



The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at ***wvOASIS.gov***. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at ***WVPurchasing.gov*** with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

Header

[List View](#)

General Information

[Contact](#)
[Default Values](#)
[Discount](#)
[Document Information](#)

Procurement Folder: 171220

Procurement Type: Central Contract - Fixed Amt

Vendor ID: 000000160372

Legal Name: GAI CONSULTANTS INC

Alias/DBA:

Total Bid: \$0.00

Response Date: 02/18/2016

Response Time: 13:12

SO Doc Code: CEOI

SO Dept: 0313

SO Doc ID: DEP1600000013

Published Date: 1/26/16

Close Date: 2/18/16

Close Time: 13:30

Status: Closed

Solicitation Description: Addendum 01 EO: Webster County
Landfill Closure Cap Design

Total of Header Attachments: 0

Total of All Attachments: 0



Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Solicitation Response

Proc Folder : 171220

Solicitation Description : Addendum 01 EOI: Webster County Landfill Closure Cap Design

Proc Type : Central Contract - Fixed Amt

Date issued	Solicitation Closes	Solicitation No	Version
	2016-02-18 13:30:00	SR 0313 ESR02181600000003635	1

VENDOR

000000160372
GAI CONSULTANTS INC

FOR INFORMATION CONTACT THE BUYER

Beth Collins
(304) 558-2157
beth.a.collins@wv.gov

Signature X FEIN # DATE

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Water testing services				\$0.00

Comm Code	Manufacturer	Specification	Model #
81100000			

Extended Description :	Site Characterization Study, Leachate Management and Closure Cap Design for the Webster County Landfill per the attached specifications, bid requirements, and terms and conditions, incorporated here by reference and made a part hereof.
------------------------	---

Expression of Interest

Engineering Services Required for the Webster County Landfill Randolph County, West Virginia

GAI Project Number: E160054.00

February 18, 2016



Prepared by: GAI Consultants, Inc.
Charleston Office
300 Summers Street, Suite 1100
Charleston, West Virginia 25301

Prepared for: West Virginia Department of Environmental Protection
Landfill Closure Assistance Program
601 57th Street, S.E.
Charleston, West Virginia 25304

Expression of Interest
Engineering Services Required
for the
Webster County Landfill
Webster County, West Virginia

GAI Project Number: E160054.00

February 18, 2016

Issuing Office:

West Virginia Department of Environmental Protection
Landfill Closure Assistance Program
601 57th Street, S.E.
Charleston, West Virginia 25304

Submitted By:

GAI Consultants, Inc.
300 Summers Street, Suite 1100
Charleston, West Virginia 25301

Author:



Charles F. Straley, P.E., P.S.
Engineering Manager





Charleston Office
300 Summers Street, Suite 1100
Charleston, West Virginia 25301

T 304.926.8100
F 304.926.8180

February 18, 2016

Project E160054.00

Department of Administration
Purchasing Division
2019 Washington Street, East
Charleston, West Virginia 25305

**Expression of Interest
Engineering Services Required for the
Webster County Landfill
Webster County, West Virginia**

Gentlemen:

GAI Consultants, Inc. (GAI) welcomes the opportunity to submit our qualifications in response to your Request for Expression of Interest to provide professional engineering services. These services will result in the development of a site characterization study, leachate management plan, and closure cap design required for closure of the Webster County Landfill in Webster 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 with support from our Bridgeport, 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. 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 300 Summers Street, Suite 1100, Charleston, West Virginia 25301 and 600 Market Place Avenue, Suite 301, Bridgeport, West Virginia 26330.

GAI has:

- on staff in Charleston five, and one in Bridgeport, West Virginia registered professional engineers who will review, stamp, and sign all work and contract documents.
- a large diverse staff of civil engineers, CADD operators, surveyors, geologists, estimators, designers, and biologists with extensive experience in landfill engineering, hydrology, and geology.
- extensive experience in landfills, environmental remediation, ecological principles, and contract administration.

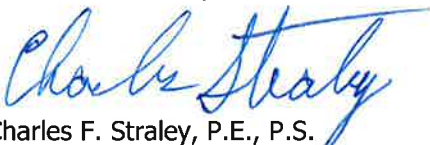
In summary, GAI will provide the most favorable terms as a result of:

- Exceptional qualifications (22 years of in-state LCAP experience)
- Local, Charleston and Bridgeport, presence with excellent access to LCAP offices and the Webster 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.



