



ENGINEERS • PLANNERS • SCIENTISTS • Construction Managers

48 DONLEY STREET, SUITE 502 • MORGANTOWN, WV 26501 • 304-296-3611 • (FAX) 304-296-8046

August 11, 2009

Mr. Chuck Bowman
WV Purchasing Division
2019 Washington St E
PO Box 50130
Charleston WV 25305-0130

Subject: **Site Characterization Study, Leachate Management and Closure Cap Design for the City of Kingwood Landfill, Located in Preston County, WV**

RFQ #: **DEP14707**

Dear Mr. Bowman,

KCI Technologies, Inc. (KCI) is pleased to provide the WV Purchasing Division and WV Department of Environmental Protect Agency (WVDEP) with our expression of interest for engineering services site characterization study, leachate management and closure cap design for the City of Kingwood landfill project. We have reviewed the request and are confident that we can provide the highest quality, cost efficient services to the WVDEP.

This contract will be housed in KCI's Morgantown, West Virginia office under the direction of Robert Milne, PE. Mr. Milne will act as the primary point of contact for the WVDEP, and coordinate all disciplines within KCI. At Mr. Milne's disposal are more than 950 professional engineers, planners, scientists, surveyors, construction managers, and support personnel offering technical expertise in site/civil engineering, environmental, transportation, and comprehensive planning; hazardous waste, mechanical, electrical, telecommunications, and soils engineering; urban design; landscape architecture; historic preservation; geology; hydrology; ecology; surveying; as well as construction management and inspection. The size and diversity of talent and expertise possessed by our staff allows us to provide a wide-variety of technical services on time and within budget.

In closing, KCI offers an experienced staff immediately available and fully devoted to the successful completion of task assignments under this contract. We are confident you will find our staff eminently qualified for this project. We look forward to your favorable response and the opportunity to progress to the next phase of your selection process.

Sincerely,
KCI TECHNOLOGIES, INC.

Robert R. Milne, PE
Division Chief, Senior Associate
Morgantown Engineering Division

RECEIVED

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PURCHASING DIVISION
STATE OF WV

Enclosures

RRM/as

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

PROJECT NAME City of Kingwood Landfill DEP14707	DATE (DAY, MONTH, YEAR) 11, August, 2009	FEIN 52-1604386
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1. FIRM NAME KCI Technologies, Inc.	2. HOME OFFICE BUSINESS ADDRESS 936 Ridgebrook Rd, Baltimore, MD 21152	3. FORMER FIRM NAME Kiddie Consultants, Inc.
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4. HOME OFFICE TELEPHONE (410) 316-7800	5. ESTABLISHED (YEAR) 1955	6. TYPE OWNERSHIP INDIVIDUAL, CORPORATION, PARTNERSHIP, JOINT-VENTURE S-Corp	6A. WV REGISTERED DBE (DISAVANTAGED BUSINESS ENTERPRISE) YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
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7. PRIMARY OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. (name particular type) PERSONNEL EACH OFFICE
48 Donley Street, Suite 502, Morgantown, WV 26501 / (304) 296-3611 / Robert R. Milne, PE - Division Chief / No. of Personnel - 7 (Morgantown, WV), 521 (Sparks, MD)

8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM Terry F. Neimeyer, PE, CEO Nathan J. Beil, PE, President	8a. NAME, TITLE, & TELEPHONE NUMBER-OTHER PRINCIPALS See Attachment
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9. NUMBER OF PERSONNEL BY DISPLINE (**Bold Lettering Indicates Minimum Design Team Members**)
Detailed information On Team To Be Included

106 ADMINISTRATIVE	<u>0</u> ECOLOGISTS	<u>6</u> LANDSCAPE	<u>30</u> STRUCTURAL
<u>0</u> ARCHITECTS	<u>0</u> ECONOMISTS	<u> </u> ARCHITECTS	ENGINEERS
0 BIOLOGIST	<u>16</u> ELECTRICAL	<u>9</u> MECHANICAL	70 SURVEYORS
61 CADD OPERATORS	ENGINEERS	<u> </u> ENGINEERS	
<u>0</u> CHEMICAL ENGINEERS	<u>83</u> ENVIRONMENTALISTS	<u>0</u> MINING	<u>178</u> OTHER
72 CIVIL ENGINEERS	<u>3</u> ESTIMATORS	<u> </u> ENGINEERS	
241 CONSTRUCTION	<u>4</u> GEOLOGIST	<u>0</u> PHOTOGRAMMETRISTS	
INSPECTORS	<u>3</u> HISTORIANS	<u>8</u> PLANNERS:	<u>1018</u> TOTAL
101 DESIGNERS	<u>3</u> HYDROLOGISTS	URBAN/REGIONAL	PERSONNEL
<u>11</u> DRAFTSMEN		<u>4</u> SANITARY	
		ENGINEERS	
		9 SOILS ENGINEERS	
		<u>0</u> SPECIFICATION	
		WRITERS	

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE:
4 - Morgantown Office, 31 - Companywide
*RPEs other than Civil must provide supporting documentation that qualifies them to supervise and perform this type of work.

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".

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

11. OUTSIDE KEY CONSULTANTS/ SUB-CONSULTANTS ANTICIPATED TO BE USED.		
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
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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. ***Note: *Personnel* refers to those who will be working directly on the project:

A. Are your firm's personnel experienced in Solid Waste Landfill Closure Design?

YES Description and Number of Projects:

Yes. KCI has designed closures, including earthwork, corrosion, and sediment control, gas and liquid management, and design of the cap "sandwich" for landfills. The design team has also participated in dozens of other designs for previous employers. This design team was recently awarded the Marion County Landfill Connection Project

NO

B. Are your firm's personnel experienced in Solid Waste landfill site characterization assessment and evaluation?

YES Description and Number of Projects:

Yes. KCI has designed/performed geotechnical and hydrological site characterization for four sites. The design team has also performed many other landfill site characterization assessments for previous employers.

NO

C. Are your firm's personnel experienced in landfill closure construction inspection?

YES Description and Number of Projects:

Yes. KCI has performed landfill closure construction inspection for Pisgah Landfill Closure in Charles County, MD. The design team has also performed landfill closure construction inspection for previous employers.

NO

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

YES Description and Number of Projects:

Yes. KCI has two contracts for annual aerial photogrammetry, contour mapping, and capacity analysis at active landfills. We have also performed aerial photogrammetry at several other landfill locations, and our survey department has used aerial photogrammetry to develop site plans for hundreds of sites.

NO

E. Are your firm's personnel experienced in evaluating ground water contamination, such as may be associated with landfills?

YES Description and Number of Projects:

Yes. The firm has evaluated groundwater containment plumes at four landfills and numerous service stations, Brownfields, and industrial sites. Jeff Gernand is a hydrogeologist with experience at more than 50 solid waste facilities.

NO

F. Are your firm's personnel experienced in Landfill Closure cost estimating?

YES Description and Number of Projects:

Yes. KCI has provided cost estimates for two rubble landfills at Aberdeen Proving Ground and estimates for a Brownfield redevelopment of the Bowley's Lane Landfill.

NO

13. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR LANDFILL CLOSURE DESIGN (describe project) (Furnish Complete data but keep to essentials)			
NAME & TITLE (Last, first, Middle Int.)	YEARS OR EXPERIENCE		
	YEARS OF (type) EXPEIRENCE:	YEARS OF (type) EXPEIRENCE:	YEARS OF (name type) EXPEIRENCE:
Sprehe, Thomas G.	28 years (environmental engineering)		
Brief Explanation of Responsibilities: <u>Managing and directing the operations of technical and professional staff in environmental engineering, water and wastewater, solid and hazardous waste, geotechnical engineering, and public utilities. Mr. Sprehe has been involved with design and regulatory issues at nearly 20 landfill sites, including half a dozen landfill closure plans. He is currently serving as a Principal-in-Charge of the Millennium Landfill Expansion (Quarantine Road) for the City of Baltimore, MD.</u>			
EDUCATION (DEGREE, YEAR, SPECIALIZATION) MS, 1984, Civil Engineering BS, 1980, Civil Engineering			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS: ASEC, Water Environment Federation, SWANA, American Waterworks Association		REGISTRATION (Type, Year, State) BCEE 2007 PE: MD, 1997; VA, 2001; DC, 2004; DE, 2006; PA, 2003; IN 2002	
13a. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR LANDFILL CLOSURE DESIGN (name type of design or work) (Furnish complete data but keep to essentials)			
NAME & TITLE (Last, First, Middle Int.)	YEARS OF EXPEIRENCE		
	YEARS OF EXPEIRCENE (name type):	YEARS OF EXPEIRENCE (name type):	YEARS OF EXPEIRENCE (name type):
Schulte, Raymond	35 years (environmental engineering)		
Brief Explanation of Responsibilities: <u>Design and management of environmental projects in the municipal water and wastewater field including studies, facilities plans, engineering design, preparation of construction plans and specifications, and construction-related engineering services for landfills and leachate management facilities, water systems (wells, treatment, pumping storage, transmission, and distribution systems), wastewater systems (collection, pumping, force mains, treatment, and disposal), sludge treatment and disposal, and solid waste management projects.</u>			
EDUCATION (Degree, Year, Specialization) MS, 1972, Sanitary Engineering BS, 1971, Civil Engineering			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS ASEC, Water Environment Federation, American Waterworks Association		REGISTRATION (Type, Year, State) BCEE 2007 PE: WV, 1984; MD, 1976; DC, 1996; VA, 1975; DE, 2004; MI, 2001	

