



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: 323504

Doc Description: EOI: Leachate Tank Study - Monongalia/Morgantown LFs

Proc Type: Central Purchase Order

Date Issued	Solicitation Closes	Solicitation No	Version
2017-05-19	2017-06-13 13:30:00	CEOI 0313 DEP1700000003	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:

06/15/17 13:10:51  
 WV Purchasing Division

**FOR INFORMATION CONTACT THE BUYER**

Jessica S Chambers  
 (304) 558-0246  
 jessica.s.chambers@wv.gov

Signature X

FEIN #

55-0687626

DATE

6/9/17

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

**ADDITIONAL INFORMATION:**

The Acquisition and Contract Administration Section of the Purchasing Division (Purchasing Division) is soliciting Expression(s) of Interest for the Department of Environmental Protection (Agency), from qualified firms to provide architectural/engineering services (Vendors) as defined herein.

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	Monongalia County and City of Morgantown Landfills		

Comm Code	Manufacturer	Specification	Model #
81100000			

**Extended Description :**

Leachate Holding Tank Study, Recommendation, and Construction QAQC for Monongalia County and City of Morgantown Landfills per the attached specifications, bid requirements, and terms and conditions, incorporated here by reference and made a part hereof.

**DESIGNATED CONTACT:** Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

RYAN WHEELER, BUSINESS DEVELOPMENT

(Name, Title)

RYAN WHEELER, BUSINESS DEVELOPMENT

(Printed Name and Title)

409 JAROSLOW DR. W5, PCA, WY 25159

(Address)

304-729-9174 | 304-755-2636

(Phone Number) / (Fax Number)

RYAN.WHEELER@TELRADON.COM

(email address)

**CERTIFICATION AND SIGNATURE:** 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.

TELRADON CORPORATION

(Company)



(Authorized Signature) (Representative Name, Title)

RYAN WHEELER, BUSINESS DEVELOPMENT

(Printed Name and Title of Authorized Representative)

6-9-2017

(Date)

304-729-9174 | 304-755-2636

(Phone Number) (Fax Number)

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: TERRAPON Corporation

Authorized Signature: [Signature] Date: 6/9/17

State of West Virginia

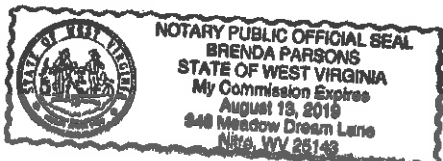
County of Putnam, to-wit:

Taken, subscribed, and sworn to before me this 9 day of June, 2017

My Commission expires August 13, 2019

AFFIX SEAL HERE

NOTARY PUBLIC Brenda Parsons



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

PROJECT NAME EOI: Leachate Tank Study- Monongalia/Morgantown LFs		DATE (DAY, MONTH, YEAR) 13, June, 2017	FEIN 55-0687626
1. FIRM NAME TERRADON Corporation	2. HOME OFFICE BUSINESS ADDRESS 409 Jacobson Drive, Poca, WV 25159	3. FORMER FIRM NAME	
4. HOME OFFICE TELEPHONE 304-755-8291	5. ESTABLISHED (YEAR) 1989	6. TYPE OWNERSHIP INDIVIDUAL, <b>X CORPORATION</b> , PARTNERSHIP, JOINT-VENTURE	6A. WV REGISTERED DBE (DISAVANTAGED BUSINESS ENTERPRISE)  YES      X      NO
7. PRIMARY OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. (name particular type) PERSONNEL EACH OFFICE 409 Jacobson Drive, Poca, WV 25159/304-755-8291/Ashley L Lioi/46 425 North Jefferson Street, Lewisburg, WV 24901/ (304) 645-4636 / Will Thornton, PE, PS /3 persons PO Box 307, Charlton Heights, WV 25040 / (304) 541-6165 / Will Thornton, PE, PS / 2 persons			
8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM Virginia L. King, Owner, Chief Financial Officer Bill Hunt, President		8a. NAME, TITLE, & TELEPHONE NUMBER-OTHER PRINCIPALS Ashley Lioi, PE 304-755-8291	
9. NUMBER OF PERSONNEL BY DISPLINE (Bold Lettering Indicates Minimum Design Team Members) Detailed information. On Team To Be Included			
6 ADMINSIRATIVE	ECOLOGISTS	2 LANDSCAPE	3 STRUCTURAL
_ ARCHITECTS	_ ECONOMISTS	ARCHITECTS	ENGINEERS
_ BIOLOGIST	_ ELECTRICAL	_ MECHANICAL	8 SURVEYORS
3 CADD OPERATORS	ENGINEERS	ENGINEERS	
_ CHEMICAL ENGINEERS	3 ENVIRONMENTALISTS	_ MINING	_ OTHER
6 CIVIL ENGINEERS	_ ESTIMATORS	ENGINEERS	
17 CONSTRUCTION	3 GEOLOGIST	_ PHOTOGRAMMETRISTS	
INSPECTORS	1 HISTORIANS	_ PLANNERS:	61 TOTAL
8 DESIGNERS	_ HYDROLOGISTS	URBAN/REGIONAL	PERSONNEL
_ DRAFTSMEN		_ SANITARY	
		ENGINEERS	
		1 SOILS ENGINEERS	
		_ SPECIFICATION	
		WRITERS	
TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: <u>10</u> *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
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11. OUTSIDE KEY CONSULTANTS/ SUB-CONSULTANTS ANTICIPATED TO BE USED.		
NAME AND ADDRESS: Tuck Mapping Services 1928 Wildcat Road P.O. Box 760 Big Stone Gap, VA 24219	SPECIALTY: Aerial Photography and Topographic Mapping	WORKED WITH BEFORE  <u>YES</u> NO
NAME AND ADDRESS: REIC PO Box 286 Beaver, WV 25813	SPECIALTY: Laboratory Analysis of Water Samples	WORKED WITH BEFORE  <u>YES</u> NO
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE  YES    NO
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE  YES    NO
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE  YES    NO
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE  YES    NO
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE  YES    NO
NAME AND ADDRESS:	SPECIALTY:	WORKED WITH BEFORE  YES    NO

12. A. Is your firm experienced in (Solid Waste Landfill Closure Design)? <b><u>YES</u> Description and Number of Projects:</b> <u>Reference Pages 5-14 of SOQ</u>
B. Is your firm experienced in Solid Waste landfill site characterization assessment and evaluation? <b><u>YES</u> Description and Number of Projects:</b> <u>Reference Pages 5-14 of SOQ</u>
C. Is your firm experienced in landfill closure construction inspection? <b><u>YES</u> Description and Number of Projects:</b> <u>Reference Pages 5-14 of SOQ</u>
D. Is your firm experienced in Aerial Photography and the Development of Contour Mapping? <b><u>YES</u> Description and Number of Projects:</b>

TERRADON subcontracts these services to Tuck Mapping.