Charles F. Straley, P.E., P.S.
Senior Engineering Manager

KWK:CFS/lmt

Enclosure

TABLE OF CONTENTS

REQUEST FOR QUOTATION

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
 - Site Characterization, Design Engineering and Contract Document Preparation
- **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**



Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Centralized Expression of Interest
02 – Architect/Engr

Proc Folder: 171220

Doc Description: EOI: Webster County Landfill Closure Cap Design

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2015-12-22	2016-01-28 13:30:00	CEOI 0313 DEP1600000013	1

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Name, Address and Telephone Number:

FOR INFORMATION CONTACT THE BUYER

Beth Collins
(304) 558-2157
beth.a.collins@wv.gov

Signature X

FEIN #

25-1260999

DATE

2/18/2016

All offers subject to all terms and conditions contained in this solicitation

ADDITIONAL INFORMATION:

The West Virginia Purchasing Division, for the Agency, the West Virginia Department of Environmental Protection, is soliciting Expressions of Interest for professional mapping and design services for the Webster County Landfill Closure Cap Design project located in Webster County, West Virginia, per the attached bid requirements and specifications.

INVOICE TO	SHIP TO
ENVIRONMENTAL PROTECTION OFFICE OF ENVIRONMENTAL REMEDIATION 601 57TH ST SE CHARLESTON WV25304 US	ENVIRONMENTAL PROTECTION 601 57TH ST CHARLESTON WV 25304 US

Line	Comm Ln Desc	Qty	Unit Issue
1	Water testing services		

Comm Code	Manufacturer	Specification	Model #
81100000			

Extended Description :

Site Characterization Study, Leachate Management and Closure Cap Design for the Webster County Landfill per the attached specifications, bid requirements, and terms and conditions, incorporated here by reference and made a part hereof.

SCHEDULE OF EVENTS

Line	Event	Event Date
1	Tech Question Submittal Deadline at 5:00 PM	05/01/08

DEP1600000013	Document Phase Final	Document Description EOI: Webster County Landfill Closure Cap Design	Page 3 of 3
----------------------	---------------------------------------	---	------------------------------

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions



Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Centralized Expression of Interest
02 — Architect/Engr

Proc Folder: 171220

Doc Description: Addendum 01 EOI: Webster County Landfill Closure Cap Design

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2016-01-26	2016-02-18 13:30:00	CEOI 0313 DEP1600000013	2

BID RECEIVING LOCATION

BID CLERK
DEPARTMENT OF ADMINISTRATION
PURCHASING DIVISION
2019 WASHINGTON ST E
CHARLESTON WV 25305
US

VENDOR

Vendor Name, Address and Telephone Number:

FOR INFORMATION CONTACT THE BUYER

Beth Collins
(304) 558-2157
beth.a.collins@wv.gov

Signature X

Charles A. Haly

FEIN #

25-1260999

DATE

2/18/2016

All offers subject to all terms and conditions contained in this solicitation

ADDITIONAL INFORMATION:

Addendum No. 01

This addendum is issued to modify the solicitation per the attached documentation and the following:

1. To publish answers to vendor submitted questions.
 2. To modify the bid opening date to February 18, 2016 at 1:30 PM, EST.
- No other changes.

The West Virginia Purchasing Division, for the Agency, the West Virginia Department of Environmental Protection, is soliciting Expressions of Interest for professional mapping and design services for the Webster County Landfill Closure Cap Design project located in Webster County, West Virginia, per the attached bid requirements and specifications.

INVOICE TO	SHIP TO
ENVIRONMENTAL PROTECTION OFFICE OF ENVIRONMENTAL REMEDIATION 601 57TH ST SE CHARLESTON WV25304 US	ENVIRONMENTAL PROTECTION 601 57TH ST CHARLESTON WV 25304 US

Line	Comm Ln Desc	Qty	Unit Issue
1	Water testing services		

Comm Code	Manufacturer	Specification	Model #
81100000			

Extended Description :

Site Characterization Study, Leachate Management and Closure Cap Design for the Webster County Landfill per the attached specifications, bid requirements, and terms and conditions, incorporated here by reference and made a part hereof.

SCHEDULE OF EVENTS

Line	Event	Event Date
1	Tech Question Submittal Deadline at 5:00 PM	02/16/16

DEP1600000013	Document Phase Final	Document Description Addendum 01 EOI: Webster County Landfill Closure Cap Design	Page 3 of 3
----------------------	---------------------------------------	---	------------------------------

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: _____

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:

(Check the box next to each addendum received)

<input checked="" type="checkbox"/> Addendum No. 1	<input type="checkbox"/> Addendum No. 6
<input type="checkbox"/> Addendum No. 2	<input type="checkbox"/> Addendum No. 7
<input type="checkbox"/> Addendum No. 3	<input type="checkbox"/> Addendum No. 8
<input type="checkbox"/> Addendum No. 4	<input type="checkbox"/> Addendum No. 9
<input type="checkbox"/> Addendum No. 5	<input type="checkbox"/> Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

GAI Consultants, Inc.