13b. PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES RESPONSIBLE FOR LANDFILL CLOSURE QA/QC (Furnish complete data but keep to essentials)			
NAME & TITLE (last, first, middle Int.)	YEARS OF EXPERIENCE		
	YEARS OF EXPERIENCE (name type):	YEARS OF EXPERIENCE (name type):	YEARS OR EXPERIENCE (name type):
Perkins, Jeffrey	26 years (environmental engineering)		
Brief Explanation of Responsibilities: <u>Responsible for leading significant projects and programs as well as quality control and company-wide quality system management. Mr. Perkins has technical experience with industrial facilities, site development, water and waste water, environmental regulatory compliance, environmental remediation studies, solid waste facility, and landfill projects.</u>			
EDUCATION (Degree, Year, Specialization) BS, 1989, Civil Engineering			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS Water Environment Federation		REGISTRATION (Type, Year, State) PE: NY, 1996; PA, 1995	
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 EXPERIENCE (name type):	YEARS OF EXPERIENCE (name type):	YEARS OF EXPERIENCE (name type):
Blaney, Joseph	40+ years (construction and project management)		
Brief Explanation of Responsibilities <u>Managers teams of inspectors and construction managers responsible for oversight of municipal capital projects such as roads, bridges, drainage improvements, and utility construction. Experience providing construction management, construction inspection, office engineering, and project management services for building construction projects, utilities, and civil works construction.</u>			
EDUCATION (Degree, Year, Specialization) BS, 1968, Business Management			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS		REGISTRATION (Type, Year, State) NICET Level IV, 1989, MD	

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

Project:

KCI uses state-of-the-art three-dimensional MicroStation and AutoCAD Software for computer-aided drafting and design (CADD). KCI supports AutoCAD Releases 14, 16, 2000, 2002 and AutoCAD LT for Windows. KCI also uses Bentley MicroStation drafting and third-party design applications, including Siteworks, Fieldworks, Inroads, and Geopak

See attached listing at the end of this questionnaire for a complete list of software and equipment.

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 RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
Marion County Landfill Connection to the Town of Farmington Marion County, WV	West Virginia Department of Environmental Protection	Surveying, Design, and Construction Administration	\$282,169 (fee)	1%
Charles County Landfill No. 2, Design and Construction, Charles County, MD	Charles County Planning & Growth Management 200 Baltimore Ave PO Box 2150 LaPlata, MD 20646	Engineer-of-Record and Construction Management	\$4,137,000	98%
Millennium Landfill Cap and Overfill, Baltimore City, MD	Baltimore City Department of Public Works 417 East Fayette St Baltimore, MD 21202	Site Characterization and Permitting Design.	\$1,200,060 (For leachate facilities only from the existing industrial waste landfill. Cost of capping the industrial waste landfill and building the future piggyback MSW landfill has not yet been established.)	1%
TOTAL NUMBER OF PROJECTS:			TOTAL ESTIMATED CONSTRUCTION COSTS:	
# 3			\$8158050	

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

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
N/A					

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)
Charles County Landfill of Cell 3A Charles County, MD	Charles County Department of Public Works 200 Baltimore St PO Box 2150 LaPlata, MD 20646	\$347,000 (fee)	2008	YES
Millersville Landfill and Resource Recovery Facility/Glen Burnie Landfill Annual Reporting Anne Arundel County, MD	Anne Arundel County Department of Public Works 389 Burns Crossing Rd Severn, MD 21144	\$50,000 (fee)	2004	YES
Alpha Ridge Solid Waste Management Center/Transfer Station Howard County, MD	Howard County Department of Public Works 6751 Columbia Gateway Columbia, MD 21046	\$2,400,000	2003	YES
Northwest Transfer Station Rehabilitation Baltimore, MD	Baltimore City Department of Public Works 200 North Holiday Street Baltimore, MD 21202	\$2,200,000	2003	YES
Quarantine Road Landfill Air Space Review Baltimore, MD	Baltimore City Department of Public Works 200 North Holiday Street Baltimore, MD 21202	\$42,000 (fee)	2003	YES
St. Andrew's Landfill Area C – Design for New Lined Cells St. Mary's County, MD	St. Mary's County Department of Public Works State Route 4 California, MD 20619	\$296,000 (fee)	2006	YES
Harpers Ferry Site/Civil Harper's Ferry, WV	National Park Service Central Office 1100 Ohio Drive, SW Contracting Annex, Washington, DE, 20242	\$200,000	2006	YES

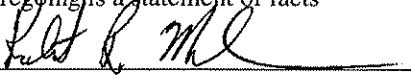
18. COMPLETED WORK WITHIN LAST 5 YEARS IN WHICH YOUR FIRM HAS BEEN A SUBCONSULTANT TO OTHER FIRMS (INDICATE PHASE OF WORK WHICH YOUR FIRM WAS RESPONSIBLE) LIST 5 TO 7.

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	ESTIMATED CONSTRUCTION COST OF YOUR FIRM'S PORTION	YEAR	CONSTRUCTED (YES OR NO)	FIRM ASSOCIATED WITH
WVU Downtown Student Housing, Site/Civil Morgantown, WV	West Virginia University 979 Rawley Lane Morgantown, WV 26506	\$250,000	2007	UNDER CONSTRUCTION	Paradigm Architecture
The View II, Site/Civil Morgantown, WV	The Phoenix Group 1117 University Ave Morgantown, WV 26505	\$50,000	2007	Yes	Paradigm Architecture
Morgantown Event Center and Parking Garage, Site/Civil Design-Build Morgantown, WV	The City of Morgantown 389 Spruce Street Morgantown, WV 26505	\$1,000,000	2008	UNDER CONSTRUCTION	Paradigm Architecture
New Northside Firestation, Site/Civil Morgantown, WV	The City of Morgantown 389 Spruce Street Morgantown, WV 26505	\$300,000	2007	YES	Bignell Watkins Hasser Architects
Westminster House, Site/Civil Morgantown, WV	Westminster House 456 Spruce Street Morgantown, WV 26505	\$12,000	2008	NO	Edward Tucker Architects
Premas Run Relief Sewer Steubenville, OH	City of Steubenville 302 Market Street Steubenville, OH 43952	\$20,000	2008	NO	Hirani Engineering
Ashokan Reservoir, Surveying (2 tasks) Catskills, NY	New York State Department of Environmental Conservation 625 Broadway Albany, NY 12233	\$12,000	2007	NO	Hirani Engineering

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.

Please find additional information in the following sections identifying qualifications and experience of key personnel and similar project experience. We look forward to continuing our relationship with the WV Department of Environmental Protection.

20. The foregoing is a statement of facts

Signature: 

Title: Division Chief, Senior Associate,
Morgantown Office

Printed

Name: Robert R. Milne, PE

Date: August 11, 2009

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: KCI Technologies, Inc.

Authorized Signature:  Date: August 11, 2009



Delaware
 Florida
 Georgia
 Indiana
 Maryland
 New York
 North Carolina
 Ohio
 Pennsylvania
 Tennessee
 Virginia
 West Virginia
 Washington, D.C.

CORPORATE LEADERSHIP

Board of Directors

Terry F. Neimeyer, PE, *Chairman*
 Jack Kinstlinger, PE, *Chairman Emeritus*
 Nathan J. Beil, PE, *Director*
 Jeffrey C. Lookup, PE, *Rotating Member*
 Darryl J. Kroeze, PE, *Rotating Member*

Samuel G. Brooks, *Employee Representative*
 William R. Snyder, *Outside Representative*
 Kenneth H. Trout, *Outside Representative*
 Patricia J. Mitchell, *Outside Representative*

Chief Executive Officer – Terry F. Neimeyer, PE

President – Nathan J. Beil, PE

Executive Vice President & Regional Manager – Christopher J. Griffith, PE, CCM (*Mid-Atlantic*)

Regional Manager – Jeffrey C. Lookup, PE, *Vice President (Northeast)*

Regional Manager – Darryl J. Kroeze, PE, *Senior Vice President (Southeast)*

Chief Financial Officer – Donald A. McConnell, CPA, *Vice President*

Chief Information Officer – Alan W. Mlinarchik, *Vice President*

Corporate Secretary – James H. Shumaker, *Vice President*

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 D. Scott Riddle, *Public Utilities*
 Charles S. Ruzicka, PLS, *Surveys*
 Franklin R. Snyder Jr., PE, LEED AP, *Mechanical/Electrical*
 Lane W. Swauger, PE, *Transportation*
 D. Dwight Walters, PE, *Newark Engineering*
 Douglas H. Warfel, PE, *Highway Design*
 Roger J. Windschitl, *Natural Resources*
 Timothy W. Wolfe, PE, BCEE, *Environmental*

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KCI Technologies is ranked among the top consulting engineering firms in the nation. Our employee owners serve public- and private-sector clients in the Northeast, Southeast and Mid-Atlantic. Visit us at www.kci.com.



SOFTWARE AND EQUIPMENT LIST

KCI has in-house computer systems and software to perform a multitude of the engineering, accounting and project management functions. In order to provide cost effective and innovative approaches to client services, we have invested in the best available computer technology. All computer systems are integrated into a data communications network that coordinates and controls the work performed in all of our offices. This network allows for the efficient sharing of all production and administrative information.

KCI, in its commitment to quality and expanding client services, utilizes the state-of-the-art three-dimensional MicroStation and AutoCAD Software for computer-aided drafting and design (CADD). CADD is a technical resource that provides analysis, design, and production support. KCI currently employs over 120 PC-based workstations for the production of drawings in the mechanical, electrical, structural, transportation, environmental, environmental planning, site planning, and surveying disciplines. Currently, KCI supports AutoCAD Releases 14, 16, 2000, 2002, and AutoCAD LT for Windows. AutoCAD is a full-featured CADD package useful in a variety of engineering disciplines. It has advanced 2D and 3D design, drafting, and modeling capabilities utilizing drawing and drawing management toolsets, and contains versatile editing options. AutoCAD also supports a powerful user customization feature with "AutoLISP," AutoCAD's built-in programming language, and the "AutoCAD Development System" (ADS), a C-language programming environment for developing AutoCAD applications. KCI also employs Bentley MicroStation drafting and third-party design applications, including Siteworks, Fieldworks, Inroads, and Geopak.