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

**YES Description and Number of Projects:**

Reference pages 5-14 of SOQ

F. Is your firm experienced in Landfill Closure cost estimating?

**YES Description and Number of Projects:**

Reference pages 5-14 of SOQ

**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:
<b>James, John, W., PE</b>	<b>48</b>		

Brief Explanation of Responsibilities:  
**Mr. James' project responsibilities include: studies and designs for landfills and environmental facilities; surface and ground water studies and remediation; design of liners for landfills and various impoundments; earth and rockfill dams; roads; highways and bridges; numerous foundation investigations; foundation investigations and designs ranging in size from small projects to major industrial complexes; storm drainage facilities; airport facilities; landslide analysis and correction; and forensic engineering**

**EDUCATION (DEGREE, YEAR, SPECIALIZATION)**

**BS Civil Engineering, 1968, Geotechnical**

**MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS:**

**American Society of Civil Engineers  
 Society of American Military Engineers**

**REGISTRATION (Type, Year, State)**

**Professional Engineer, WV**

**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):
<b>Clutter, Mark, A.</b>	<b>16</b>		

Brief Explanation of Responsibilities:  
**Mark Clutter is a Project Manager/Design Engineer who is experienced in preparing construction documents and associated permitting for numerous projects throughout Kentucky, Ohio, and West Virginia including: creating erosion and sediment control plans, storm water management, design of impoundment closures, slope stability analysis, field surveying, drawings and specification preparation, design, design drafting, construction inspection, quality control testing, shop drawing review, project management, contract administration, permitting, and report preparation.**

**Clutter's landfill experience adheres to the WVDEP's Landfill Closure Assistance Program**

**(LCAP) for landfill designs and construction, including all closure-related activities such as: leachate management control, sediment and erosion, gas management, groundwater monitoring, and a final cover on non-composite lined landfills.**

EDUCATION (Degree, Year, Specialization)  
**BS Civil Engineering Technology, 2000, Geotechnical**  
**A.A.S. Civil Engineering Technology**  
**A.A.S. Drafting/Design Engineering Technology**

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

REGISTRATION (Type, Year, State)

**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.) Reed, Philip, W., PE	YEARS OF EXPERIENCE		
	YEARS OF EXPERIENCE (name type): 26	YEARS OF EXPERIENCE (name type):	YEARS OR EXPERIENCE (name type):

Brief Explanation of Responsibilities:  
**Philip Reed provides services to clients for Engineering Design, Quality Control and Materials Testing. Reed provides technical direction on a variety of civil engineering markets including landfills, commercial and industrial developments, housing, energy and infrastructure. Reed is responsible for engineering analysis and modeling, design, regulatory compliance and permitting, in addition to quality control and assurance. He has more than 20 years of experience in landfill design and construction.**

EDUCATION (Degree, Year, Specialization)  
**1988, Civil Engineering, Geotechnical**

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

REGISTRATION (Type, Year, State)  
**PE, 2006, WV**  
**PE, 2006, VA**

**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.) Hunt, Bill, PG, LRS	YEARS OF EXPERIENCE		
	YEARS OF EXPERIENCE (name type) 31	YEARS OF EXPERIENCE (name type)	YEARS OF EXPERIENCE (name type)

Brief Explanation of Responsibilities  
**Bill Hunt is a Professional Geologist, Licensed Remediation Specialist and President at TERRADON Corporation. Hunt offers relevant experience in environmental documentation, investigations, and coordination with federal, state, and local agencies. He prepares Environmental Impact Statements, Environmental Assessments, Section 4(f) Evaluations, and other environmental technical documents. He supervises and participates in work plan development, field surveys, on-site monitoring, data collection, impact analysis, subconsultant management, public meeting organization and group presentations.**



EDUCATION (Degree, Year, Specialization) <b>MA Geography, 1985, Resource Management</b> <b>BS, Environmental Studies, 1981, Geology</b>	
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS	REGISTRATION (Type, Year, State) <b>PG, 1999, Indiana</b> <b>LRS, 2005, WV</b>

14. PROVIDE A LIST OF SOFTWARE AND EQUIPMENT AVAILABLE IN THE PRIMARY OFFICE WHICH WILL BE USED TO COMPLETE THIS PROJECT (name project)
<b>Microsoft Office (Excel, Access, Word, PowerPoint)</b>
<b>Haestad Methods Hydraulic Software for Channel, Culvert, and Pond Design</b>
<b>AutoCAD 2016, Civil 3D</b>
<b>HELP (Hydrologic Evaluation of Landfill Performance) Computer Model</b>
<b>Microstation V-8</b>
<b>TR-55 Software for Precipitation and Hydrologic Modeling</b>
<b>HEC-HMS and HEC-RAS for Modeling of Watersheds and River/Stream Flows</b>
<b>Terrain Navigator (Regional Topographic Mapping Database)</b>
<b>gINT Geotechnical and Environmental boring logs and well construction logs</b>
<b>Troxler Moisture Density Testing Gauge</b>
<b>Miscellaneous Concrete and Grout Testing Equipment</b>
<b>Digital Cameras for photo-documentation of construction activities</b>
<b>Monitoring Well Sampling and Gauging Equipment</b>
<b>DumpStat statistical analysis of groundwater quality data</b>

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
<b>Tucker County Landfill Cell 5 Extension</b>	Tucker County Solid Waste Authority Davis , WV	Survey, Mapping, Subsurface Investigation, Groundwater Investigation and Monitoring, Cell Design and Construction monitoring and Certification	\$600,000	100% Complete
<b>Tucker County Landfill Cell 6 New Cell Design and Construction</b>	Tucker County Solid Waste Authority Davis , WV	Survey, Mapping, Subsurface Investigation, Groundwater Investigation and Monitoring, Major Permit Modification, Cell Design and Construction monitoring and Certification	\$720,000	100% Complete
<b>Tucker County Landfill Cell 7A New Cell Design and Construction – 7 acre cell</b>	Tucker County Solid Waste Authority Davis , WV	Survey, Mapping, Subsurface Investigation, Groundwater Investigation and Monitoring, Major Permit Modification, Certificate of Need, Cell Design and Construction Monitoring and Certification	\$840,000	100% Complete
<b>HAM Sanitary Landfill Certificate of Need</b>	HAM Sanitary Landfill Inc. Peterstown, WV	Part 1 – Solid Waste Facility Permit including geologic and hydrologic evaluation of the site.	\$158,000.00	100 % Complete
<b>HAM Sanitary Landfill Part 2 – Solid Waste Facility Design Application</b>	HAM Sanitary Landfill Inc. Peterstown, WV	Part 2 – Solid Waste Facility Design including Site design, leachate modeling, composite liner design, cell	\$950,000.00	100 % Complete

		construction drawings and QA/QC plan.		
<b>Jackson County Sanitary Landfill</b> <b>WV LCAP Program</b> <b>Interim Closure Plan</b>	Jackson County Solid Waste Authority P.O. Box 800 Ripley, WV	Interim Closure Plan including storm water and leachate management planning, sediment and leachate pond design	\$3,299,683	100 % Complete
<b>Pine Creek Landfill</b> <b>WV LCAP Program</b>	Pine Creek Omar Landfill, Inc. PO Box 99 Cora, WV 25614	designed the permanent closure plan including an additional cell, storm water management, capping, leachate management and storage tank, construction QC and certification for the abandoned landfill.	\$1,306,325	100 % Complete
<b>Wyoming County Sanitary Landfill</b>	Wyoming County Commission Wyoming County Courthouse PO Drawer 309 Pineville, WV 24874	site characterization; storm water management and leachate management design including storage tank, pump station and force main to POTW; slope stability; and Subtitle D Cap for the WVDEP	\$1,427,522	100 % Complete
TOTAL NUMBER OF PROJECTS:			TOTAL ESTIMATED CONSTRUCTION COSTS:	
# <u>8</u>			\$ <u>9,301,530</u>	



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)
<b>Manila Ridge Extension Engineering Poca, WV</b>	Putnam County Commission 3389 Winfield Road Winfield, WV 25213		2012	Yes
<b>WV Air National Guard Design/Inspection Charleston, WV</b>	WV American Water Shared Services Center P.O. Box 5609 Cherry Hill, New Jersey 08034	\$2 Million	2013	Yes
<b>Mallory (Gibson) Portals Design Mallory, WV</b>	WVDEP/AML&R 601 57th Street SE Charleston, WV 25304	\$500,000	2013	Yes
<b>Montgomery 6th Ave. Pump Station Montgomery, WV</b>	Sanitary Board Of Montgomery 706 Third Avenue Montgomery, WV 25136	\$500,000		No
<b>Ham Sanitary Landfill - Peterstown WV</b>	HAM Sanitary Landfill P.O. Box 576 Peterstown, WV 24963		2013	Yes
<b>Northern Wayne County PSD Force Main Replacement Wayne, WV</b>	Northern Wayne County PSD P.O. Box 775 Lavallette, WV 25535	\$325,000	2013	No
<b>Upper Glade Creek Dam Improvements</b>	Beckley Water Company Po Box 2400 Beckley, WV 25802-2400	\$35,000.00	2013	No
<b>Charleston</b>	Alan Ives		2013	Yes