Company

Charles Shaley

Authorized Signature

February 18, 2015

Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.
Revised 6/8/2012

CERTIFICATION AND SIGNATURE PAGE

By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

GAI Consultants, Inc.

(Company)



Charles F. Straley, P.E., P.S., Senior Engineering Manager

(Authorized Signature) (Representative Name, Title)

(304) 926-8100, (304) 926-8180, Feb. 18, 2015

(Phone Number) (Fax Number) (Date)

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

MANDATE: Under W. Va. Code §5A-3-10a, 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: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. 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.

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.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"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 exceeds five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: GAI Consultants, Inc.

Authorized Signature: Charles Shatip Date: February 18, 2016

State of West Virginia

County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 18 day of February, 2016.

My Commission expires April 11, 2023.

AFFIX SEAL HERE



NOTARY PUBLIC

Jason T Green
Purchasing Affidavit (Revised 07/01/2012)

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

PROJECT NAME Webster County Landfill Closure Cap Design (DEP 1600000013)	DATE (DAY, MONTH, YEAR) <i>18 February, 2016</i>	FEIN <i>25-1260999</i>	
1. FIRM NAME <i>GAI Consultants, Inc.</i>	2. HOME OFFICE BUSINESS ADDRESS <i>385 East Waterfront Drive Homestead, PA 15120-5005</i>	3. FORMER FIRM NAME <i>N/A</i>	
4. HOME OFFICE TELEPHONE <i>Homestead Office (412) 476-2000 Charleston Office (304) 926-8100</i>	5. ESTABLISHED (YEAR) <i>1958</i>	6. TYPE OWNERSHIP INDIVIDUAL, CORPORATION, PARTNERSHIP, JOINT-VENTURE <i>Corporation</i>	
6A. WV REGISTERED DBE (DISAVANTAGED BUSINESS ENTERPRISE) <i>NO</i>			
7. PRIMARY OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. (name particular type) PERSONNEL EACH OFFICE <i>300 Summers Street, Suite 1100, Charleston, WV 25301 / (304) 926-8100 / Stephen Gould, QEP / 21 Charleston, 12 Bridgeport, 13 Pittsburgh 600 Market Place Avenue, Suite 301, Bridgeport, WV 26330/ (304) 808-6680</i>			
8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM <i>Stephen Gould, QEP, Vice President/Senior Director</i>		8a. NAME, TITLE, & TELEPHONE NUMBER-OTHER PRINCIPALS <i>Gary M. DeJidas, P.E., President, Anthony Morocco, P.E., Senior Vice President, (412) 476-2000</i>	
9. NUMBER OF PERSONNEL BY DISPLINE (Bold Lettering Indicates Minimum Design Team Members) Detailed information On Team To Be Included			
<u>140</u> ADMINISTRATIVE <u>0</u> ARCHITECTS <u>26</u> BIOLOGIST <u>63</u> CADD OPERATORS <u>2</u> CHEMICAL ENGINEERS <u>124</u> CIVIL ENGINEERS <u>41</u> CONSTRUCTION INSPECTORS <u>35</u> DESIGNERS <u>0</u> DRAFTSMEN	<u>6</u> ECOLOGISTS <u>1</u> ECONOMISTS <u>9</u> ELECTRICAL ENGINEERS <u>93</u> ENVIRONMENTALISTS <u>8</u> ESTIMATORS <u>15</u> GEOLOGIST <u>2</u> HISTORIANS <u>3</u> HYDROLOGISTS	<u>11</u> LANDSCAPE ARCHITECTS <u>8</u> MECHANICAL ENGINEERS <u>1</u> MINING ENGINEERS <u>0</u> PHOTOGRAMMETRISTS <u>17</u> PLANNERS: URBAN/REGIONAL <u>2</u> SANITARY ENGINEERS <u>13</u> SOILS ENGINEERS <u>6</u> SPECIFICATION WRITERS	<u>26</u> STRUCTURAL ENGINEERS <u>15</u> SURVEYORS <u>261</u> OTHER 932 TOTAL PERSONNEL
TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: <u>3</u> *RPEs other than Civil must provide supporting documentation that qualifies them to supervise and perform this type of work. <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".N/A

10a. HAS THIS JOINT-VENTURE WORKED TOGETHER BEFORE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO <i>N/A</i>
---	------------------------------	--

11. OUTSIDE KEY CONSULTANTS/ SUB-CONSULTANTS ANTICIPATED TO BE USED.

[illegible]

12. A. Is your firm experienced in (Solid Waste Landfill Closure Design)?

YES Description and Number of Projects: *GAI has completed projects for nine landfills and four State Wide projects at 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.*

Mr. Charles 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 and has assisted with closure plans for various CCR facilities.