Hardware - Currently, KCI has the following computer hardware in support of environmental and engineering projects:

- 12 Network Servers (including back-up, intranet, e-mail, FTP, file restoration, and software distribution)
- 2 Network Appliance Filer 720/820 Network Attached Storage providing approx. 1.2 TB of production storage
- 1 Optical Storage Array for archival storage
- 600 Pentium III and IV Workstations
- Full reprographics services provided by ABC imaging within KCI's office: 14 Printers (HP5000N, HP4100, HPLJ1012); 9 copiers (Xerox WC35; Xerox WCP55); 2 color printers (Xerox 770GX and 7750).
- 43 Laptop Computers
- 5 Wide Format Plotters (OceTDS600 black & white, and HP1055 color)
- 21 CD Readers/Writers
- 8 Digital Cameras
- 6 Scanners

Software - The list below is a sampling of software available:

- Desktop Operating Systems
 - Microsoft Windows XP (KCI standard), 2000, 98
- Microsoft Office XP Professional
 - Word, Excel, PowerPoint, Access, Outlook, Publisher, Project
- Computer Aided Design
 - Auto CAD LT 2002 & 98
 - MicroStation V8 & V7
- Groundwater
 - Traffic Analysis AQTESOLV – Aquifer Test Analysis
 - Visual MODFLOW – Groundwater Flow Modeling
 - HELP 3.0 – Landfill Performance Modeling
- Hydrology and Hydraulic Modeling
 - BRGWW - Hydraulics of Bridge Waterways
 - DYNLET - Water Surface Profile Model
 - FESWMS-2DH - Finite Element Surface Water Modeling System
 - FM PROFESS - FLOWMASTER Professional
 - GIS-HYDRO - GIS Hydrology
 - HEC-2 - Water Surface Profiles
 - HEC-RAS



- HYDRO - Hydrology Analysis
- HGA - Hydraulic Gradient Analysis
- HYCHL - Roadside Channels
- HYCLV - Culvert Analysis and Design
- HYDRA - Storm Drain and Sanitary Sewer Analysis/Design
- HYDNET - Hydraulic System Analysis
- HYDRAIN - Integrated Drainage Design
- HYDRO - Hydrology Analysis
- HY8 - Hydraulic Analysis of Culverts
- HY9 - Scour at Bridges
- POND2 - Detention Pond Design and Analysis
- PROHEC2 - Storm Channel Analysis
- QTR55 - Urban Hydrology for Small Watersheds
- RISERCAL - Riser Calculations
- SWALE - Swale Calculations
- SWMM - Stormwater Management Model
- TR20 - Watershed Hydrologic Analysis
- TR55 - Urban Hydrology for Small Watersheds
- XP-SWMM



PROJECT TEAM

KCI Technologies, Inc. is pleased to present our qualifications for your review. In formulating our team for this proposed project, KCI has brought together a group of individuals with proven experience and accomplishments in the required technical disciplines. KCI's history demonstrates industry leadership in the application of advanced technology to the wide variety of projects successfully completed by the firm.

Introduction to KCI Technologies, Inc.

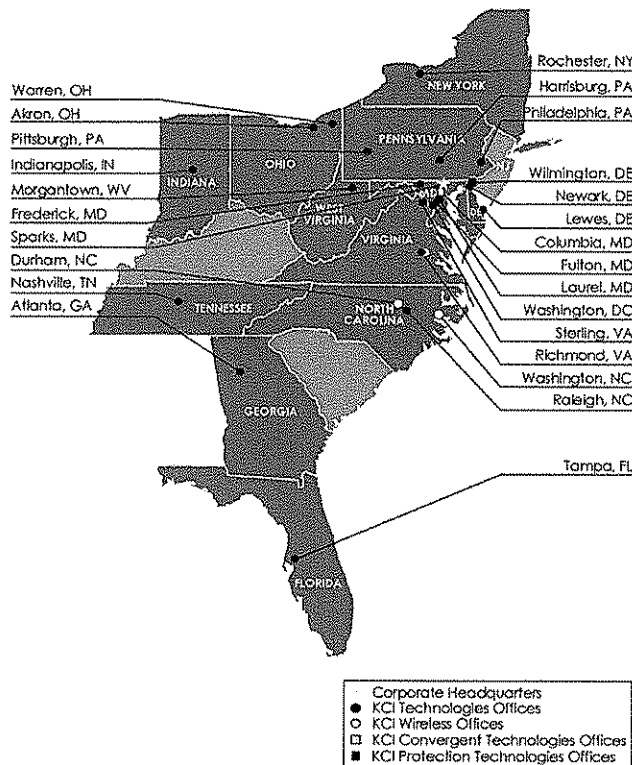
Early Corporate History – KCI Technologies, Inc. traces its corporate history to a Baltimore firm founded in 1955. In the early-1970s, the firm--- along with a number of other privately held engineering companies-joined Kidde, Inc., and became known in 1978 as Kidde Consultants, Inc. During the 1980s, Kidde Consultants opened additional offices in Maryland, Delaware, Virginia, and Pennsylvania.

Employee Ownership – In August 1987, Hanson Trust PLC of Great Britain, a manufacturing company with diversified holdings worldwide, purchased Kidde, the parent company. Soon thereafter, KCI initiated an employee buyout from Hanson, which was completed in December 1988. KCI became Maryland's largest employee-owned company. In 1991, the official name was changed to KCI Technologies, Inc. In 2008, the corporate headquarters was moved to its present location in Sparks, MD.

Continued Growth – With revenues of approximately \$142 million in 2008, the *Engineering News-Record* has consistently placed KCI among the top consulting engineering firms in the country. Today our roughly 950 employee owners operate out of 25 offices in 12 states – Delaware, Florida, Georgia, Indiana, Maryland, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia and West Virginia – and the District of Columbia.

Technical Expertise – With a professional staff of engineers, planners, scientists, surveyors, and construction managers, we offer a broad range of engineering services, including civil, structural, transportation, environmental, hazardous waste, mechanical, electrical, telecommunications, and soils. But engineering is not all we do. We also provide cultural and environmental resource management services, land planning and landscape architecture, geology, hydrology, ecology, surveying, and construction management and inspection. All of our service lines are supported by a team of CADD operators, GIS specialists, database and Web programmers, and other computer-savvy professionals working on state-of-the-art equipment.

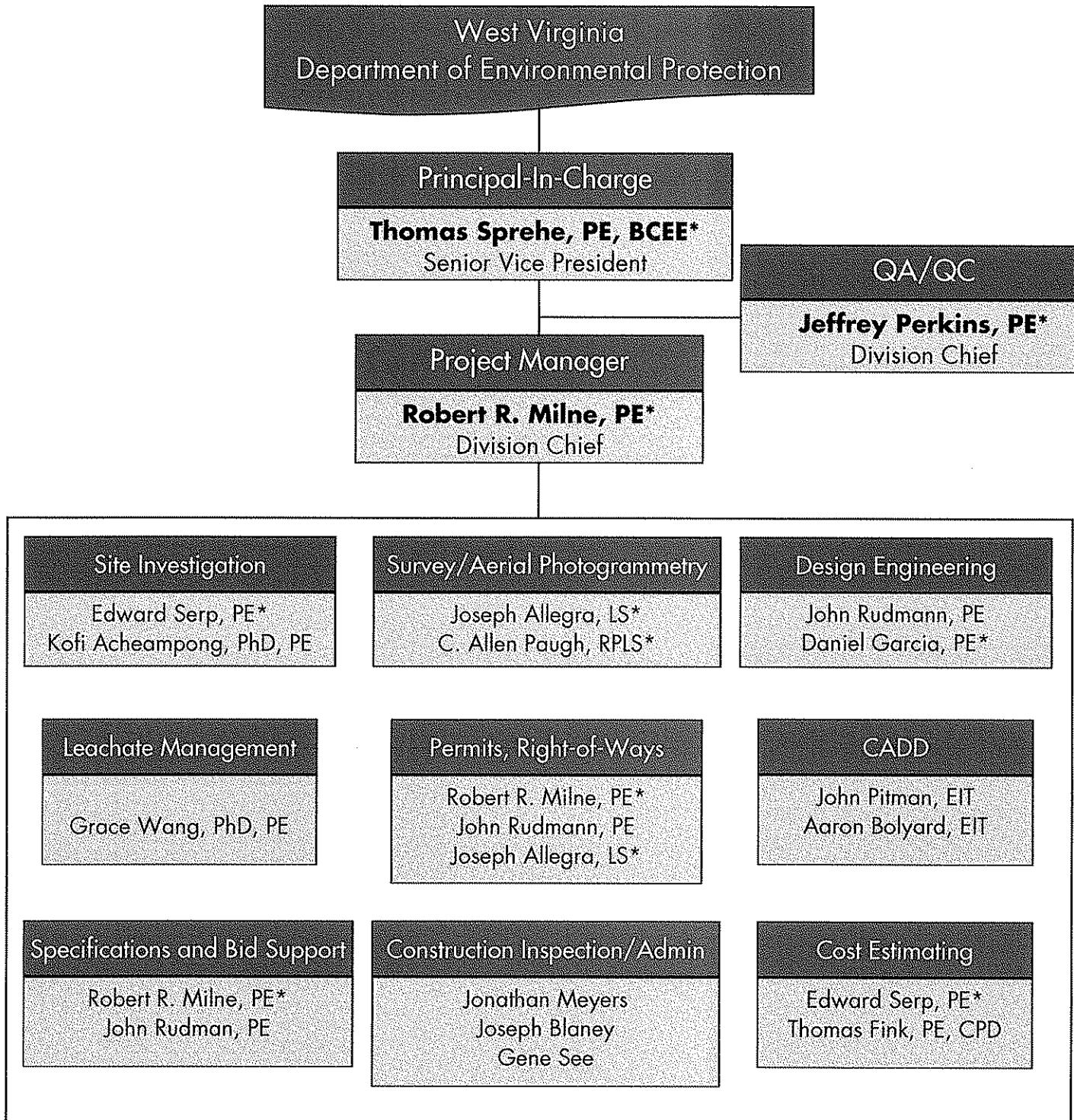
At KCI, we believe that our broad technical expertise, combined with our unique commitment as employee owners, has enabled us to emerge as industry leaders whose customers can count on excellent service time and again.