<b>Replacement Housing</b>	Construction 709 Patrick St Charleston, WV, 25312			
<b>Noise Wall in Pennsylvania</b>	ECA - Eastern Operations 500 Corporate Landing Charleston, West Virginia 25311-1264	\$300,000	2014	
<b>Edgewood Country Club Sissonville, WV</b>	ECC 1600 Edgewood Drive Charleston, WV 25302	\$150,000	2014	
<b>MOT-75-21.96 Vandalia, OH</b>	Ohio Department of Transportation 1980 W. Broad St. Mailstop: 4100, 1 <sup>st</sup> Floor Columbus, Ohio 43223	\$400,000	2014	NO
<b>Verizon Wireless Cell Tower Nitro, WV</b>	Verizon Wireless 18 Abele Road Bridgeville, PA 15017	\$200,000	2014	
<b>Verizon Wireless Cell Tower Goldtown, WV</b>	Verizon Wireless 18 Abele Road Bridgeville, PA 15017	\$200,000	2014	
<b>West Virginia GSA Office Complex Fairmont, WV</b>	State of West Virginia 1900 Kanawha Blvd E Charleston, WV 25305	\$25 Million	2014	YES
<b>Poca Elementary School Poca, WV</b>	Putnam County Board of Education 3022 Winfield Rd, Winfield, WV 25213	\$12 Million	2014	YES
<b>Winfield</b>	Putnam County	\$15 Million	2014	YES

<b>Middle School Winfield, WV</b>	Board of Education 3022 Winfield Rd, Winfield, WV 25213			
<b>Courtyard Hotel Charleston, WV</b>	VIM, Inc. P.O. Box 359 123 North Court Street Fayetteville, WV 25840	\$14 Million	2014	YES
<b>Gerrardstown Middle School Gerrardstown, WV</b>	Berkley County Board of Education 401 S Queen St, Martinsburg, WV 25401	\$13 Million	2014	YES
<b>South Preston PK-8 School Tunnelton, WV</b>	Preston County Board of Education 731 Preston Drive Kingwood, WV 26537	\$13 Million	2014	YES
<b>Leading Creek Elementary School</b>	Lewis County Board of Education 239 Court Avenue Weston, WV 26452	\$13 Million	2014	YES
<b>Advantage Valley Advanced Technology Center South Charleston, WV</b>	WV Higher Education Policy Commission 1018 Kanawha Boulevard, E., Suite 700 Charleston, WV 25301	\$15 Million	2014	YES
<b>Cabell County Bus Garage Lesage, WV</b>	Cabell County Board of Education WV Higher Education Policy Commission 1018 Kanawha Boulevard, E., Suite 700 Charleston, WV 25301	\$10 Million	2014	YES
<b>Energy Corporation of America Charleston,</b>	Energy Corporation of America 501 56th Street SE	\$12 Million	2014	YES

<b>WV</b>	Charleston, West Virginia 25304			
<b>East Hardy High School</b>	Hardy County Board of Education 510 Ashby Street Moorefield, WV 26836	\$15 Million	2014	YES
<b>WVSU Student Housing Institute, WV</b>	West Virginia State University 5000 Fairlawn Ave, Dunbar, WV 25112	\$16 Million	2014	YES
<b>Weisburg Applied Sciences Building Huntington, WV</b>	Marshall University One John Marshall Drive Huntington, WV 25755	\$30 Million	2014	YES
<b>Smith Fastener South Charleston</b>	Smith Fastener 7500 MacCorkle Ave., SE P.O. Box 4356 Charleston, West Virginia 25364	\$10 Million	2014	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
<b>Summit Bechtel Reserve Boy Scouts of America Glen Jean, WV</b>	Boy Scouts of America PO Box 152079, Irving, TX 75015-	\$50,000,000	2013	Yes	Trinity Works/Arrow WV, Inc.
<b>WV Northern Advanced Technology Center</b>	WV Higher Education Policy Commission 1018 Kanawha Boulevard, East, Suite 700 Charleston, WV 25301	\$15,000,000	2014	Yes	ET Boggess Architects



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.

**TERRADON CORPORATION is well qualified to provide all of the services as described in the Scope of Services of the Request for Qualifications to include: the study of the existing leachate holding tanks and ponds to see if they meet requirements of applicable rules and if there would be an economical advantage to modify existing structures including improvements or replacement as well as potential reduction in water generation. TERRADON is experienced in providing these and similar services on various projects throughout the state for the agency.**

20. The foregoing is a statement of facts

Signature: Samuel P. Wilkes  
Title: VP - Geo Environmental Dept

Date: 6-13-17

Printed Name: Samuel P. Wilkes



**SUBMITTED BY:**  
TERRADON Corporation  
409 Jacobson Drive  
Poca, WV 25159  
304-755-8291  
Fax: 304-755-2636

**BUSINESS  
DEVELOPMENT  
PERSON OF CONTACT:**  
Ryan Wheeler  
Director of Business  
Development  
ryan.wheeler@terraddon.com  
304-634-2894

**PROJECT MANAGER &  
POINT OF CONTACT**  
Sam Wilkes, MS, PWS, LRS  
VP Geo-Environmental  
Sam.wilkes@terraddon.com  
304-755-9119

## STATEMENT OF QUALIFICATIONS

Leachate Tank Study  
Monongalia & Morgantown Landfills

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**FOUNDED:** 1989

**EMPLOYEES:** 61

**LOCATIONS:**

Poca, WV  
 Lewisburg, WV  
 Fayetteville, WV

**SERVICES:**

Environmental  
 Geotechnical Engineering  
 Land Planning & Design  
 Survey & Mapping  
 Testing & Inspection  
 Construction Monitoring & Administration  
 Cultural Resources  
 Archaeological  
 Civil Engineering  
 Water, Wastewater, & Storm Water  
 Transportation Engineering  
 Structural Engineering



*TERRADON is the largest woman-owned engineering firm in West Virginia. TERRADON is a certified Women's Business Enterprise as defined by the Women's Business Enterprise National Council and the National Women Business Owners Corporation.*

**TERRADON** TERRADON Corporation offers a multi-faceted approach to design engineering and consulting services. For more than 28 years TERRADON staff has provided a wealth of engineering solutions blanketing West Virginia and surrounding states with successful projects. The company built its reputation on expert personnel and quality, time-sensitive service. Those same founding principles hold true today.

The firm has been recognized through numerous awards from professional organizations and agencies including the American Society of Civil Engineers, State Highway Departments, the Department of Environmental Protection and the American Institute of Architects.

TERRADON's diverse team of professionals work together on projects to offer a wide range of services in house to keep project centrally focused. By providing this range of services, TERRADON is able to work completely as a team to offer clients the most rewarding design.

TERRADON has experience working on projects funded by various agencies. Because of the variety of funding options for projects, TERRADON maintains in-house grant writing staff and support to help make funding client projects easier.

**TERRADON maintains professionally registered engineers, landscape architects, and surveyors as well as a competitive team of highly certified inspectors and environmental specialists.**

TERRADON's corporate culture promotes innovation and progressive thinking. Project leaders strive to sustain customers through a wide-range of engineering offerings. TERRADON employees understand the purpose behind their services and work to cultivate lasting relationships with clients through honest, hard work.





## LANDFILL EXPERIENCE

TERRADON has performed a variety of services on landfill projects throughout West Virginia for more than 28 years. TERRADON engineers and Geo-Environmental groups are experienced in landfill cap designs and cap system cross sections, survey and mapping landfills, design elements including leachate design, leachate studies, landfill analysis, and NPDES certifications. TERRADON's experienced professionals have worked on a number of WVDEP Landfill Closure projects through the WVDEP Landfill Closure Assistance Program. Additionally, TERRADON has completed a wide variety of landfill maintenance and inspection projects. TERRADON maintains a staff of knowledgeable and experienced key personnel who have serviced West Virginia landfill projects spanning 50 years.