Mr. Kenneth Kinder has been involved in the closure design and QA/QC for the Fleming Landfill and the Jackson County landfill within the LCAP system. Mr. Kinder assisted with hydraulic design associated with a portion of the Elkins Landfill. Mr. Kinder has also prepared closure plans and has assisted with construction monitoring and construction management for various industrial landfills, CCR facilities, and environmental remediation sites.

Mr. R. Scott Bria has been involved with several landfill closure designs, including the Fleming landfill within the LCAP system. Mr. Bria has extensive knowledge in the use of CAD software for developing grading plans and earthwork quantities. Mr. Bria also served as the primary QA/QC construction oversight for closure of the Fleming Landfill.

NO

B. Is your firm experienced in Solid Waste landfill site characterization assessment and evaluation?

YES Description and Number of Projects: *GAI has completed site characterizations for 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 completed site characterizations for numerous other landfills in the process of siting, expanding or developing closure plans. We have evaluated ground water, surface water and waste types at numerous sites for landfills and other projects.*

Mr. Straley was involved in the site characterization 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 landfill closure construction inspection?

YES Description and Number of Projects: *GAI has performed construction inspection for 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 30 solid waste facilities including 8 LCAP projects. Mr. R. Scott Bria served as the primary QA/QC construction oversight for closure of the Fleming Landfill. Mr. Terry Queen has served as primary QA/QC for Mingo, Central, Fayette County and Berkeley County Landfills.*

NO

D. Is your firm experienced in Aerial Photography and the Development of Contour Mapping?

YES Description and Number of Projects: *GAI has produced or evaluated contour mapping on our WVDEP-LCAP projects discussed in the above responses. We have in-house surveying services with exceptional capabilities in development of contours and base map models. We have used our surveying services to locate*

facilities for many of the miscellaneous LCAP projects. We routinely run control to sites, perform property surveys and generate topographic mapping. We subcontract our aerial photography, if none is available. GAI has not only successfully and promptly performed these services for the LCAP program but has coordinated, surveyed and mapped thousands of acres for the WVDEP Abandoned Mine Land program over the past two decades including recent projects with the Vens Run Landslide, Duck Creek Landslide, and Rt. 60 (Smithers) drainage design.

NO

E. Is your firm experienced in evaluating ground water contamination, such as may be associated with landfills?

YES Description and Number of Projects: GAI has evaluated the ground water at each of the five WVDEP-LCAP landfills which we completed closure designs. GAI evaluated the ground water monitoring wells at 29 of the WVDEP-LCAP facilities. GAI developed the ground water monitoring plan at Fleming, Big Bear, and Kingwood landfills in the WVDEP-LCAP program. Ground water quality and monitoring plans have been developed and evaluated on multiple private landfills and other projects. We are highly experienced in developing sampling and testing programs to determine contaminants of concern

Mr. Straley has been responsible for establishing and maintaining multiple ground water monitoring programs for the LCAP program. Groundwater, wells sampling, and analysis have been involved in a majority of the 50+ solid waste facilities he has been involved with. Mr. Straley established the ground water monitoring program for Big Bear and City of Kingwood landfills.

NO

F. Is your firm experienced in Landfill Closure 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 29 of the WVDEP-LCAP Landfills.