Organization Chart

The key staff for this project was selected for specific roles based on knowledge and past experience. An organizational chart illustrating our proposed team is presented below. Detailed resumes containing experience and qualifications of key personnel are provided on the following pages.



*Resumes Included



Thomas G. Sprehe, PE, BCEE

Principal-in-Charge

Education:

MS/ 1984/ Civil Engineering/ University of Oklahoma
BS/ 1980/ Civil Engineering/ University of Oklahoma

Registration:

2007/ BCEE
1987/ PE/ MD/ 15909
2001/ PE/ VA/ 0402-036577
2004/ PE/ DC/ PE901120
2006/ PE/ DE/ 14751
2003/ PE/ PA/ PE062745
2002/ PE/ IN/ PE10201284
1986/ PE/ FL/ 36906

Years Experience: 26

Years with KCI: 10

Experience:

Mr. Sprehe is a Senior Vice President and manages KCI's Environmental Engineering Group. He has 26 years of professional experience in civil, environmental and water resources engineering, in both the public and private sectors. His current responsibility includes managing and directing the operations of technical and professional staff in environmental engineering, water and wastewater, solid and hazardous waste, geotechnical engineering, and public utilities. Relevant project experience includes:

Charles County Sanitary Landfill - Design of Cell 3A, Charles County Department of Public Works, MD. *Principal-in-Charge.* KCI is currently completing design and preparation of plans and specifications of Cell 3A of the Charles County Landfill No. 2. The design includes leachate recharge/landfill gas venting wells for existing Cell 2A and for Cell 3A, and landfill gas flares.

Garrett County Landfill, Oakland, MD, Garrett County Commissioners. *Project Manager.* Managed design, permitting, bidding, financing, and construction of the new Garrett County Landfill. Designed and installed monitoring wells prior to construction. Responsible for overall project including site civil engineering, inspection, and testing. Certain portions of the design were subcontracted.

Resh Road II Landfill, Washington County, MD, Department of Public Works. *Project Principal.* This project included the design and construction services for Cell N1, N2 and N3, preliminary design services for Cell 6, design and construction services for Cell 4, design and construction services for sediment control facilities at the North Section, design and construction services for Cell N-1 at the North Section and design of Cells N-2 and N-3 at the North Section.

Aerial Photographic & Photogrammetric Surveys for Millersville Landfill and Resource Recovery Facility, Glen Burnie Landfill and Sudley Landfill, Annual Reporting, Anne Arundel County Department of Public Works. *QA/QC Officer.* Anne Arundel County, Department of Public Works, hired KCI to provide aerial photographic services, photogrammetric surveys, and infrared photography to perform evaluations and fulfill regulatory requirements for three landfills. The evaluations and services required include differential settlement analyses, wet area delineation, mapping, volume analyses and report preparation for the three landfills.

Gravel Hill Road Rubble Landfill, Harford County, MD, Maryland Reclamation Associates. *Environmental Engineer.* KCI provided expert witness testimony in a zoning case seeking approval of variances to lot size and setback requirements applicable to a rubble land fill. Areas of expertise included engineering, land use, archeological and historic resources and environmental effects.



JEFFREY PERKINS, PE
Division Chief E-VIII, Senior Associate, QA/QC

Education:

BS / 1989 / Civil Engineering / Rochester Institute of Technology

Registration:

PE / NY / 073981-1 / 1996
PE / PA / PE047972E / 1995

Years Experience: 26

Years with KCI: 2

Experience:

Mr. Perkins has over 20 years consulting engineering experience in a wide variety of areas. He is a strong manager who has lead significant projects and programs as well as quality control and company-wide quality system management. Mr. Perkins has technical experience with industrial facilities, site development, water and waste water, environmental regulatory compliance, environmental remediation studies, and solid waste facility projects. Mr. Perkins current role at KCI is the Northeast Region Civil / Environmental Division Chief who has overall responsibility of related technical production and customer satisfaction on civil and environmental engineering projects within the northeast.

With other firms

CECOS Hazardous Material Landfill. Niagara Falls, NY. QA/QC Officer. For this project, Mr. Perkins reviewed plans and construction activities for CECOS on an extensive design/construction project to cap an existing hazardous waste landfill. Specific responsibilities included compiling and reviewing field inspection reports, reviewing material submittals, calculating and checking installed material quantities and payment requisitions, compiling material testing results and directing the preparation of record/as-built drawings. The NYSDEC Construction Quality Assurance / Quality Control Plan was followed for this project.

Turner Construction and Demolition Debris Landfill. Victor, NY. Environmental Engineer. Mr. Perkins was the Environmental Engineer for the design and preparation of a permit application for the construction and demolition debris landfill for Turner Development. Responsibilities included explosive gas survey, final cover system design, final site grading, and drainage design. The project also included the development of a QA/QC plan, an Erosion/Sedimentation Control plan, and financial assurance plans.

GREEN LAKES STATE PARK LANDFILL CLOSURE. ONONDAGA COUNTY, NY. Environmental Engineer. Mr. Perkins was the Environmental Engineer for the closure of two sanitary landfills owned by the New York State Parks Department. He investigated several components for the design of a capping system according to 6NYCRR Part 360 guidelines. Responsibilities included waste characterization and waste limit investigations, explosive gas survey, groundwater sampling, design options for final cover systems, and siting for a new facility.

ONTARIO LANDFILL CLOSURE. ONTARIO, NY. Design Engineer. Mr. Perkins was the Design Engineer for the design of a landfill capping system. He performed engineering field investigations of existing cover material for the final cover system design. Base plans showing limits of existing waste, locations of monitoring wells and existing topography were also reviewed. Investigations were conducted and reviewed to evaluate explosive gas monitoring.

SENECA MEADOWS SANITARY LANDFILL VERTICAL EXPANSION. WATERLOO, NY. Environmental Engineer. Mr. Perkins was the Environmental Engineer for design and construction of a vertical expansion at Seneca Meadows Sanitary Landfill in Western New York. Responsibilities included oversight and implementation of a QA/QC program, compilation and interpretation of survey and laboratory data, and preparation of construction compliance reports for submittal to the NYSDEC. Other duties included providing direction to the contractors, calculating installed material quantities, reviewing and approving material and equipment submittals, and directing the preparation of record/as-built drawings to document completed construction.



ROBERT R. MILNE, PE
Division Chief E-VIII, Senior Associate

Education:

BS / 1990 / Civil Engineering / West Virginia University
MS / 1999 / Civil Engineering / West Virginia University

Registration:

PE / PE / WV / 014177
PE / PE / PA / PE061465

Years Experience: 18

Years with KCI: 6

Experience:

Mr. Milne is the Division Chief in KCI's Morgantown, West Virginia office where this contract will reside. He is responsible for the offices' daily operation, supervision of staff, and management of large projects. Mr. Milne is also experienced in civil/site design, utilities and buildings as well as roadway and storm sewer design; highways, bridges, traffic studies; construction administration and inspection. His experience includes:

Design and QA/QC Services for Landfill Leachate Lines. Marion County, WV. Project Manager. KCI was recently selected by the West Virginia Department of Environmental Protection (WVDEP) to provide engineering services to include surveying & mapping; design engineering; preparation of construction contract drawings and specifications suitable for letting construction Bids; and quality control/quality assurance following design approval, Bid processing, and during installation; assistance with all applicable permits, rights-of-way & easements, and approvals for the Marion County Landfill connection to the Town of Farmington, WV WWTP.

New Northside Fire Station. Morgantown, WV. Project Manager. KCI is a sub-consultant to Bignell Watkins Hasser for the proposed North Side Fire Station for the City of Morgantown. This project is currently in the conceptual design phase. KCI is responsible for overall site design, access roads, utility lines, sidewalks, drainage, storm water retention, grading plans, erosion and sedimentation control plans, and all the site/civil permitting.

WVU Downtown Student Housing Project. Morgantown, WV. Division Chief/Senior Site/Civil Engineer KCI is a sub-consultant to Paradigm Architecture for the proposed Downtown Student Housing Project. This project is currently under construction. KCI is responsible for overall site design, access roads, courtyard, utility lines, sidewalks, drainage, storm water retention, grading plans, erosion and sedimentation control plans, and all the site/civil permitting.

Survey Services Open End. Fairmont, WV. Project Manager. KCI was awarded an open end contract to provide land surveying services to the FCDP for various locations throughout Fairmont, WV.

Harpers Ferry National Park Historic Train Station. Harpers Ferry, WV. Project Manager. KCI was subcontracted to a national design/build contractor to provide electrical, site/civil, and structural engineering support services for this Historical Renovation project. KCI was responsible for designing a 92 space parking lot, sidewalks and lighting at the Historic Harpers Ferry Train Station. In order to meet the deadlines of our client this project was placed on a fast track schedule. The preliminary and final design of the parking lot was completed in less than a month.

A/E Support Services Multiple Award Task Order Contracts, Various Locations, Federal Bureau of Prisons. Alderson Federal Prison Camp, Alderson, WV. Task Manager. As a subconsultant KCI supported Smolen Emr Architects on this project. Mr. Milne served as Project/Task Manager for Alderson FPC Multi-Purpose Building. Lead civil engineer for site design; design of parking lots, roadway improvements, utility lines, sidewalks, drainage, stormwater retention, grading plans, E&S, preliminary construction cost estimates.



