result of this experience, GAI will provide the required expertise to complete landfill closure projects in a timely, economical, and efficient manner and will only require minimal subconsultants to be utilized on this project. Our direct knowledge of the LCAP 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 twelve years has been **rated among the top 500 engineering** and environmental firms in the nation by Engineering News Record (ENR). In 2006 and 2007, GAI reached the top 250. GAI reached 177 in 2008.

GAI Consultants, Inc., is a full service civil, environmental engineering firm headquartered in suburban Pittsburgh, Pennsylvania, with offices in Charleston, West Virginia; Philadelphia, Pennsylvania; Cincinnati, Ohio, Ft. Wayne, Indiana; Orlando and Jacksonville, Florida; and Richmond, Virginia. Established in 1958, GAI and its subsidiaries comprise an organization of over 600 engineers, scientists, and support personnel. With our 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 50 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 siting, design, and closure of landfills. By successfully completing so many reclamation projects, GAI has obtained "expertise" status on an international basis for many types of projects.

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 solid waste authorities; mining and industrial companies; federal, state, and local governmental agencies; engineers and architects; and private developers.

GAI has successfully served the WVDEP on previous LCAP contracts from 1993 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 associated with this type of 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,
- Oil and gas surveying, and
- ALTA Surveys.

GAI presently operates several 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 LCAP specifications.

### **Subsurface Investigation**

Subsurface investigations will be required to obtain information for foundations for a leachate tank. These services will be subcontracted to Enviroprobe, Inc. of Cross Lanes, West Virginia. We have successfully and satisfactorily worked with them throughout West Virginia for several years. The excavation of test pits and trenches will be subcontracted to a local excavation firm.

### Laboratory Services

GAI operates a soils and materials laboratory in our Philadelphia, Pennsylvania office. We also utilize local soils laboratories for a small quantity testing.

We have 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 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 and appropriate NRC licensure to monitor field compaction.

### Siting and Design and Contract Document Preparation

GAI has extensive experience in siting, design engineering and the preparation of contract documents for landfill leachate tanks. 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 LCAP projects during the past 16 years will ensure this quality engineering continues.

GAI has prepared construction packages for WVDEP-LCAP since 1993. 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 LCAP 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 landfill closures and schedules meetings with WVDEP-LCAP 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 proposed methods of construction. This review also expedites the overall reclamation plan.

### Quality Assurance and Quality Control

GAI has extensive experience in providing quality assurance and quality control services for landfill closures and other construction projects. GAI has performed these services on five WVDEP-LCAP landfills (Kanawha Western, Central West Virginia, Fayette County, Mingo County, and Berkeley County) since 1993.

We have the necessary equipment to perform field testing for soil compaction and collecting geosynthetic, soil, rock and concrete samples. We complete daily and weekly reports on the construction activities and final certifications for landfill closures.

We have also provided construction management services for the WVDEP-LCAP landfills. These services included review of contractor submittals, answering questions from the field, performing field modifications to handle unusual subsurface conditions, and process contractor invoices. The reviews are followed by providing recommendations to the LCAP project manager.

### QUALIFICATIONS OF PERSONNEL

GAI has a staff of over 600 engineering, environmental and technical support personnel. GAI's staff is particularly well suited to investigate problems associated with landfill closures. We propose to utilize a staff of engineers, geologists, biologists, surveyors, estimator, designers, and CADD operators to conduct the investigatory and design work backed by a group of management professionals. The primary team anticipated for this work includes;

**Mr. C. Elwood Penn, IV, P.E., Managing Officer** will serve as Contract Administrator in the Charleston office. Mr. Penn has worked with industry and their related problems for **25 years**. Mr. Penn is very knowledgeable with a variety of WVDEP 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. James A. Hemme, P.E., L.R.S.** will serve as a Project Manager. Mr. Hemme has participated in the design and permitting of over 50 solid waste facilities. This has included engineering work on four LCAP projects (Wyoming County Landfill, Jackson County Landfill, Moundsville Landfill and Flemming Landfill) and design, permitting and construction of over 20 other landfills and solid waste facilities throughout West Virginia.