## LANDFILL SERVICES

- SURVEY & MAPPING
- LABORATORY ANALYSIS
- SUBSURFACE INVESTIGATION
- CAP SYSTEM DESIGN
- GRADING PLANS
- CAP SYSTEM CROSS SECTIONS
- LEACHATE COLLECTION DESIGN
- STORAGE SYSTEM DESIGN
- NPDES CERTIFIED
- SEDIMENT & EROSION CONTROL
- QA/QC SERVICES
- ENGINEERING COST ESTIMATES
- SOLID WASTE FACILITY SITING PLAN
- CERTIFICATE OF NEED
- CERTIFICATE OF SITE APPROVAL
- QUARTERLY & ANNUAL REPORTS
- LEACHATE STUDIES

TERRADON is experienced in designed landfill closures that sufficiently manage leachate, control sediment and erosion, control and manage natural gases, and monitor groundwater on both composite lined and lined or un-lined cells. TERRADON services customers to standards of the West Virginia Department of Environmental Protection. TERRADON offers clients full in-house services needed to complete landfill projects throughout the state. TERRADON offers subsurface investigation through our experienced geotechnical department lead by a professional engineer with more than 50 years experience servicing landfill and leachate projects throughout the state. TERRADON also offers survey and mapping, sediment and erosion control, construction document services, permitting and approvals, and environmental services to meet the needs of each individual project.



## TRANSPORTATION ENGINEERING

TERRADON's Roadway and Bridge Design group is one of the most respected in the region. The department is well-known for its structural design capabilities and expert knowledge in bridge erection planning. Whether the job requires project planning, preliminary engineering studies or detailed roadway design, TERRADON maintains the resources needed to successfully complete transportation projects. Success on each project is achieved by using advanced technology to produce innovative, pragmatic design. TERRADON engineers are among leading professionals experienced in an array of transportation and quality & assurance measuring services.

TERRADON's certified staff is trained to work under unique and changing task orders and to maintain quality work to clientele that creates a maintained respected relationship between TERRADON and it's client.

TERRADON provides a diverse staff of professionals capable of providing project planning and preliminary engineering services, as well as final roadway and bridge designs (plans, specifications, and estimates). The firm's transportation engineers and technicians apply the latest technology to innovative, award-winning projects. TERRADON's transportation staff has a wide range of experience that includes preparing maintenance of traffic plans, signing and pavement marking plans, utility coordination, drainage design, and right-of-way plans.

TERRADON is prequalified to provide engineering design services for the West Virginia Department of Transportation (WVDOT) through a Statewide Engineering Consulting Contract and for Design-Build services.

TERRADON's Transportation sector has enjoyed a long-standing relationship with several states' Departments of Transportation including the WVDOT. TERRADON has performed successful engineering design for the agency for more than 20 years. The group is led by an experienced transportation engineer and includes veteran staff with demonstrated experience.

TERRADON routinely works on transportation projects, including survey, right-of-way, utilities, and specification design and review with WVDOT personnel. Additionally, TERRADON has been recognized for outstanding engineering work on several occasions with engineering excellence nominations and awards.

### SERVICES INCLUDE

- Structural Engineering
- Bridge Design
- Roadway Planning & Review
- Structural Planning & Review
- Roadway Design
- Maintenance of Traffic
- Traffic Analysis
- Right of Way Plans
- Grading Studies
- Survey
- Materials Testing
- Construction Inspection
- Materials Certification



**SERVICES INCLUDE**

- Site Civil Engineering
- Master Planning
- Site Feasibility Studies
- Schematic Design
- Layout Plans
- Grading Plans
- Utilities Design
- Preliminary Designs
- Storm Water Management Plans
- Erosion Control Plans
- Planting Plans
- Presentation Drawing
- Renderings
- Graphic Design
- Construction Observation
- Bidding
- Phase I ESA
- Phase II ESA
- Construction Review
- Permitting Oversight
- QA/QC
- Survey
- Building Renovations & Additions Design
- Geotechnical Engineering
- Archaeological
- Cost Estimating
- Project Management
- Site Assessments
- Construction Inspection

TERRADON's Land Planning and Development department offers creative and innovative site design plans that have been brought to life throughout the region. Land Planning and Development engineers, landscape architects and CAD designers work closely with other TERRADON departments to deliver the most efficient design for each project.

TERRADON's Land Development department works with public and private entities and has remained a strong presence in the commercial, educational and, parks and recreational development sectors.

The Land Planning and Development group is focused on retaining lasting relationships with it's customers and prides itself on repeat clientele and referrals.

The Land Planning and Development department provides all services in-house from schematic design through construction drawings.

TERRADON maintains LEED accredited professionals in the Land Planning and Development department who remain on the forefront of sustainable design initiatives that aid clients in reducing significant energy costs on projects. TERRADON's Land Development department has more than 25 years experience working on industrial, commercial, parks and recreational, and other projects.

TERRADON has performed engineering and landscape design services for various monuments and plazas throughout the state. TERRADON has ample experience incorporating thematic design elements to achieve honorable memorial and monument plaza sites.

TERRADON has also worked on various renovation and addition projects ranging in sizes from small commercial gas stations, to large industrial sites. TERRADON has specialty staff that have worked on building renovation and additions comparable in size to the proposed project.





TERRADON has been a leader in West Virginia and the surrounding region for the land surveying industry since 1989. The team has developed an extensive resume of successful surveying and mapping projects performed for a diverse group of repeat private and public sector clients. TERRADON's experienced staff of licensed professional surveyors and mappers bring expertise and proficiency to every project task.

The company is committed to staying ahead of the industry's pace by investing in state-of-the-art equipment and technology. That commitment enables TERRADON to overcome unique and challenging project conditions or obstacles, and efficiently provide the most accurate and complete information available to clients.

TERRADON has a long history of providing design and construction survey services for numerous transportation projects. Efficient and accurate results are ensured by prioritizing the use of modern technology, including state of the art GPS and robotic total stations, with the latest design software.

TERRADON maintains full-time Professional Surveyors on staff. The firm services projects through the use of in-house field survey crews who are backed by corporate staff members, including an experienced team of CAD designers. TERRADON's transportation survey group is experienced in preparing highway right-of-way plans, including courthouse research and right of way questionnaires, and writing legal descriptions for right of way take parcels, temporary construction easements and permanent drainage easements.

TERRADON's Professional Surveyors are licensed in:

- West Virginia
- Pennsylvania
- Kentucky
- Tennessee

#### SERVICES INCLUDE

- Mapping
- Construction Layout
- ALTA survey
- Topographic Survey
- GPS Network Control Surveys
- Aerial & LiDAR Mapping





Constantly changing federal and state environmental requirements are difficult to track and can have a serious impact on businesses and other organizations. TERRADON offers a strong environmental services team to manage issues in a complex environment. Staff is well-versed on environmental permitting processes and regulations as well as site assessment and reporting.

TERRADON closely follows environmental activities on the local, state and federal levels. TERRADON has a thorough understanding of state and federal environmental permitting processes and regulations. This expertise applies to both the initial permit preparations, as well as subsequent negotiations affecting the permit. The firm's strength in addressing environmental issues is built on the diversity of its staff with credentials in chemistry, civil engineering, geotechnical engineering and geology.

#### SERVICES INCLUDE

- Environmental Site Assessments
  - Phase I ESA
  - Phase II ESA
- Hazardous Waste
- Process Water
- Wastewater
- Storm Water
- Groundwater
- Air Permitting
- Risk Management Plans
- Wetland Delineation
- Tier II Reporting
- Emergency Response Plans
- Environmental Audits
- Environmental Remediation
- NEPA Compliance
- Asbestos and Lead Inspection
- Underground Storage Tanks
- Impoundment Stabilization & Closure
- SPCC Planning
- BMP Planning

TERRADON's experienced environmental staff routinely performs Waters of the US determinations, wetland delineations, Nationwide Permits as well as Individual 404/401 Permits with the Army Corps of Engineers and West Virginia Department of Environmental Protection (WVDEP). TERRADON has performed hundreds of wetland delineations using the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region* (Corps, 2012).