EDWARD A. SERP, III, PE

Senior Environmental Engineer

Education:

MS/ 1973/ Civil Engineering/ University of Maryland
BS/ 1959/ Civil Engineering/ Johns Hopkins University

Registration:

1971/ PE/ WV/ 5950
1965/ PE/ MD/ 4728
1971/ PE/ DE/ 4200
1972/ PE/ DC/ 6430
1972/ PE/ VA/ 5926

Years Experience: 47

Years with KCI: 9

Experience:

Mr. Serp has more than 47 years of experience, and has been responsible for determining design criteria, evaluating alternatives, facility planning, and preparing contract documents for numerous public and private landfill and related solid waste management facilities. He has evaluated landfill gas migration; designed landfill gas control and monitoring systems, as well as evaluating different landfill capping alternatives. Specific projects include:

Westwood Rubble Landfill Closure Plan. Aberdeen Proving Ground, MD. *Project Manager.* The Westwood Rubble Landfill encompasses approximately 25.4 acres and is located in the Edgewood Arsenal area of the Aberdeen Proving Ground, Edgewood, MD. The unlined landfill was operated in accordance with a Maryland Department of the Environment solid waste disposal permit, which mandated closure by June 30, 2001 in accordance with Federal regulations. Westwood substantially reached permitted design capacity. The existing landfill area is substantially within the permitted footprint; however, there are areas, which have been filled to the design finished grade elevation. Negotiations with MDE resulted in acceptance of a slight overfilling to accommodate the cap thickness and also to accept a less than 4% top cross slope to avoid waste disturbance in preparation for cap placement.

Phillips Army Airfield Rubble Landfill Closure Plan - Phase I and II. APG, Edgewood, MD. *Project Manager.* The Phillips Army Airfield Rubble Landfill encompassed approximately 17 acres of which 5 acres (Phase I) had been inactive for over ten years and approximately 12 acres (Phase II) was in active use with closure scheduled for June 30, 2001.

Charles County Landfill No. 2- Constructability Reviews - Cell 2A Redesign. La Plata, MD. *Staff Team.* Constructability review of contract documents, design plans, and specifications for the Cell 2A design. Provided comments to the County. KCI provided technical review of Contract Documents for the construction of Cell No. 2A of Charles County Landfill No. 2 on behalf of the Department of Planning and Growth Management. Reviews were performed at four stages of contract document development including bid ready documents over a nine month period. Written comments were submitted to Development and Capital Services for each submittal. KCI participated in meetings including conference calls for each submittal. In addition, meetings were held with the County's consultant to discuss KCI comments and County's consultant's responses.

Tire Chip Pilot Study - Garrett County Sanitary Landfill. Garrett County, MD. *Environmental Engineer.* KCI prepared field verification testing plans, instrumentation and monitoring plans and performed laboratory testing of the tire chips. The laboratory testing consisted of performing compression and permeability tests to estimate the amount of compression to expect under the weight of the waste material and the permeability of the tire chips under differing loads. In addition, laboratory tests to verify compliance with the specifications were performed.



JOSEPH H. ALLEGRA, LS

Regional Practice Leader - Surveys

Education:

Coursework / 1991 / Mathematics / Computer Science / American River College

Coursework / 1993 / Survey Technology / Catonsville Community College

BA / 1986 / History / Mathematics / Saint Vincent College

Registration:

LS / LS / DC / LS901866

LS / PLS / VA / 2262

PLS / PLS / PA / SU-054345-E

Years Experience: 25

Years with KCI: 1

Experience:

Mr. Allegra is the Regional Practice Leader-Surveys with KCI Site Engineering Division. Mr. Allegra has 25 years of experience nationally and internationally in Survey Construction, Survey Engineering, GPS Sales and Technical support/training as related to the fields of Surveying and Mapping. The last 15 years have been dedicated to implementing, managing, marketing, training and selling Global Positioning System and 3D Laser Scanning solutions to cross-market national and international clients. Mr. Allegra is proficient in both the use and integration of numerous engineering and surveying hardware and software systems. Relevant project experience includes:

Survey, GPS and Photo Positioning Services. , NY. Surveyor. Mr. Allegra is the Project Manager for this project. KCI has provided survey and photo positioning services at the NY Catskills. KCI also provided GPS services at Wantaugh State Park.

Survey Services Open End. Fairmont, WV. Surveyor. Mr. Allegra is providing surveying services for this project. KCI was awarded an open end contract to provide land surveying services to the FCDP for various locations throughout Fairmont, WV.

New Northside Fire Station. Morgantown, WV. Surveyor. KCI is a sub-consultant to Bignell Watkins Hasser for the proposed North Side Fire Station for the City of Morgantown. This project is currently advertised for construction. KCI performed the topographic and boundary survey for the project.

WVU Downtown Student Housing Project. Morgantown, WV. Surveyor. KCI is a sub-consultant to Paradigm Architecture for the proposed Downtown Student Housing Project. This project is currently under construction. KCI performed the topographic and boundary survey for the project.

Connastone, BGE. Baltimore County, MD. Staff Team. KCI was contracted by Baltimore Gas and Electric to provide surveys on a substation located in Baltimore County. KCI utilized 3D Laser Scanning technology in order to accurately locate and depict existing concrete pedestals and overhead electrical components. The use of 3D Laser Scanning technology allowed for the survey crews to safely locate the electrical components with a high level of accuracy.

With other firms:

State Highway Administration, Helicopter and Fixed Wing Aerial Photogrammetric Surveys Throughout Maryland, BCS 2000-03A. MDSHA. GPS Survey Manager for aerial photogrammetric mapping of 27 projects utilizing helicopters for low altitude mapping and fixed wing methods. Supervision of field crews and office personnel in providing horizontal and vertical control using conventional and GPS methods.



C. ALLEN PAUGH, RPLS

Associate

Education:

AA / 1982 / Surveying Technology / Catonsville Community College
AA / 1979 / General Studies / Essex Community College

Registration:

RPLS / RPLS / MD / 475
LS / LS / WV / 917

Years Experience: 30

Years with KCI: 21

Experience:

Mr. Paugh is Chief of Surveys with KCI's Site Engineering and Surveys Group in Laurel, MD. He organizes and coordinates the work of personnel engaged in surveying, checks the accuracy of the work, and estimates field survey costs. Mr. Paugh is skilled in the preparation of large topographic and boundary surveys, and computations for GPS surveys. Relevant project experience includes:

George Washington Memorial Parkway Columbia Island Bridge Project. Arlington, VA. Surveyor. Established horizontal and vertical control for aerial surveys, and supplemental topographic surveys, and hydraulic data including a bathymetric survey of the existing Boundary Channel using GPS. KCI is preparing design and construction documents for a new 375' long, five-span, prestressed concrete beam bridge over Boundary Channel in Arlington County, Virginia and the District of Columbia.

Digital Orthophotography and Updates to GIS Base Map, Project No. 831. Baltimore City, MD. Party Chief. This \$2,606,382 project involved producing 0.25' resolution digital orthophoto imagery, 1"=40' planimetric and topographic data, and updating the City's Cadastral GIS.

Aerial Photographic & Photogrammetric Surveys for Millersville Landfill and Resource Recovery Facility, Glen Burnie Landfill and Sudley Landfill, Annual Reporting. Anne Arundel County, MD. Staff Team. Anne Arundel County, Department of Public Works, hired KCI to provide aerial photographic services, photogrammetric surveys, and infrared photography to perform evaluations and fulfill regulatory requirements for three landfills. The evaluations and services required include differential settlement analyses, wet area delineation, mapping, volume analyses and report preparation for the three landfills.

Comprehensive Project Planning and Traffic Engineering Services Open-End Contract. Statewide, MD. Party Chief. Under an open-end, on-going contract for the MdTA, Mr. Paugh provided surveys for an aerial mapping subconsultant to develop digital topographic mapping of the bridges and approaches roadways for the Bay and Nice Bridges. He prepared and set photogrammetric targets on the bridges and roadways using GPS to NMAPS standards. KCI provided comprehensive project planning and traffic engineering services for major highway facilities maintained by MdTA under this \$1 million open-end contract.

Survey Services Open End. Fairmont, WV. Quality Assurance/Quality Control. KCI was awarded an open end contract to provide land surveying services to the FCDP for various locations throughout Fairmont, WV.

WVU Downtown Student Housing Project. Morgantown, WV. Party Chief. KCI is a sub-consultant to Paradigm Architecture for the proposed Downtown Student Housing Project. This project is currently under construction. KCI performed the topographic and boundary survey for the project.



DANIEL R. GARCIA, P.E.

Senior Designer E-IV

Education:

BS / 1990 / Civil Engineering / West Virginia University

Registration:

PE / WV / 17912 / 2008

PE / OH / 677110

PE / MO / 2007000010

Years Experience: 17

Years with KCI: Less than one

Experience:

Mr. Garcia is a Senior Designer in KCI's Morgantown, West Virginia office, who is responsible for design of municipal projects, including water, sewer, stormwater, and other environmental services. Past experience includes engineering and management of municipal and industrial solid waste landfills, closed pre-BAT landfills, and wastewater for a wide range of clients. Prior solid waste experience includes the following:

Design and QA/QC Services for Landfill Leachate Lines. Marion County, WV. Project Engineer. KCI was recently selected by the West Virginia Department of Environmental Protection (WVDEP) to provide engineering services to include surveying & mapping; design engineering; preparation of construction contract drawings and specifications suitable for letting construction Bids; and quality control/quality assurance following design approval, Bid processing, and during installation; assistance with all applicable permits, rights-of-way & easements, and approvals for the Marion County Landfill connection to the Town of Farmington, WV WWTP.

With other firms:

ELDA Municipal Solid Waste Landfill, Waste Management Incorporated. Cincinnati, OH. District Engineer. Reviewed and helped develop proposed lateral expansion and execution of closure plan. Monitored and inspected construction of closure activities. Provided routine monitoring of post-closure activities.