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

NO

13a. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR LANDFILL CLOSURE DESIGN			
NAME& TITLE (Last, first, Middle Int.) <i>Straley, Charles, F.</i> <i>Senior Engineering Manager</i>	YEARS OR EXPERIENCE		
	YEARS OF LANDFILL CLOSURE DESIGN EXPERIENCE: 27	YEARS OF LCAP EXPERIENCE: 21	YEARS OF QA/QC EXPERIENCE: 27
<p>Brief Explanation of Responsibilities:</p> <p><i>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.</i></p> <p><i>Mr. Straley will also provide expertise in the area of the 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.</i></p>			
<p>EDUCATION (DEGREE, YEAR, SPECIALIZATION)</p> <p><i>B.S. 1986 Civil Engineering</i> <i>M.S. 1988 Geotechnical Engineering</i></p>			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS:		<p>REGISTRATION (Type, Year, State)</p> <p><i>1992 Professional Engineer WV, OH, KY, IN</i> <i>1996 Professional Surveyor, WV</i> <i>OSHA 40 Hour Hazwopper</i></p>	
13a. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR LANDFILL CLOSURE DESIGN			
NAME & TITLE (Last, First, Middle Int.) <i>Kinder, Kenneth W.</i> <i>Assistant Engineering Manager</i>	YEARS OF EXPEIRENCE		
	YEARS OF LANDFILL CLOSURE DESIGN EXPERIENCE: 15	YEARS OF LCAP EXPERIENCE: 15	YEARS OF QA/QC EXPERIENCE: 15
<p>Brief Explanation of Responsibilities:</p> <p><i>Mr. Kinder will be responsible for preparation of construction drawings, technical specifications, calculations, and cost estimates. He will oversee hydrologic/hydraulic aspects of the project including stormwater management and erosion and sediment control.</i></p>			
<p>EDUCATION (Degree, Year, Specialization)</p> <p><i>B.S. 2003 Civil Engineering</i></p>			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		<p>REGISTRATION (Type, Year, State)</p> <p><i>2007 Professional Engineer WV</i> <i>2013 Certified Floodplain Manager</i> <i>OSHA 40 Hour Hazwopper</i></p>	

13a. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR LANDFILL CLOSURE DESIGN			
NAME & TITLE (last, first, middle Int.) <i>Klamut, John R. Engineering Manager</i>	YEARS OF EXPEIRENCE		
	YEARS OF LANDFILL CLOSURE DESIGN EXPERIENCE: 15	YEARS OF LCAP EXPERIENCE: 0	YEARS OF QA/QC EXPERIENCE: 15
Brief Explanation of Responsibilities: <i>Mr. Klamut has extensive experience with landfill closure design in Arizona, and Virginia and will assist with preparation of construction drawings and technical specifications. He will assist with initial development and design of the landfill closure plan.</i>			
EDUCATION (Degree, Year, Specialization) <i>B.S. 1998 Forest Engineering M.S. 2002 Civil Engineering</i>			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State) <i>Professional Engineer WV, VA, AZ, KY, PA Certified Floodplain Manager</i>	
13a. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR LANDFILL CLOSURE DESIGN			
NAME & TITLE (last, first, middle Int.) <i>Frech, Kerry L. Civil Engineer / Hydrologist</i>	YEARS OF EXPERIENCE		
	YEARS OF LANDFILL CLOSURE DESIGN EXPERIENCE: 37	YEARS OF LCAP EXPERIENCE: 19	YEARS OF QA/QC EXPERIENCE: 30
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) <i>B.S. 1977 Civil Engineering M.Eng. 1978 Environmental Engineering</i>			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State) <i>1983 Professional Engineer, PA, WV</i>	
13a. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR LANDFILL CLOSURE DESIGN			
NAME & TITLE (last, first, middle Int.) <i>Bria, R. Scott Senior CAD Designer</i>	YEARS OF EXPERIENCE		
	YEARS OF LANDFILL CLOSURE DESIGN EXPERIENCE: 15	YEARS OF LCAP EXPERIENCE: 15	YEARS OF QA/QC EXPERIENCE: 15
Brief Explanation of Responsibilities <i>Mr. Bria will be responsible for activities that will include development of project drawings, transferring survey data to project plans, and development of project details.</i>			
EDUCATION (Degree, Year, Specialization) <i>A.S. 1997 Computer Aided Drafting and Design</i>			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State)	

13a. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR LANDFILL CLOSURE DESIGN			
NAME & TITLE (last, first, middle Int.) <i>Fuller, Jayme.</i> <i>Environmental Manager</i>	YEARS OF EXPERIENCE		
	YEARS OF LANDFILL CLOSURE DESIGN EXPERIENCE: 8	YEARS OF LCAP EXPERIENCE: 0	YEARS OF QA/QC EXPERIENCE: 0
Brief Explanation of Responsibilities <i>Ms. Fuller 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. Natural Sciences</i>			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS <i>Ohio Oil and Gas Association</i>	REGISTRATION (Type, Year, State) <i>Stream Restoration Program Natural Channel</i> <i>Wetland Delineation Training</i>		
13a. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR LANDFILL CLOSURE DESIGN			
NAME & TITLE (last, first, middle Int.) <i>Green, Jason T.</i> <i>Senior Project Specialist</i>	YEARS OF EXPERIENCE		
	YEARS OF LANDFILL CLOSURE DESIGN EXPERIENCE: 15	YEARS OF LCAP EXPERIENCE: 15	YEARS OF QA/QC EXPERIENCE: 15
Brief Explanation of Responsibilities <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 plans and details. He will also assist the Project Engineers and Managers in their duties.</i>			
EDUCATION (Degree, Year, Specialization) <i>A.S., 2002, Engineering Technology</i>			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State) <i>OSHA 30 Hour Construction</i> <i>Troxler Nuclear Densometer Certification</i>		
13b. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR LANDFILL CLOSURE QA/QC			
NAME & TITLE (last, first, middle Int.) <i>Queen, Terry W.</i> <i>Lead Construction Technician</i>	YEARS OF EXPERIENCE		
	YEARS OF LANDFILL CLOSURE DESIGN EXPERIENCE: 20	YEARS OF LCAP EXPERIENCE: 20	YEARS OF QA/QC EXPERIENCE: 20
Brief Explanation of Responsibilities <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. Mr. Queen will provide construction monitoring and administration services.</i>			
EDUCATION (Degree, Year, Specialization) <i>1986 Math and Physical Education Classwork</i> <i>1992 Drafting and Design</i>			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State) <i>Troxler Nuclear Densometer Certification</i> <i>WVDOH Portland Cement Concrete and Compaction</i>		