**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 landfill design and studies for over 10 projects for the WVDEP, LCAP Program. Mr. Straley has a complete understanding of WVDEP - LCAP guidelines, specifications, and project expectations.

**Mr. Joseph A. Prine, E.I.** will serve as a Project Engineer. Mr. Prine has 6 years of engineering experience which has included the design, permitting and full time construction monitoring of landfill expansions and the placement of capping systems in West Virginia.

**Mr. Mark D. Young, P.E.** will serve as a Project Engineer. Mr. Young has 10 years of engineering experience which has included the design, permitting and full time construction monitoring of landfill expansions and the placement of capping systems in West Virginia.

**Mr. Brian Clauto** will serve as project biologist and environmental scientist. Mr. Clauto has 5 years experience with GAI and assisted in the cursory assessment of all facilities in the LCAP program and performing research and QA/QC on Berkeley County Closure.

**Mr. Terry W. Queen** will serve as the primary QA/QC personnel. Mr. Queen has provided QA/QC services on five LCAP projects and performed fieldwork on several other LCAP projects. Mr. Queen has a complete understanding of WVDEP-LCAP guidelines, specifications, and

project expectations. He has a good working relationship with LCAP staff. Mr. Queen recently completed a QA/QC on a 20+ acre landfill.

All have relevant direct experience with site characterizations, grading/drainage, leachate management, surface and ground water issues, and preparation of construction documents.

A team of staff engineers, geologists/hydrologists, environmental scientists, biologists, technicians, CADD operators, word processor operators, secretaries, and designers 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 and industry related to landfill design and closure.

In addition we have performed similar services for other agencies and sections of the WVDEP and other state and federal agencies including;

- Open End and Specific Contracts for design of Abandoned Mine Lands (AML) Reclamation and Acid Mine Drainage (AMD) sites throughout West Virginia,
- Numerous projects for the Office of Surface Mining, and Reclamation and Enforcement (ASMRE) throughout Kentucky and Pennsylvania,
- Numerous projects for Ohio Division of Natural Resources,
- Multiple landfill sites for electric generation companies for disposal of fly ash and gypsum. This has included assessment, design and permitting in West Virginia and other states.

## 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 less than 6 miles from the WVDEP's Charleston Headquarters.

GAI's professional, technical and support staff have extensive experience on LCAP 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 setting up the initial project and assist in developing the scope of work and establishing the contract with WVDEP. He will also generally supervise the work in progress and perform progress reviews at intermediate points and finally prior to submittal to the WVDEP. In addition, Mr. Penn will be in charge of any contractual negotiations necessary through the process of the project.

Project Management will be provided by **Messrs. James A. Hemme, P.E. or Charles F. Straley, P.E., P.S.**, as shown in Figure 1. They will be responsible for the day to day management and performance of the project. They will review the work directive and spreadsheet preparation of 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 on a daily basis supervise the work in progress and review work products of others at regular intervals and finally prior to submittal to the WVDEP. They will be responsible for maintaining liaison with the WVDEP Project Manager including project status reports, as required. They will be responsible for adherence to the project schedule and budget.

Day-to-day project activities will be performed under the direction of the Project Manager by one of the project engineers (**i.e., Joseph Prine, E.I., Mark D. Young, P.E.**), surveying or environmental staff as shown in Figure 1.

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-LCAP, is to assign qualified team with a core group of 3 to 5 individuals with total responsibility for completion of the work to the clients satisfaction and budget. Where necessary the core group can draw on the expertise available within GAI's large and experienced staff.