Center Hill Landfill, City of Cincinnati, OH. District Engineer. Reviewed and helped develop gas management system, Mill Creek Embankment improvements, proposed phytoremediation project, proposed radio tower installation.

Rumpke Sanitary Landfill, Rumpke Consolidated Companies, Cincinnati, OH. District Engineer. Reviewed and helped develop several expansions, permit alterations, stormwater projects, gas management system improvements. Served as part of response team to major landslide and worked on slope remediation team. Monitored and inspected construction of landfill cells, intermediate slopes, gas management, leachate management, and stormwater management. Coordinated engineering, construction, and operating activities.

Preble County Landfill, Preble County, Eaton, OH. District Engineer. Reviewed and helped develop landfill expansion. Evaluated alternate drainage media using scrap tires. Inspected and monitored construction of landfill cells and leachate management.

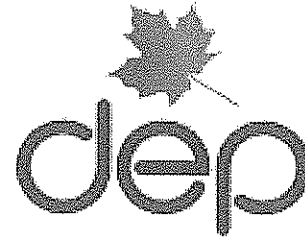
Rumpke (Brown County) Sanitary Landfill, Rumpke Consolidated Companies, Georgetown, OH. District Engineer. Reviewed and helped develop several expansions, permit alterations, stormwater projects, gas management system improvements. Monitored and inspected construction of landfill cells, intermediate and final slopes, gas management, leachate management, and stormwater management. Coordinated engineering, construction, and operational activities.



PROJECT EXPERINECE

Leachate Line Design, Layout, and Installation QA/QC Control Marion Co. Landfill Connection to the Town of Farmington WWTP

KCI was recently selected by the West Virginia Department of Environmental Protection (WVDEP) to provide engineering services to include surveying & mapping; design engineering; preparation of construction contract drawings and specifications suitable for letting construction Bids; and quality control/quality assurance following design approval, Bid processing, and during installation; assistance with all applicable permits, rights-of-way & easements, and approvals for the Marion County Landfill connection to the Town of Farmington, WV WWTP. Work is scheduled to begin in early March, 2009.



The West Virginia Department of Environmental Protection (WVDEP), is in the process of providing the ultimate closure of the Marion County Landfill, it has been determined that a transmission line is necessary to send leachate to the Town of Farmington's Wastewater Treatment Plant for treatment and disposal. Currently, the Landfill has no permanent leachate management, but the current configuration does involve extraction of leachate from within the limits of waste into three lagoons. KCI will provide the engineering services necessary for establishing the connection between the Landfill leachate ponds and the town's Treatment Plant. This project will include the evaluation of alternative alignments and connections through a preliminary engineering report, a preliminary design, a final design and contract documents, bid support, and contract management.

Millersville Landfill and Resource Recovery Facility and Glen Burnie Landfill Annual Reporting, Anne Arundel County, MD

Anne Arundel County Department of Public Works hired KCI to provide aerial photographic services, photogrammetric surveys, and infrared photography to perform evaluations and fulfill regulatory requirements for two landfills in Anne Arundel County. These include the Glen Burnie Sanitary Landfill (GBLF) and the Millersville Sanitary Landfill and Resource Recovery Facility (MLFRRF). The evaluations and services required include differential settlement analyses, wet area delineation, mapping, volume analyses and report preparation.

KCI developed three reports for the MLFRRF: an Annual Report describing solid waste operations for submittal to MDE, an extended Annual Report describing solid waste operations for the County, and a Settlement Letter Report describing any settling that had occurred at the facility since 1998 and 2003.

The first report contained the quantity of solid waste received each month during each of the preceding 12 months, percentage of total capacity of the landfill used for emplacement of solid waste, projected date the landfill will reach capacity, and the premises upon which this determination is made. It contained a current topographic map to accurately depict fill areas and the amount of precipitation at the facility based on local climatolical data. The report also contained the following:



- Solid waste records from the County for 2003
- A three-dimensional digital terrain model (DTM) based on the aerial mapping used to complete calculations for values required in the Annual Report.
- Calculations based on DTMS for:
 - The volume of material added to Cell 8 since February 2003.
 - Tons of waste added to Cell 8 since February 2003.
 - The total volume of waste contained in Cell 8.
 - The percentage of Cell 8 air space consumed since February 2003.
 - The total volume of waste in Cell 8.
 - The total airspace consumed and remaining in Cell 8.
 - The in-place waste density for Cell 8 since February 2003.
 - The cover to waste ratios for Cell 8 since February 2003.
- The projected lifespan of Cells 8 and 9 was calculated based on current remaining air space in the landfill and projected annual waste volumes.

The County also requested a second Annual report that contained everything in the first plus the following information since February 2003.

- A discussion of Cell 8 usage including:
 - Waste stream data
 - Total cover use (soil and mulch)
 - Airspace consumption
 - Filled volume
 - In-place waste density
 - As-built vs. design slope comparisons for various sub-cells
 - Lifespan calculations
 - Cover availability
- Tabulations of cover type and quantity used.
- Landfill cross sections.
- Airspace Computations.
- Volume Analysis Computations.
- Density and Cover to Waste Ratio Computations.
- Municipal Solid Waste Volume Computations.
- Volume Analyses for Cells 8 and 9.
- Computations for Lifetime Averages of In-Place Waste Density, Cover to Waste Ratios, and Airspace.
- Airspace Volumes Consumed in Cells 8 & 9.
- Life Span Calculations for Various rates of waste disposal.
- Sequence of Operations plan.

In addition, KCI prepared a letter report discussing settlement in several areas of the landfill including Cells 1 East, 2 and 4 combined, Cells 5, 6, and 7 combined, and Cell 8. The settlement report summarized settlement in each area between January 1998 and 2004, and between February 2003 and 2004. The amount of settlement was determined by comparing DTM surface changes between years.

For the Glen Burnie Landfill, KCI developed a Settlement and Wet Area Letter Report. This report described any settling that occurred between January 2001 and January 2004. It also discussed wet areas at the facility that may indicate ponding, sump areas or leachate seeps.

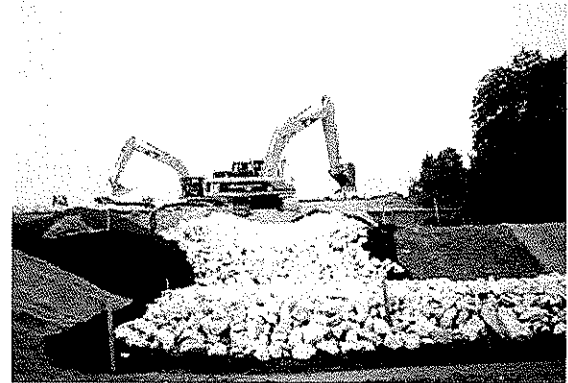


KCI developed a three-dimensional digital terrain model (DTM) based on the aerial mapping created for GBLF. The County provided KCI with the January 2001 DTM for the facility. The amount of settlement was determined by comparing DTM surface changes between years. KCI's wetland scientists evaluated the infrared photograph of the GBLF, noting areas that appeared to contain moisture. KCI prepared a map to show locations of wet areas on the site.

Glen Burnie Landfill Closure, Anne Arundel County, MD

KCI provided oversight for a design constructability review, construction management services, inspection services, materials testing and site health and safety plan implementation of a 120-acre unlined mixed solid waste disposal site, formerly classified as a Superfund site.

This project included construction of temporary and permanent sedimentation controls and storm water management facilities, regrading the landfill site to improve storm water drainage from the site, permanent stabilization of all disturbed areas, and construction of landfill gas management and leachate management systems.



Construction complications included wetlands, the adjacent Furnace Creek, and Chesapeake Bay Critical Area constraints. Other project challenges included citizen involvement due to site visibility, continuous monitoring of grading operations in case of leachate seeps, and coordination of leachate management.



KCI's constructability review involved ensuring that the design met the project goals; assessing the completeness and consistency of the design documents; identifying discrepancies, variances, inconsistencies and ambiguities between the plans and the specifications; analyzing staging and construction sequencing logic and determining the adequacy of the proposed contract duration and schedule.

The project involved management of leachate, solid waste and gas encountered on-site, as a preemptive measure to prevent negative community relations.

Construction activities were regulated and coordinated with several county grading and sediment and erosion control permits, Maryland SHA permit, MDE air and waste management permits, Corp of Engineers wetland permit, and State wetland permits.



Charles County Landfill No. 2 - Design of Cell 3A, Charles County, MD

KCI completed design and preparation of plans and specifications of Cell 3A of the Charles County Landfill No. 2. The design includes leachate recharge/landfill gas venting wells for existing Cell 2A and for Cell 3A, and landfill gas flares. Supplemental tasks performed by KCI included topographic surveys, geotechnical engineering investigations and report; earthwork and landfill life calculations and report; landfill gas modeling and landfill gas management report; consultation regarding landfill gas Title 5 permitting; leachate modeling and report. KCI provided construction phase engineering and resident construction inspection and construction contract administration services.



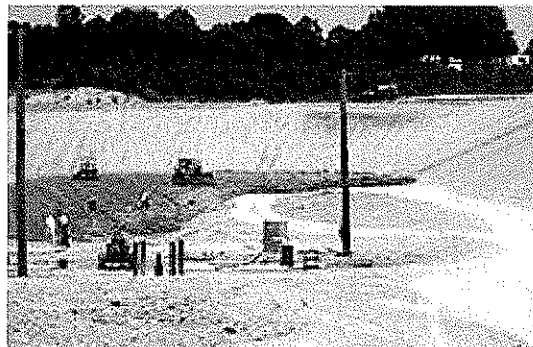
Resh Road Landfill Cell Designs, Washington County, MD

Washington County selected KCI to develop Maryland Department of Environment Phase III Solid Waste Permit Documents, final design and operations plan for the extension of Cells 2, 3 and 6 at the Resh Road Landfill. Under existing Refuse Disposal Permit, Cells 2 & 3 were proposed to be constructed as separate cells. KCI's task was to combine the cells and perform construction phase drawings for these cells. Knowing Washington County's lack of land filling space, KCI proposed to consider a valley between existing completed cells. This area for land filling was called Cell 6 and KCI was contracted to perform a feasibility study and preliminary design for Cell 6. In order to perform fast track services Cell N3 construction phase documents were provided first.