TERRADON has performed floodplain modeling and elevation studies according to FEMA, state, and local floodplain coordinators. Our permitting team has performed numerous assessments and documentation according to FEMA standards for our clients.



TERRADON offers some of the most experienced staff in the region for local geotechnical expertise. This team of experts brings a distinctive, specialized understanding of the difficult soil and groundwater conditions found in the Ohio Valley and Appalachian Regions of the United States.

The Geotechnical group has provided investigations associated with earthen dams, mining, waste disposal, new building construction, landslides analysis and remedial design, cell and high mast towers, landfill permitting and cap design, flexible/rigid pavement design, and environmental remediation.

### SERVICES INCLUDE

- Test Borings
- Test Pit Excavations
- Monitoring Well and Piezometer Installation
- Soil and Rock Logging, Sampling & Testing
- Landslide Analysis and Remedial Design
- Stability Analysis
- Retaining Structure Design
- Earthen Dams
- Foundation Design
- Municipal and Industrial Landfills
- Flexible and Rigid Pavement Design
- Complete Removal for Landslide Repair
- Removal, Stabilization & Replacement
- Buttrassing and Regrading
- Subsurface Drainage
- Structural Corrections
- Retaining Walls
- MSE Walls and Other Gravity Walls
- H-Piles and Lagging
- Anchors (Rock or Soil Nailing)

### GEOTECHNICAL DESIGNS

- Complete Removal for Landslide Repair
- Removal, Stabilization, Replacement
- Buttrassing and Regrading
- Subsurface Drainage
- Structural Corrections
- Retaining Walls
- MSE Walls and Other Gravity Walls
- H-Piles and Lagging
- Anchors (Rock or Soil Nailing)



TERRADON offers materials testing and construction monitoring services to document compliance with project design specifications and regulatory requirements. The firm provides construction monitoring for utility, highway, and commercial construction projects.

TERRADON also provides laboratory and field testing of construction materials. Engineers and technicians at TERRADON are West Virginia Department of Highways certified in Portland Cement Concrete, Hot-mixed Asphalt, Compaction and Aggregates.

### **MATERIALS TESTING & INSPECTION**

- Slump of Portland Cement Concrete (AASHTO-T119)
- Air Content of Freshly Mixed Concrete (AASHTO-T196 and T152)
- Unit Weight and Yield (AASHTO-T121)
- Making and Curing of Concrete Test Specimens (AASHTO-T23)
- Compressive Strength of Concrete Specimens (AASHTO-T22)
- Fine and Course Aggregate Gradations (AASHTO-T11 and T27)
- Specific Gravity of Aggregates (AASHTO-T84 and T85)
- Atterberg Limits (AASHTO-T89 and T90)
- Moisture Content of Soil (ASTM-D2216)
- Nuclear Compaction Testing of Soil, Stone, and Hot Mixed Asphalt
- Preparation of Certification Forms and Construction Reports
- Welder Certification

### **CONSTRUCTION MONITORING**

- Document compliance with project design specifications
- Ensures compliance with regulatory requirements
- OSHA 10-Hour and 30-Hour Construction Safety & Health Certified

### **SPECIALTY TESTING & INSPECTION**

- Floor Flatness Testing
- Fireproofing
- Masonry Testing
- Structural Steel Inspection Certified
- Welding Inspection
- Dye Penetrant Testing
- Bolt Testing
- Project Safety Monitoring
- FAA Eastern Regional Laboratories



**GREENBRIER COUNTY SANITARY LANDFILL  
LEWISBURG, WV**

TERRADON has been the Engineer of Record for Greenbrier County Sanitary Landfill for the more than one year. TERRADON has been working with the facility to address compliance issues in regards to storm water management and leachate management. The facility operates a leachate collection system which flows into two leachate storage ponds. Pre-treatment, in the form of a package plant, is performed on a percentage of the leachate in one of the ponds. The leachate is eventually pumped via approximately four miles of force main to the local PSD collection system. The treatment plant imposes daily flow restrictions and halts flow completely during periods of wet weather when the plant experiences large inflow and infiltration problems.

TERRADON is working with Greenbrier County Landfill to best manage its storage capabilities to provide the required 30-day leachate storage while utilizing its existing leachate management facilities. This management includes guidance on cell development to minimize leachate generation and storm water management to reduce the potential for storm water to enter the leachate collection/storage system. TERRADON is also evaluating the need for expansion to leachate storage ponds.

**SERVICES PROVIDED**

- Compliance Study
- Storm Water Management
- Leachate Collection Study
- Leachate Management
- Storage Management
- Inspection
- Design

**PROJECT REFERENCE**

Wayne Childers, Manager  
Greenbrier County Landfill  
304-645-2489



### **HAM SANITARY LANDFILL PETERSTOWN, WV**

TERRADON has been the Engineer of Record for HAM Sanitary Landfill for more than 10 years. TERRADON has designed and overseen construction of a leachate conveyance line, one MSW disposal cell and two Asbestos/C&D disposal cells over this period.

TERRADON Corporation provided site characterization, surveying, mapping, subsurface investigation, groundwater study, monitoring, cell design, and Certificate of Need application for a Major Modification to HAM Landfill's existing facility.

HAM Landfill initially collected leachate in a series of above ground storage tanks and trucked leachate off-site to PSD for treatment. Growth of the facility warranted change in leachate management. Through a series of permit modifications, HAM Landfill now has a gravity connection to the PSD for leachate removal and is under construction to replace the above ground storage tanks with a lined leachate pond. TERRADON works with HAM Landfill to manage its leachate flow to meet flow restrictions by the PSD while accommodating the WVDEP's requirement for on-site 30-day leachate storage.

TERRADON is currently overseeing the construction of a 2 acre asbestos/C&D disposal cell, a 2 acre MSW disposal cell, and a leachate storage pond at HAM Sanitary Landfill

### **SERVICES PROVIDED**

- Compliance Study
- Storm Water Management
- Leachate Collection Study
- Leachate Management
- Storage Management
- Construction Inspection
- Construction Management
- Cell Design
- Hazardous Materials
- Site Characterization
- Subsurface Investigation
- Groundwater Study

### **PROJECT REFERENCE**

Cassie Bradley, Manager  
HAM Sanitary Landfill, LLC  
304-753-9470



**TUCKER COUNTY LANDFILL  
DAVIS, WV**

**CELL 5 DESIGN & CERTIFICATIONS**

For the Tucker County Solid Waste Authority, TERRADON performed surveying, cell design, and construction observation and certification for the extension of Cell 5.

**EXISTING LEACHATE POND REPAIR**

TERRADON assessed the need for scheduled relining of the leachate Pond and correctly determined the problem was ground water leakage under the pond and designed an intercept ditch to fix the problem, resulting in several hundred thousand dollars savings.

**CELL 6 DESIGN**

TERRADON performed surveying, mapping, subsurface investigation, Certificate of Need and Major Modification permit application, Cell Design, construction monitoring and certification for the six-acre cell.

**CELL 7 DESIGN**

TERRADON provided Certificate of Need (CON) application and major modification for the permit for a 20-acre, 50-year new cell design including leachate pond and innovative gravity loadout facility design, QA/QC services, and final certification. Design included provisions for cell lining in four phases, storm water and leachate management.

**CAPPING FOR CELLS 1-4**

TERRADON provided design for the capping of Cells 1-4 including gas venting and leachate management.

**SERVICES PROVIDED**

- Cell Design
- Construction Observation
- Certification
- Leachate Pond Repair
- Surveying & Mapping
- Subsurface Investigation
- Construction Monitoring
- Leachate Management
- Geotechnical Investigations
- Monitoring Well Installation
- HELP Analysis
- QA/QC
- Reporting

**PROJECT REFERENCE**

Joe F. Drenning, Chairman  
Tucker County Solid Waste  
Authority  
304-259-5580



### **MCDOWELL COUNTY LANDFILL LCAP MCDOWELL COUNTY, WV**

The project consisted of capping approximately 12 acres with a HDPE Liner. The project included: surveying, develop exiting topo map, site assessment, concept plans, bid documents, permitting, bidding, construction and construction oversite, and certification. Site assessment included extensive surface and subsurface evaluations to minimize the amount of groundwater entering the leachate collection system.