### **Project Budget Control**

The Project Manager will be responsible for monitoring the project budget. GAI's staff submits electronic 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. Through our DELTEK accounting system, project managers can review charges to date by Wednesday 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

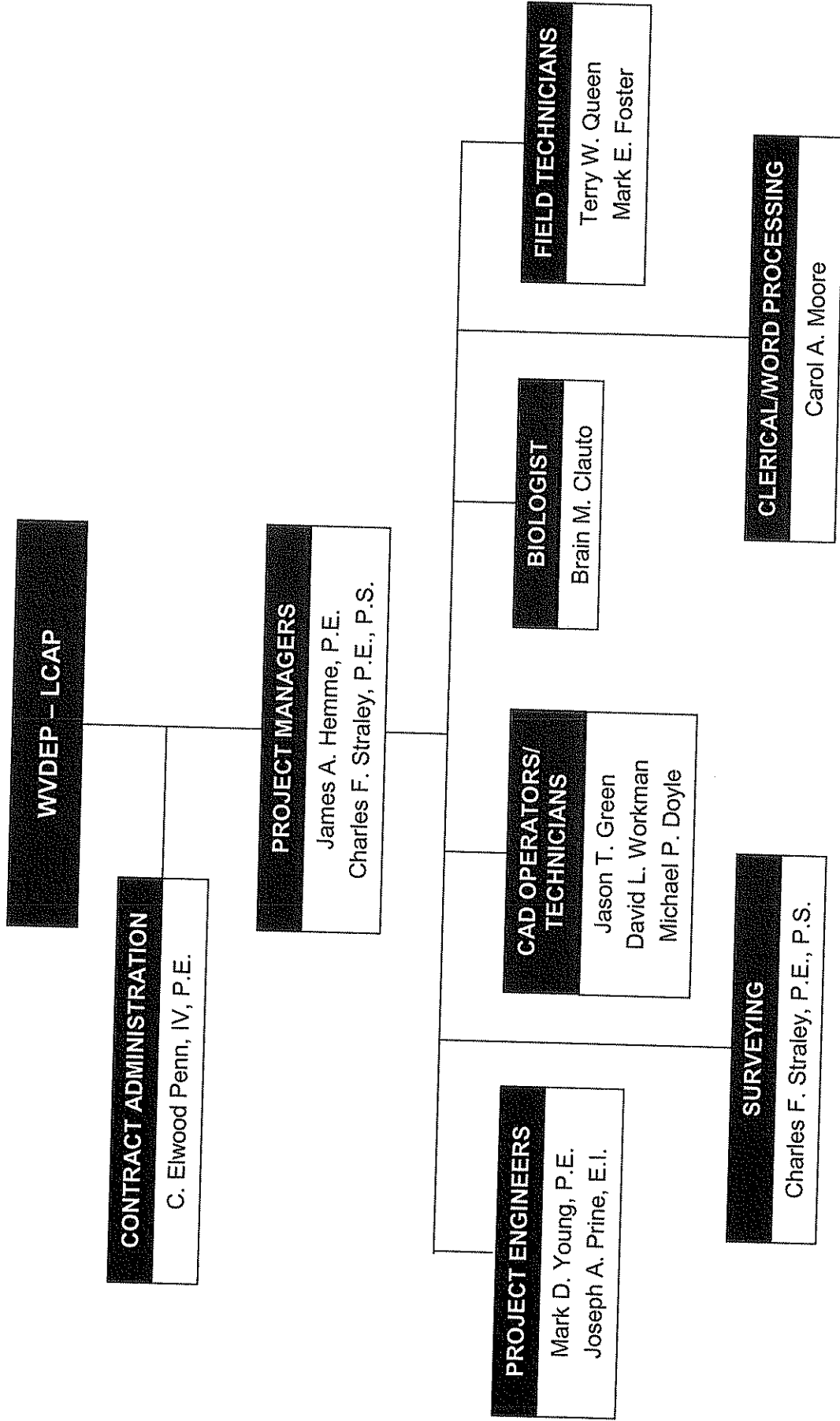


FIGURE 1