During the construction period, several problems were encountered. A geotechnical study for the area which determines geological site conditions, such as soil parameters, elevations of rock and ground water, were performed at the MDE Phase II design phase in 1992. During the construction excavation it was determined that the ground water level had risen since that time, therefore KCI designed a subsurface drainage system to convey the ground water to the existing ditch.

The selected liner system consists of 2' of clay (permeability 1×10^{-7} cm/sec); 60 mil HDPE primary liner; geosynthetic clay liner (GCL); and 40 mil LLDPE liner. A double layer drainage net is placed on the floor of the liner system for each cell, while a single-layer drainage net was proposed for the side slopes. A 12" layer of coarse sand was then placed over the drainage net. A protective 12" soil cover was placed above the sand layer, and a non-woven geo-textile material was used to separate the layers.



The leachate collection piping system consists of 8" HDPE perforated pipes placed in the stone trenches. Two 30,000-gallon fiberglass-reinforced, double-wall, underground storage tanks were proposed for both cells. Motor operated plug valves were designed for leachate outlet piping to control influent flow to the tanks. The EPA HELP Model was used to estimate leachate generation.

Cell N2 includes an area adjacent to Cell N3. KCI performed construction phase design and contract documents for Cell N2. Services for Cell 6 included lining side slopes of existing cells to create a stable working face for land filling operations and provide a reliable gas collection system for completed cells.

The liner system on side slopes included the following materials: double drainage geocomposite; 60-mil textured MDPE liner; 10-oz. Non-woven geotextile; 60-mil textured MDPE liner; double drainage geocomposite; 6" 57 stone layer overlaid by 8-oz. non-woven geotextile.

Cell 6 floor liner system consists of compacted subgrade; 60-mil textured MDPE liner; reinforced geosynthetic clay liner (GCL); 60-mil MDPE textured liner; double drainage geocomposite; 12" coarse sand layer; 8-oz. non-woven geotextile; 12" stone layer.

Leachate collection piping system consists of 10" MDPE perforated pipes placed into stone trench. Collected leachate is conveyed to proposed leachate storage tanks for Cells 2 & 3.

Pisgah Landfill Closure, Charles County, MD

KCI provided construction management services for the closure of the 72-acre Pisgah Landfill, located west of Maryland Route 425 in Charles County, Maryland.

This \$6.3 million construction project capped the Pisgah Landfill with earth fill, geomembrane liner system, 125 gas vent wells, and a gas collection and flaring system. Testing services included tests for geonet, textiles, geocomposite peel strength, geomembrane and other tests.

The project scope involved providing complete construction management services including contract administration, construction inspection, field engineering, surveying, testing and close-out documentation for the Maryland Department of Environment (MDE).

KCI's inspection and testing personnel were responsible for providing the following:

- Project document review
- Attendance at project meetings
- Shop drawing review
- Certification review
- Manufacturer warranty agreement review
- O&M data for equipment review
- Construction phase engineering consultation
- Construction contract administration
- Construction inspection
- Semi-final and final inspections
- Record drawing preparation
- Monthly status report preparation
- QA/QC final report preparation for MDE



KCI's involvement started with construction management but grew to include design modifications and value engineering as well. Because the existing closure design was dated, KCI recognized that newer technologies and approaches could benefit the client by reducing capital and operating costs, as well as increasing ease of operations.



KCI's innovative design modification and construction management services saved the County more than \$600,000 in construction costs, including:

Landfill Boundaries—Through test pits, the project team identified that the initial boundaries of the landfill were incorrect; the area to be capped was reduced by eight acres and resulted in a \$400,000 savings of material costs.

Gas Collection System—The original design had the gas collection piping above the liner, resulting in 125 points of penetration from the gas vent wells. KCI redesigned the system with most of the piping underneath the liner, reducing the penetration points to 17. Along with increasing the integrity of the liner system and simplifying any future repairs, this design modification saved the County \$15,000 in construction costs.

Groundwater Monitoring System—KCI modified the design to include a portable analyzer for the wells, reducing costs associated with operations and maintenance.

Flare System—The original design called for a customized design piping system. KCI modified the design to include less expensive piping.

Underdrain System—KCI's redesign included modifications to collection points, discharge points, and routing. The redesign improved the integrity of the liner by eliminating stress points. The actual construction time and costs were less, and the contractor gave our client approximately \$20,000 of credit against other tasks.

Borrow Pit—KCI changed the design of the borrow pit to reduce the amount of impact to trees and to avoid wetlands. The design also limited the necessary temporary sediment and erosion control.

KCI also negotiated on behalf of the County on claim issues. The project team negotiated a discrepancy on the use of sludge versus topsoil, which resulted in a \$200,000 savings to the County. In addition, KCI introduced an innovative concept for a vegetation cover which further reduced operating procedures and provided a natural habitat for desirable species, such as birds and butterflies, while deterring burrowing animals capable of damaging the cover/liner.

Phillips Army Airfield Rubble Landfill Closure Plan - Phase I and II, Edgewood, MD

The Phillips Army Airfield Rubble Landfill encompassed approximately 17 acres of which 5 acres (Phase I) had been inactive for over ten years and approximately 12 acres (Phase II) was in active use with closure scheduled for June 30, 2001. The unlined landfill was operated in accordance with a Maryland Department of the Environment solid waste disposal permit, which mandated closure by June 30, 2001 in accordance with Federal regulations. Neither Phase I nor Phase II areas reached permitted design capacity.

Phase I Closure Plan - 5 Acres—The Phase I area was slightly constrained by wetlands created by landfilling which have been delineated and were protected during capping. The cross slope on the top of the Phase I area as filled is less than 2% (less than 4% required by permit). Negotiations with MDE resulted in acceptance of the existing top cross slopes for capping because of the lack of organic content in the material disposed of in the landfill and the extended period of inactivity when anticipated settlement should have substantially taken place.



Phase II Closure Plan - 12 Acres-Phase II was capped after final closure. Phase II closure was bid in the fall of 2001 with actual construction in the spring of 2002. Technical tasks performed by KCI for this assignment included:

- Field survey of existing landfill site.
- Evaluation of permit compliance with respect to grading elevations and footprint and evaluation of alternate caps particularly with respect to the impervious layer of the cap.
- Preparation of contract documents for construction, which addressed landfill gas interception and venting, subgrade preparation for geomembrane, drainage layer and pipe subdrainage interception system, final cover and surface stabilization and erosion and sediment control during construction.
- Preparation of technical specifications.
- Preparation of quantity and cost estimates.
- Bidding period services.
- Post award response to technical questions.

Westwood Rubble Landfill Closure Plan, Edgewood, MD

The Westwood Rubble Landfill encompasses approximately 25.4 acres and is located in the Edgewood Arsenal area of the Aberdeen Proving Ground, Edgewood, MD. The unlined landfill was operated in accordance with a Maryland Department of the Environment solid waste disposal permit, which mandated closure by June 30, 2001 in accordance with Federal regulations. Westwood substantially reached permitted design capacity. The existing landfill area is substantially within the permitted footprint; however, there are areas, which have been filled to the design finished grade elevation. Negotiations with MDE resulted in acceptance of a slight overfilling to accommodate the cap thickness and also to accept a less than 4% top cross slope to avoid waste disturbance in preparation for cap placement.

- Technical tasks performed by KCI for this assignment included:
- Field survey of existing landfill site.
- Evaluation of permit compliance with respect to grading elevation and footprint and evaluation of alternate caps particularly with respect to the impervious layer of the cap.
- Preparation of contract documents for construction which address landfill gas interception and venting, subgrade/final cover below geomembrane, drainage layer and pipe subdrainage interception system, final cover and surface stabilization, slope stabilization evaluation, and erosion and sediment control during construction.
- Preparation of technical specifications.
- Preparation of quantity and cost estimates.
- Bidding period services.



WEST VIRGINIA PROJECT EXPERIENCE

West Virginia University Downtown Student Housing Project, Morgantown, WV

KCI is a sub-consultant to Paradigm Architecture for the proposed Downtown Student Housing Project. This project is currently under construction. KCI was responsible for overall site design, access roads, plaza, utility lines, sidewalks, drainage, storm water quality and retention, grading plans, erosion and sedimentation control plans, and the site/civil permitting.



KCI provided a design on the plaza area using stamped concrete patterns, in conjunction with strategically placed patio's and pergolas. The plaza was designed to create a warm friendly environment. This plaza will also serve as a throughway from the new dormitory to the existing Summit Hall, where the residents of the new dorm will go for dinners. KCI also provided an innovative storm-water management design to capture all water within the plaza.

The View II at the Park, Morgantown, WV

KCI was a sub-consultant to Paradigm Architecture for the proposed View II. The View II is the second phase of a three phased development along the waterfront in Morgantown, WV. The View II is a 4-story structure that will be the new home to the Morgantown Area Chamber of Commerce once completed, along with several residential condominiums. This project is currently under construction. KCI is responsible for overall site design, utility lines, sidewalks, drainage, storm water retention, grading plans, erosion and sedimentation control plans, and the site/civil permitting.

The Dayton, Morgantown, WV

KCI was a sub-consultant to Paradigm Architecture for the proposed Dayton. The Dayton is a new 3 story modular building with one level of parking and retail space below located at the corner of Ridgeway Avenue, Dayton Street and Richwood Avenue in Morgantown, WV. KCI is responsible for overall site/civil design, water lines, sanitary sewer, general utility coordination, site/civil permitting and erosion and sediment control. This project is currently under construction.