13c. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR HEAVY EARTH WORK CONSTRUCTION PROJECTS (Furnish complete data but keep to essentials)			
NAME & TITLE (last, first, middle Int.) <i>David F. Smeltzer</i> <i>Senior Lead Technician</i>	YEARS OF EXPERIENCE		
	YEARS OF LANDFILL CLOSURE DESIGN EXPERIENCE: 29	YEARS OF LCAP EXPERIENCE: 0	YEARS OF QA/QC EXPERIENCE: 29
Brief Explanation of Responsibilities <i>Mr. Smeltzer specializes in geotechnical inspection and construction inspection. His experience includes soil density testing in the field; concrete sampling, testing and inspection; and PVC liner installation and inspection.</i>			
EDUCATION (Degree, Year, Specialization) <i>A.S., 1977, Conservation and Environmental Technology</i>			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State) <i>NVLAP Certification, Concrete Testing</i> <i>Troxler Nuclear Densometer Certification</i> <i>ACI Certified</i>	
13c. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR HEAVY EARTH WORK CONSTRUCTION PROJECTS (Furnish complete data but keep to essentials)			
NAME & TITLE (last, first, middle Int.) <i>John W. Hollar</i> <i>Lead Construction Coordinator</i>	YEARS OF EXPERIENCE		
	YEARS OF LANDFILL CLOSURE DESIGN EXPERIENCE: 23	YEARS OF LCAP EXPERIENCE: 0	YEARS OF QA/QC EXPERIENCE: 23
Brief Explanation of Responsibilities <i>Mr. Hollar has experience in landfill construction quality assurance/quality control (QA/QC) and management. He is a responsible resident QA/QC professional with extensive knowledge of permit compliance requirements.</i>			
EDUCATION (Degree, Year, Specialization) <i>B.A., 1985, Geology</i>			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State) <i>Troxler Nuclear Densometer Certification</i> <i>NICET Level IV</i> <i>OSHA 40 Hour Hazwopper</i>	
13c. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR HEAVY EARTH WORK CONSTRUCTION PROJECTS (Furnish complete data but keep to essentials)			
NAME & TITLE (last, first, middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF LANDFILL CLOSURE DESIGN EXPERIENCE: 0	YEARS OF LCAP EXPERIENCE: 0	YEARS OF QA/QC EXPERIENCE: 0
Brief Explanation of Responsibilities			
EDUCATION (Degree, Year, Specialization)			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State)	

14. PROVIDE A LIST OF SOFTWARE AND EQUIPMENT AVAILABLE IN THE PRIMARY OFFICE WHICH WILL BE USED TO COMPLETE THE **LANDFILL CLOSURE DESIGN**.

Equipment: <i>Plotters</i>		Software: <i>AutoCAD / Civil 3D</i>	
<i>Troxler Nuclear Density Gauge</i>		<i>MicroStation</i>	
<i>Digital Cameras</i>		<i>Microsoft Office Suite</i>	
<i>Photocopiers/Printers/Scanners</i>		<i>Sewer CAD</i>	
<i>Surveying Stations</i>		<i>Water CAD</i>	
<i>GPS Units</i>		<i>Hydrocalc Hydraulics</i>	
<i>Concrete Testing Equipment</i>		<i>TR-55</i>	
		<i>Numerous Hydrology/Hydraulic Models</i>	
		<i>Maptech (Professional)</i>	
		<i>Slope/W (Slope Stability)</i>	
		<i>Google Earth</i>	
		<i>GeoPack Design</i>	
		<i>Hydraulic Evaluation of Landfill Performance (HELP)</i>	

15. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS THE DESIGNATED ENGINEER OF RECORD ASSOCIATED WITH OR RELATING TO LANDFILL CLOSURE OR CONSTRUCTION.				
PROJECT NAME,TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESOPNSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
<i>Possum Point Ash Impoundment Closure</i>	<i>Dominon Energy 5000 Dominion Blvd Glen Allen, VA 23060</i>	<i>Design of cap system for impoundment closure, construction QA/QC</i>	<i>\$80 Million</i>	<i>Permit/Design 80% Construction 10%</i>
<i>John Amos CCR Landfill</i>	<i>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>Chesterfield Ash Impoundment Closure</i>	<i>Dominon Energy 5000 Dominion Blvd Glen Allen, VA 23060</i>	<i>Design of cap system for impoundment closure,</i>	<i>\$40 Million</i>	<i>Permit/Design 60% Construction 0%</i>
TOTAL NUMBER OF PROJECTS:			TOTAL ESTIMATED CONSTRUCTION COSTS:	
# <u>3</u>			\$ <u>130 Million</u>	

16. CURRENT ACTIVITIES ON WHICH YOUR FIRM IS SERVING AS A SUB-CONSULTANT TO OTHERS RELATING TO LANDFILL CLOSURE AND CONSTRUCTION.

[illegible]

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	YEAR	CONSTRUCTED (YES OR NO)
Amigo Portals Raleigh County, WV The scope of work involved providing closure of 19 mine portals with bat gates or mine seals, covering exposed refuse, providing stream realignment and streambank protection, and providing proper drainage control measures. We also prepared and obtained a Stormwater NPDES Permit and COE 404 Permit.	<i>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program Charleston, West Virginia</i>	<i>\$46K (Fee)</i>	<i>2014</i>	<i>YES</i>
Greystone Mine Drainage Monongalia County, WV The scope of work involved design for construction of a collection system using underdrains, a conveyance drainage system, and site reclamation.	<i>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program Charleston, West Virginia</i>	<i>\$45K (Fee)</i>	<i>2011</i>	<i>YES</i>
Earling Refuse Pile Logan County, WV The scope of work involves seal the mine portal(s), bat gates, providing proper drainage control measures and site reclamation.	<i>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program Charleston, West Virginia</i>	<i>\$61K (Fee)</i>	<i>2011</i>	<i>YES</i>
Reynoldsville Refuse Harrison County, WV The scope of work involved design for construction of mine portal seals, bat gates, regrading and soil covering refuse areas, subsurface drainage collection, providing proper drainage control measures and providing streambank stabilization.	<i>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program Charleston, West Virginia</i>	<i>\$100K (Fee)</i>	<i>2012</i>	<i>YES</i>
Laurel Point Strip Monongalia County, WV The scope of work involved design for construction of mine portal seals, backfilling the exposed and dangerous highwalls, regrading and soil covering refuse areas providing proper drainage control measures and providing streambank stabilization.	<i>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program Charleston, West Virginia</i>	<i>\$80K (Fee)</i>	<i>2012</i>	<i>YES</i>
Cherokee Complex McDowell County, WV The scope of work involved design for construction of structure demolition and disposal, regrading and soil	<i>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program Charleston, West Virginia</i>	<i>\$44K (Fee)</i>	<i>2012</i>	<i>YES</i>

covering a refuse areas, subsurface drainage collection, providing proper drainage control measures, natural stream restoration and providing streambank stabilization.				
Lynch Run Highwall Harrison County, WV The scope of work involves providing seals for the collapsed portals, backfilling the highwalls, reclamation of the refuse pile, and providing proper controlled drainage including natural stream design. Construction plans and technical specifications were developed.	<i>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program Charleston, West Virginia</i>	<i>\$50K (Fee)</i>	<i>2010</i>	<i>YES</i>
Wheatley Branch (Luthy) Portals Logan County, WV The scope of work involved several locations of abandoned trash piles, access road construction, twenty-nine (29) mine seals and providing proper drainage control measures. We also prepared and obtained a Stormwater NPDES Permit, WVDOH MM-109 permits and a non-reporting nationwide COE 404 permit.	<i>West Virginia Division of Environmental Protection, Abandoned Mine Lands Program Charleston, West Virginia</i>	<i>\$75K (Fee)</i>	<i>2013</i>	<i>YES</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.

[illegible]

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 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 has a large staff of engineers, designers, surveyors, geologists, and scientists that have extensive experience with landfill closure design and LCAP.*
- *GAI has been very involved in keeping up with the recent EPA regulations on Coal Combustion Residual (CCR) facilities. Many aspects of the design and construction of CCR landfill and impoundment closures are similar to municipal solid waste facilities.*
- *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:

Title:

Printed

Name:


Senior Engineering Manager

Charles F. Straley, P.E., P.S.