### **SERVICES PROVIDED**

- Cap Design
- Surveying
- Topo Mapping
- Site Assessment
- Concept Plans
- Bid Documents
- Permitting
- Bidding
- Construction Oversight
- Surface & Subsurface Evals

### **PROJECT REFERENCE**



**DIETZ HOLLOW LANDFILL  
HUNTINGTON, WV**

The project included: preliminary surveying, develop exiting topographic map, site assessment, field reconnaissance, historical data research, preliminary capping costs, ground water sampling for hazardous waste, and preliminary post closure care/cost. TERRADON also reviewed water quality data and revised the sampling strategy and parameter list.

**SERVICES PROVIDED**

Preliminary Surveying  
Topo Mapping  
Site Assessment  
Cost Estimating  
Ground Water Sampling  
Construction Oversight

**PROJECT REFERENCE**

Jim Insko  
Public Works Director  
City of Huntington  
304-696-5903  
[Inskoj@cityofhuntington.com](mailto:Inskoj@cityofhuntington.com)





**PINE CREEK LANDFILL  
LOGAN, WV**

For the WVDEP LCAP, TERRADON Corporation designed the permanent closure plan including an additional landfill cell, stormwater management, capping, leachate management and storage tank, construction QC and certification for the abandoned landfill.

**JACSON COUNTY SANITARY LANDFILL  
JACKSON COUNTY, WV**

As part of the WVDEP's Landfill Closure Assistance Program, TERRADON Corporation prepared interim closure plan including stormwater management, leachate management, sediment pond and leachate pond repairs, regrading and re-vegetation of disturbed areas.

**COPPER RIDGE LANDFILL  
CAPELS, WV**

TERRADON provided services to Enviro Solutions for the Cooper Ridge Landfill. TERRADON services included stormwater management, leachate management, and subsurface investigations. The project had a \$5.6 Million construction cost.

**WYOMING COUNTY SANITARY LANDFILL  
WYOMING COUNTY, WV**

TERRADON Corporation provided landfill and geotechnical services for the Wyoming County Landfill in WV. Services included site characterization, stormwater management, leachate management including storage tanks, pump station and force main to POTW; slope stability regrading; and Subtitle D cap for the WVDEP.

## TERRADON's Project Understanding

TERRADON's understanding of the project is that there are two landfills, the Monongalia County Landfill, and the City of Morgantown Landfill which are the subject of this investigation. Both of these landfills are closed and no longer accepting waste materials. They are enrolled into WVDEP's Landfill Closure Assistance Program (LCAP). Presently, WVDEP is seeking an evaluation of the leachate holding tanks and ponds to determine if they are in compliance with Title 33 CSR Series 1 Solid Waste Management Rule, Title 47 Series 63 Aboveground Storage Tanks, and other appropriate regulations. Along with this evaluation, WVDEP is seeking cost effective alternatives to bring the facilities into compliance.

### Monongalia County Landfill (SWC-1007/WV0109045)

**Latitude:** 39° 35' 52" N

**Longitude:** 80° 04' 03" W

The Monongalia County Landfill was capped under the WVDEPs' LCAP program in 2001. The landfill is approximately 16 acres with four monitoring wells and is currently in post closure status. Leachate is being trucked to the Fairmont Waste Water Treatment Facility for treatment, a round trip of approximately 50 miles. The Monongalia County Landfill is located 5.4 miles South of I-79 exit 152 off of Little Indian Creek Road (Orange Pipe Gate).

### City of Morgantown Landfill (SWC-4870/WV0109053)

**Latitude:** 39° 38' 24" N

**Longitude:** 79° 55' 15" W

The City of Morgantown Landfill was capped under the WVDEP's LCAP program in 1998. The landfill is approximately 29 acres with six monitoring wells and is currently in post closure status. Leachate from this landfill is transported to the Morgantown Waste Water Treatment Facility via pipeline for treatment. The Morgantown Landfill is located off of I-68 exit 4, Route 7 into Saberton, tight turn onto Route 857, and then right onto Everlasting Lane, landfill gate is on the left side.

## 1.1 WVDEP's Project Goals and Objectives

The goals and objectives of the project, for each site to be considered are the following:

- Site Investigation of Existing Features
- Surveying and Mapping
- Subsurface Investigation
- Corrective Action Design
- Sediment and Erosion Control Plan
- Construction Specifications, Drawings, Cost Estimate, and QA/QC Plan
- Construction Bid Evaluation
- Construction QA/QC Oversight
- All Applicable Permit Applications
- Right of Way, Right of Entry
- Compliance with 33CSR1, 47CSR63 AST Rule, and other rules

The following sections are TERRADON's approach to accomplish WVDEP's required goals and objectives.

## 2.0 Site Investigation

TERRADON's engineers and scientists will conduct a comprehensive site investigation to obtain information necessary for evaluation of existing facilities and alternatives. This investigation will include a review and evaluation of existing information pertaining to the sites, evaluation of surface and subsurface soil and hydrogeologic conditions, as well as evaluation of current facilities and operations at each landfill. The site investigation may include the following items:

### 2.1 Records Review

TERRADON will review all the LCAP closure design files available from WVDEP on the two landfills. This will include an evaluation of the stormwater runoff design, leachate collection sys-

tem, leachate holding system, and treatment facilities. The design information provided by the LCAP program will be reviewed for compliance with 33CSR1. Utilizing this information, TERRADON will assemble a site investigation program for each landfill.

## 2.2 Site Survey

Part of this task may also include a site survey of existing features, if existing survey files are not adequate. A design quality survey may be required to obtain existing site topography and other important site features. This quality of survey would allow for design of the leachate holding facilities and better control of surface water. TERRADON's survey department can conduct all required surveys, if required.

## 2.3 Leachate Collection System Evaluation

TERRADON will review and inspect the existing leachate collection system in place at each landfill. This will include an evaluation of the surface water component that is entering the leachate collection system and potential solutions to reduce surface water volume. If observations or records indicate a potential problem, an evaluation of the groundwater may be conducted. The source of groundwater and potential engineering controls to reduce or eliminate groundwater infiltration into the leachate collection system may be necessary and will be designed, if required.

### 2.3.1 Subsurface Investigation

The site investigation plan may include a subsurface investigation consisting of subsurface soil borings and may include the installation of additional groundwater monitoring wells. This subsurface investigation would be conducted to assist in the determination of soil types, type and depth of bedrock, and depth to groundwater and groundwater flow properties. The subsurface investigation will allow TERRADON to evaluate the data to determine if viable engineering alternatives may be beneficial in upgrading the leachate storage and treatment system.

### 2.3.2 Surface Water Evaluation

The surface topography and existing stormwater controls will be evaluated to determine if additional engineering controls can be implemented to reduce the amount of surface water entering the leachate collection system.

## 2.4 Leachate Storage, Treatment, and Disposal Systems Evaluation

TERRADON will review and evaluate the existing leachate storage and treatment options in place at the landfills. This evaluation will include a compliance evaluation with 33CSR1 and a feasibility analysis to determine the extrapolated costs of operations and maintenance of the existing facilities. This analysis will also be critical for comparison to determine if upgrades or complete redesign of the facilities would be cost effective over time.

## 3.0 Feasibility and Cost Evaluation Study

TERRADON will perform a feasibility and cost evaluation study that will include the records review, field investigation data, and analysis of several potential alternatives. TERRADON will continually collaborate with WVDEP to develop the alternatives to be studied. Close collaboration with WVDEP is anticipated during the alternative selection process to ensure that the most desirable and cost effective alternative is selected. Some of the potential alternatives may include the following:

**3.1 Alternative 1:** Conduct business as usual (Normal O&M costs) for remaining life expectancy of the existing facility.