Morgantown Event Center and Parking Garage, Morgantown, WV

KCI is a sub-consultant to Paradigm Architecture for the new Morgantown Event Center and Garage, located in the Wharf District of Morgantown. KCI is providing site/civil engineering and landscape architecture services for this design-build project.

GSA/USDA Building, Morgantown, WV

KCI is a sub-consultant to Paradigm Architecture for the Design-Build of the new USDA Building, located in the Sabraton Area of Morgantown. KCI is providing site/civil design for parking lots, landscaping, storm drains, water lines, sanitary sewer and erosion and sediment control devices.

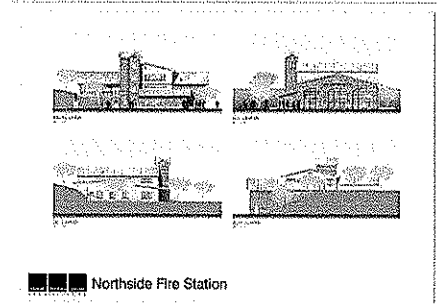


Westminster House, Morgantown, WV

KCI was a sub-consultant to Edward Tucker Architects for the construction of two 69,000 gross square foot (gsf) new 6 story residential buildings that will accommodate 441 student residents. KCI is currently providing site/civil engineering services for the schematic design phase of this project.

New Northside Fire Station, Morgantown, WV

KCI is a sub-consultant to Bignell Watkins Hasser for the proposed North Side Fire Station for the City of Morgantown. KCI is responsible for overall site design, access roads, utility lines, sidewalks, drainage, storm water quality and retention, grading plans, erosion and sedimentation control plans, and the site/civil permitting.



The new Morgantown Fire Station will be a LEED certifiable building. KCI's design approach to the site/civil items reflects LEED certification.

KCI provided an innovative design to capture storm-water on the project site through the use of four on site Bio Cells. KCI also designed a 3,000 +/- gallon water harvesting tank to harvest the rain water from the roof of the proposed building. KCI's innovative approach to storm-water design on this project enabled the site to be designed without any connection to the existing storm-water system in the area. The design also provides a cost effective solution to long term water demand for the Fire Station.

West Virginia University Architectural and Engineering Open End, Morgantown, WV

KCI was awarded an open end contract to provide multi-disciplined engineering services to the West Virginia University.

Work Order No. 1 – Summit Hall Parking Garage. KCI performed a structural assessment of the Summit Hall Parking Garage along Grant Street. The garage has been experiencing water leaks from the upper level onto the lower level through cracks in the deck. KCI's scope of services included the review of existing plans and a building assessment. Upon completion of the building assessment, KCI provided the University with a Report of findings. Upon review of the Report the University requested KCI to produce construction documents for the rehabilitation of the upper deck. Construction documents have been submitted to the University.



Work Order No. 2 – Evansdale Library. KCI performed a structural analysis of the Evansdale Library.

Work Order No. 3 – Percival Hall Pedestrian Bridge. KCI provided the University with Structural Engineering and Drafting Services associated with the design of a replacement wood deck and support beams for the Percival Hall Pedestrian Bridge. Project was completed November, 2007.





Work Order No. 4 – WVU Coliseum Tunnel. KCI will be providing the University with complete design services for the reconstruction of the East Wall of the Coliseum Tunnel which is in current need of repair.

Work Order No. 5 – WVU Steam Tunnel Rehabilitation Project Steam Tunnel A. KCI will be providing the University with structural and electrical engineering services required to examine the existing conditions of steam tunnel A and prepare construction documents and project specific specifications to repair deficiencies in steam tunnel A.

Survey Services Open End, Fairmont, WV

Work Order #1 - 600 Maple Avenue – KCI prepared an Administrative Plan and all necessary survey work for a subdivision of the existing lot at 600 Maple Avenue into three new lots. KCI's survey team responded to this task within one business day of receipt of the signed authorization for this fast track project. Scope of services included:

- **Boundary Survey** – KCI performed all survey work to the Minimum Survey Standards for West Virginia. KCI performed property research and obtained copies of the Title deed for the property and all adjoining. Using the title information KCI prepared a deed mosaic that depicts the property lines called for in the deeds. A survey crew established horizontal and vertical control referenced to the West Virginia State Grid. In addition all existing evidence of property lines and corners were located and tied into the site control. KCI survey technicians compared field data to title information and compute a final outline of the property. KCI survey crews set permanent markers at all external property corners where no monuments were found.
- **Property Mosaic** – Using the deeds and plats acquired from the Court House, KCI prepared a Property Mosaic Drawing showing the subject property and all adjoining properties. The Mosaic was used as a tool for the field survey crew to aid in the location of existing property corner markers.
- **Administrative Plat** – KCI completed the boundary survey work required to establish the outline of the development parcels. Using this boundary survey data, and previous surveys, an Administrative Plat was prepared. KCI also prepared applications and checklists required for submission. KCI attended review meetings with The City of Fairmont's review agencies, as required, to facilitate approval of the plat.

Work Order #2 - Lot 182 Ogden Avenue – KCI prepared a written deed description and all necessary survey work to add an easement to lot 182 Ogden Avenue. Scope of Services included:

- **Boundary Survey** – KCI performed all survey work to the Minimum Survey Standards for West Virginia. KCI performed property research and obtain copies of the Title deed for the subject property and all adjoining. Using the title information KCI prepared a deed mosaic that depicts the property lines called for in the deeds. A survey crew will be dispatched to the site to established horizontal and vertical control referenced to the West Virginia State Grid. In addition all existing evidence of property lines and corners were located and tied into the site control. KCI survey technicians compared field data to title information and compute a final outline of the property. KCI survey crews set permanent markers at all external property corners where no monuments were found.

- **Property Mosaic** – Using the deeds and plats acquired from the Court House, KCI prepared a Property Mosaic Drawing showing the subject property and all adjoining properties. The Mosaic was used as a tool for the field survey crew to aid in the location of existing property corner markers.
- **Written Deed Description** – KCI completed the boundary survey work required to establish the outline of the development parcels. Using this boundary survey data, and previous surveys, a written deed description was prepared. KCI submitted a draft of the written deed description for review by the FCDP. Once comments were received from FCDP KCI revised and submitted a Final deed description to the FCDP for recordation with the City of Fairmont, WV

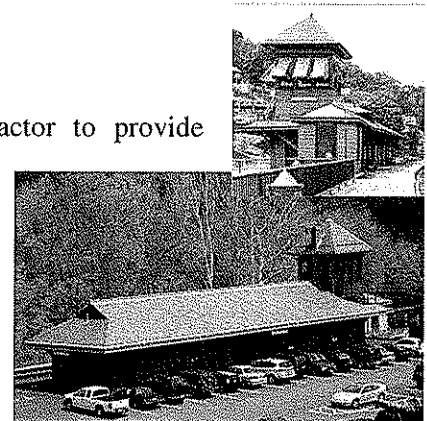
Work Order #3 - Lot 902 & 904 Ogden Avenue – KCI prepared a written deed description, boundary plat and all necessary survey work to perform a boundary survey of lots 902 and 904 Ogden Avenue. Scope of Services included:

- **Boundary Survey** – KCI performed all survey work to the Minimum Survey Standards for West Virginia. KCI performed property research and obtain copies of the Title deed for the subject property and all adjoining. Using the title information KCI prepared a deed mosaic that depicts the property lines called for in the deeds. A survey crew established horizontal and vertical control referenced to the West Virginia State Grid. In addition all existing evidence of property lines and corners were located and tied into the site control. KCI survey technicians compared field data to title information and compute a final outline of the property. KCI survey crews set permanent markers at all external property corners where no monuments were found.
- **Property Mosaic** – Using the deeds and plats acquired from the Court House, KCI prepared a Property Mosaic Drawing showing the subject property and all adjoining properties. The Mosaic was used as a tool for the field survey crew to aid in the location of existing property corner markers.
- **Written Deed Description/Boundary Plat** – KCI completed the boundary survey work required to establish the outline of the development parcels. Using this boundary survey data, and previous surveys, a written deed description and plat was prepared. KCI submitted a draft of the written deed description for review by the FCDP. Once comments were received from FCDP KCI revised and submitted a Final deed description to the FCDP for recordation with the City of Fairmont, WV.

Harper's Ferry National Park Historic Train Station, Harpers Ferry, WV

KCI Technologies was subcontracted to a national design/build contractor to provide electrical, site/civil, and structural engineering support services for this Historical Renovation project.

In addition to addressing the maintenance, safety and accessibility issues, improving the general appearance of the parking lot was also a major concern from the onset of the project. Included in these general improvements were: improving the pedestrian and vehicular circulation, addressing water ponding and drainage issues, improving the appearance of the Train Station and parking lot from the street and reducing the overall impact to resources. Other issues that were identified during the design process included the impact of the parking lot construction to rail commuters and visitors to Harpers Ferry, the impact to local business and the overall impact to the Town of Harpers Ferry. Since the town of Harpers Ferry has been encouraging tourism and the development of more business along Potomac Street, a more attractive, safer parking lot that provides better access is expected to go a long way to help support their goals, as well.





Pursuant to the requests of the client this project was placed on a fast track schedule, in order to meet the deadlines of our client. The Preliminary and Final Design of the parking lot was completed in less than a month. Coordination with the contractor was a critical issue in this project as the design had to be ready for construction, quickly so that the disruptions to the 92 commuters who use the lot on daily basis would be minimal. KCI and the contractor coordinated the schedule with the National Park Service to avoid any major delays during design and construction. The contractor was permitted to close the parking lot to commuters for a 2 week period to construct the new parking lot. Construction of the new lot started on time and the NPS was able to re-open the new parking lot back to commuters within the two week time frame.