Date: February 18, 2016

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 mapping, engineering drawings, contract specifications, and other contract documents for the leachate management and closure cap as may be required for the letting of construction project for the Webster County Landfill.

The highlighted sections following are:

- Bidders Experience
 - Surveying and Mapping
 - Subsurface Investigation
 - Laboratory Services
 - Site Characterization, 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 and Bridgeport, West Virginia offices are 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 designers, estimators, landscape architects, 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, Berkeley County and Wheeling Landfills for the LCAP program.

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. GAI also has an office in **Bridgeport, West Virginia** which has staff available that can provide services needed at the site.

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 seventeen years has been **rated among the top 500 engineering** and environmental firms in the nation by Engineering News Record (ENR).

GAI Consultants, Inc., is a full service civil, environmental engineering firm headquartered in suburban Pittsburgh, Pennsylvania, with offices in Charleston and Bridgeport, West Virginia; Philadelphia, Pennsylvania; Canton, Ohio, Ft. Wayne, Indiana; Orlando and Jacksonville, Florida; and Richmond, Virginia and several other offices. Established in 1958, GAI and its subsidiaries comprise an organization of over 950 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 57 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 five registered professional engineers and other experienced disciplines on staff. Clients served by the Charleston office include solid waste authorities; mining, oil, gas, 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, supported with staff from our Bridgeport office. 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 Total Stations and GPS surveying equipment. 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 using the Civil 3D software.

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 site characterization (e.g. waste limits, potential borrow areas, etc.) and closure design, installation of monitoring wells, and foundations for a leachate tank, if necessary. 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 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.

Site Characterization, Design Engineering and Contract Document Preparation

GAI has extensive experience in site characterization, design engineering and the preparation of contract documents for landfill closures. 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 22 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.

QUALIFICATIONS OF PERSONNEL

GAI has a staff of over 950 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. 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. Kenneth W. Kinder, P.E., CFM will serve as a Project Engineer. Mr. Kinder has 15 years of engineering experience which has included the design, permitting and construction monitoring of landfill expansions and the placement of capping systems in West Virginia. Mr. Kinder has participated in the design, permitting and construction of the closure of Fleming Landfill and Jackson County Landfill. Mr. Kinder also assisted with hydraulic design for a portion of the Elkins Landfill. Mr. Kinder has also prepared closure plans and has assisted with construction monitoring and construction management for various industrial landfills, CCR facilities, and environmental remediation sites.

Mr. John R. Klamut, P.E., CFM will serve as a Project Engineer. Mr. Klamut is a Professional Engineer who specializes in permitting, design, and construction of landfill facilities. Mr. Klamut has 15 years of experience with landfill design and has served as Project Manager for the design, permitting and/or construction of over 10 municipal solid waste and industrial landfills in West Virginia, Virginia, Arizona and California. Mr. Klamut will utilize his experience working on landfill facilities in West Virginia, Virginia, Pennsylvania, Arizona, California and Utah in the solid waste, mining and power generation industries to provide expertise and innovative solutions for this project. Mr. Klamut's landfill experience includes the permitting of new solid waste landfill facilities, the permitting of solid waste landfill expansions, the permitting and design of a solid waste landfill mining project, and the design of new landfill cells and closures. Mr. Klamut's solid waste experience also includes construction oversight of new disposal cells, cell closures, lined leachate collection ponds, stormwater ponds, stormwater conveyance channels, downchutes, and landfill mining projects. Mr. Klamut's landfill closure experience includes the design and construction oversight of low permeability soil caps, evapotranspiration soil caps, and geomembrane caps with soil cover and geosynthetic drainage layers.

Mr. R. Scott Bria will serve as the senior CAD designer. Mr. Bria has 15 years of experience with landfill design including the Fleming landfill within the LCAP system. Mr. Bria has extensive knowledge in the use of CAD software for developing grading plans and earthwork quantities. Mr. Bria served as the primary QA/QC construction oversight for closure of the Fleming Landfill.

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.

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 Coal Combustion Residuals (fly ash, bottom 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 Bridgeport, West Virginia and Pittsburgh, Pennsylvania offices 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.

Project Management will be provided by **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., Kenneth W. Kinder, P.E. or John R. Klamut, 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 a small team with total responsibility for completion of the work to the client's 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** with support from our **Bridgeport, West Virginia** office. We feel that our close proximity to the WVDEP's Charleston office and the project area will allow the project to be completed in a timely, efficient manner.

FIGURE 1