**3.2 Alternative 2:** Upgrade existing system components to address deficiencies or cost issues to become compliant with current State/Federal Standards. Calculate yearly O&M costs and life expectancy.

**3.3 Alternative 3:** Design new components of the leachate storage and transport system

to be compliant with current State/Federal Standards. It is anticipated that existing aboveground storage tanks may not be compliant with recently enacted AST requirements. Calculate yearly O&M costs and life expectancy.

**3.4 Alternative 4:** Evaluate new treatment technology to improve treatment or become compliant with State/Federal Standards. Calculate yearly O&M costs and life expectancy.

**3.5 Alternative 5:** Evaluate decommissioning the old system. The alternative may include the design and construction of a completely new leachate storage and treatment system. This alternative would require phased construction in order to continue to operate the old system until the new system is on line. Calculate yearly O&M costs and life expectancy.

### **3.6 State and Federal Regulatory Compliance**

As part of the feasibility study, TERRADON will conduct a complete state and federal regulatory review to ensure the facility is compliant with all current regulations. This review will also include a WVDEP permitting review to ensure the facilities have all appropriate permits.

### **4.0 Selected Alternative Support**

TERRADON will provide conclusions and recommendations in the feasibility report. This information will represent TERRADON's professional opinion as to the most desirable and cost effective solutions to accomplish the project goals and objectives and to be in compliance with current state and federal regulations. TERRADON will work in conjunction with WVDEP and the landfill stakeholders to provide guidance and professional opinions during WVDEP's alternative selection process. TERRADON will provide support to WVDEP for their selected alternative to be implemented at each of the landfill facilities.

#### **4.1 Corrective Action Design Support**

TERRADON will work in conjunction with WVDEP to design the selected alternative. TERRADON will complete the required design drawings and construction specifications necessary for bid. TERRADON can also provide review of construction bids and provide a recommendation on the selection of the construction firm, if requested.

#### **4.2 Additional Construction Support**

TERRADON can provide additional project support prior to and during construction activities. Additional support may consist of the following services:

- 4.2.1 Right of Way or Right of Entry support
- 4.2.2 Permitting Support
  - 4.2.2.1 WVDEP Construction Stormwater NPDES permit, including stormwater management plans
  - 4.2.2.2 404/401 permitting with the Army Corps and WVDEP
  - 4.2.2.3 Stormwater pollution prevention plans (SWPPP)
  - 4.2.2.4 Groundwater pollution prevention plan (GPP)
  - 4.2.2.5 Other potential plans and permitting, as required
- 4.2.3 Construction Inspection services to ensure that construction activities are conducted according to design specifications.
- 4.2.4 As Built Survey and final As Built Plans

**Appendix A:  
Resumes**

## JOHN JAMES, PE

## LEAD GEOTECHNICAL ENGINEER

### EDUCATION

B.A. Civil  
Engineering  
West Virginia  
Institute of  
Technology

### WORK EXPERIENCE

TERRADON  
Corporation  
2004-Present

James  
Engineering  
1983-2004

Triad Engineering  
1978-1983

James  
Engineering  
1973-1978

Ackenherl &  
Associates  
1968-1973

### REGISTRATION

Professional  
Engineer: WV

John James is a Senior Geotechnical Engineer for various dam, landslide, foundation investigation/design, transportation, environmental, site selection, and mining projects. He has over 48 years of experience practicing engineering in WV and surrounding states. James specializes in innovative and cost-saving concepts for his projects. Coupled with his hands on common sense approach to projects, he works with many of the accepted geotechnical and other engineering software applications for latest technical solutions.

James' project experience includes: foundation investigations and designs ranging in size from small projects to major industrial complexes; studies and designs for landfills and other environmental facilities; studies and designs for earth, earth/rockfill and concrete dams; all types of retaining wall designs, including conventional concrete walls, MSE walls, sheet piling, and H Pile and lagging, all with or without various anchoring systems; landslide analysis and remediation; roads; highways and bridges; surface and groundwater studies; storm drainage facilities; airport facilities; and forensic engineering.

### PROJECT EXPERIENCE

#### Tucker County Landfill

James has been the lead design engineer/engineer of record for the TCLF for the past 10 years, including responsibility for siting, permitting, design and all other services for the landfill. He has devised many cost-saving solutions and designs, including the incidental mining of previous mined-out coal workings for a cost savings for \$8,000,000 of \$10,000,000 Cell 7 cost.

#### Ham Landfill Expansion

Provided site characterization, surveying, mapping, subsurface investigation, groundwater study, monitoring, cell design, major modification to permit, and Certificate of Need application for the Ham Sanitary Landfill Expansion Project in Peterstown, WV.

#### Pine Creek/Omar Landfill

This project was under the WVDEP LCAP Program. James provided design and permitting services for the landfill that used 12 Acres HDPE Liner, in Pine Creek, Logan County, WV.

#### Dam Experience

James has been Engineer of Record for numerous earth and rock fill dams in West Virginia, and some recent projects include: Mallard Dam (presently in design), 8 acres; Upper Glade Creek Water Supply Dam upgrade (from 95 to 112 acres+/-; Dawson Dam, 30 acres+/-; Lake Chaweva Reconstruction, 24 acres+/-; and Chatham Dam, 65 acres+/-). Also provided consultation and construction design for the United States Army Corps of Engineers for Bluestone Dam.

#### Site Selection Experience

James specializes in site evaluation from geologic and topographic perspectives with an ability to visualize relevant features of both geotechnical and topographical, including literature research and site reconnaissance, for specific project needs.

#### Transportation Experience

Worked on numerous roadway (cut and fill slopes) designs, landslide evaluation and remediation, site designs for numerous projects and foundation investigations for approximately 1,000 projects in West Virginia and the surrounding states.

**EDUCATION**

B.S. Civil  
Engineering  
Technology  
Fairmont State  
College

A.A.S. Civil  
Engineering  
Technology  
Fairmont State  
College

A.A.S. Drafting/  
Design  
Engineering  
Technology  
Fairmont State  
College

**WORK  
EXPERIENCE**

**TERRADON**  
Corporation  
2010-Present

Triad Engineering,  
Inc.  
2000-2010

WV Army National  
Guard  
1990-2003

Mark Clutter is a Project Manager/Design Engineer who is experienced in preparing construction documents and associated permitting for numerous projects throughout Kentucky, Ohio, and West Virginia including: creating erosion and sediment control plans, storm water management, design of impoundment closures, slope stability analysis, field surveying, drawings and specification preparation, design, design drafting, construction inspection, quality control testing, shop drawing review, project management, contract administration, permitting, and report preparation. Clutter's landfill experience adheres to the WVDEP's Landfill Closure Assistance Program (LCAP) for landfill designs and construction, including all closure-related activities such as: leachate management control, sediment and erosion, gas management, groundwater monitoring, and a final cover on non-composite lined landfills.

**PROJECT EXPERIENCE****Tucker County Landfill, Cell 7 Design**

For the Tucker County Solid Waste Authority, performed major modification of the permit, geotechnical investigation, new 50-year cell design, and leachate pond closure plan, groundwater statistical report, leachate management, QA/QC services, stormwater ponds, subsurface investigation, and Certificate of Need (CON) application, HELP mode and installation of monitoring wells for a 20 acre cell at the Tucker County Landfill in Davis, WV.

**Tucker County Landfill Permitting**

Solid Waste Facility Siting Plan, Certificate of Need, Certificate of Site Approval, Part 1-Site Evaluation Application, Part 2-Design Application, DWW/M-Module A-NPDES, Major Modification, Quarterly Report, Annual Report for the Tucker County Landfill.

**Tucker County Landfill Cells 1-4 Capping**

The project consists of capping approximately 20 acres of previous landfill cells with a HDPE Liner. The project included the following: preparation of construction drawings, technical specifications, contract and bidding documents, advertisements for bid, design report outlining the calculations to support the design, Erosion and Sediment Control permits, modifications to the NPDES storm water permit, permits to the West Virginia Solid Waste Authority for capping and reuse of methane, air pollution control permits for use of the methane gas emissions, and field services for Quality Control.

**Tucker County Landfill**

TERRADON provides quarterly surveying of the current landfill surface and calculation of the quarterly volume and compaction rate; producing semi-annual statistical analysis and reports; creating annual reports that include: construction activities, financials, MSW tonnage, leachate generation, groundwater and discharge monitoring reports, and airspace summaries.

**Ham Landfill Expansion**

Provided site characterization, surveying, mapping, subsurface investigation, groundwater study, monitoring, cell design, major modification to permit, and Certificate of Need application for the Ham Sanitary Landfill Expansion Project.

**Additional LCAP Experience**

Provided design and permitting for the following under the WVDEP LCAP Program:

- Pine Creek/Omar Landfill, 12 Acres HDPE Liner, Pine Creek, Logan County, WV
- Buckhannon Landfill, 14 Acres Geo-synthetic Clay Liner, Buckhannon, WV
- Don's Disposal, 24 Acres HDPE Liner, near Eden's Fork, Kanawha County, WV
- McDowell County Landfill, 12 Acres HDPE Liner, near Welch, McDowell County, WV

**EDUCATION**

A.S. Survey  
Technology, West  
Virginia Institute of  
Technology

B.S. Surveying,  
West Virginia  
Institute of  
Technology

**WORK  
EXPERIENCE**

TERRADON  
Corporation  
1994-Present

Bowman Land  
Surveying  
1992-1994

Dunn Engineers  
1990-1992

Kelley Gidley Blair  
& Wolfe  
1988-1990

Pierson &  
Whitman  
Architects and  
Engineers  
1984-1986

**REGISTRATIONS**

Professional  
Surveyor: WV

With more than 30 years of experience in a wide range of surveying projects, Robert Thaw serves as head of TERRADON's Survey and Mapping department. He organizes and supervises survey crews, reviews project plans, and creates base mapping for various projects including noise barriers, interchanges, connectors, bypasses, sidewalks, bike paths, and bridges. Thaw oversees all TERRADON survey activities, including: preparation of Right-Of-Way plans; the development of GPS static networks for aerial mapping in the design of roadways; identification of existing utilities and property lines; base image development and control placement for construction projects; and drafting of legal descriptions for ROW parcels.

**PROJECT EXPERIENCE****Nitro Landfill Topographic Survey**

Thaw was responsible for surveying the boundary of the former Landfill for future cap and development. Thaw and the survey & mapping staff performed topographic survey of the site, and prepared project mapping plans.

**Tucker County Landfill**

Thaw established survey control for the landfill. His responsibilities included creating topographic surveys on a quarterly basis to be used for volume reporting for the landfill. Tucker County Landfill is a repeat client to TERRADON.

**Charleston Landfill**

Thaw performed topographic surveys, and located bore hole locations for the Charleston Landfill.

**Charleston Landfill Geotechnical Studies**

As part of the Charleston Landfill study, Thaw conducted a feasibility study for Leachate tank siting. Thaw also performed topographic surveys of proposed leachate tank sites to be used in the feasibility study.

**Nicholas County Landfill Design**

Thaw provided survey services to establish control for the landfill. Responsibilities for the project included creating topographic surveys for design studies.

**AEP- John Amos Power Plant Industrial Landfill**

Thaw established survey control, performed topographic surveys used for access road design, completed construction staking for access road, and excavation, provided daily volume reports. The client for this project was Shelly and Sands Inc..

**The Summit Bechtel Reserve, Glen Jean, WV**

Thaw delivered more than 14,000 acres of LiDAR, which was flown during full summer canopy. TERRADON provided the horizontal and vertical control utilizing GNSS receivers, and least square static network adjustment. A subsequent control network, utilizing GNSS receivers and least square network adjustment was established by TERRADON for construction staking. Concrete monuments, and aluminum disks were used for the control points. The entire 14,000 acres was mapped at 2' contour interval, will accuracy's better than 1' contour specifications.

**City of Huntington Marina, Huntington, WV**

Thaw provided services which included: aerial photogrammetry control, aerial photography, LiDAR, engineering design survey, data computation, CADD, digital terrain modeling, boundary survey, civil information model (CIM), and hydrographic surveys. Utilizing VRS and GNSS, TERRADON provided the photo control to develop base mapping for the City of Huntington Marina. After receiving the aerial mapping, TERRADON performed field edits to confirm critical areas with the LEICA TS 15 P-1, and VRs GNSS.



## **EDUCATION**

M.S. Environmental  
Science & Policy,  
Johns Hopkins

B.S. Earth &  
Environmental  
Science, Wilkes  
University

## **WORK EXPERIENCE**

TERRADON  
Corporation  
2014-Present

Tetra Tech  
2003-2014

McCormick Taylor  
2001-2003

Dynamac Corpora-  
tion  
1997-2001

Wilkes University  
1995-1997

## **CERTIFICATIONS**

OSHA  
1910.120/1926.65  
HAZWOPER

Professional Wet-  
land Scientist by the  
Society of Wetland  
Scientist (#1395)

Maryland Biological  
Stream Survey  
Sampling Certificate  
of Training, MDNR

Samuel Wilkes joined TERRADON in April 2014. He is a Professional Wetland Scientist with more than 20 years of consulting experience as a project manager and senior environmental scientist who provides technical support to watershed management restoration, natural resource conservation, and hazardous materials programs. Wilkes has provided assistance to public drinking water systems throughout West Virginia to assess potential contaminant sources and preparing source water protection plans. His experience enabled him to work with the WVDHHR-BPH staff and directly with various Public Service Districts throughout WV. He provides oversight and manages field teams and contractors collecting wetland, stream quality, environmental media data and general site condition data for site characterization. He has assisted clients by managing research, data analysis, data mapping and as a contributory author on scientific documents and peer reviewed research papers. Wilkes routinely oversees and conducts technical reviews of other consultants' work plans, sampling analysis plans, health and safety plans, quality assurance project plans, site characterization reports, and provides oversight of field crews conducting scientific data collection, delineations of wetlands and waters of the United States.

## **PROJECT EXPERIENCE**

### **Independent Oil and Gas Association**

Currently providing technical scientific support to IOGA during the appeal process of Regulated Aboveground Storage Tanks in WV. Providing expert witness testimony during the evidentiary hearing to the Environmental Quality Board. Zones of Critical Concern and Zones of Peripheral Concern.

### **Aboveground Storage Tank (WV Senate Bills 373 and 423) Implementation**

The TERRADON Team supported numerous clients by conducting time critical visual inspections of approximately 2,000 ASTs throughout the state. The inspection documentation resulted in a "Fit for Service", "Not Fit for Service", or "Fit with Required Repairs" determination for each tank. In addition, completed or updated SPCC or Spill Prevention, Response Plans for submittal to the WVDEP.

### **Wetland, Waters of the US Delineation, and Endangered Species**

Currently providing wetland and waters of the US delineations and permitting support to numerous private development and oil/gas clients. Acting as an Authorized Agent, submitted Nation Wide Permits and Individual 404 Permits to the Army Corps of Engineers. Conducted endangered species clearance through the USFWS project review process in WV and KY.

### **Environmental Audits**

Conducts site visits to confidential industrial client's facilities to review environmental permitting requirements and daily business practices. Recommend appropriate environmental permitting requirements for the facility to meet federal and state requirements. Best management practices are recommended for complying with spill prevention, control, and countermeasure (SPCC) plans and other regulations. Conducted environmental audits for industrial clients in WV, VA, MD, AZ and TX.

### **Cabin Creek Health Care System NEPA Environmental Assessment**

Providing technical scientific evaluation of the proposed development site to establish a health care facility. Conducted evaluations for Threatened and Endangered Species, Historical Structures, Cultural Resources, Wetlands and Waters of the US, and hazardous contamination. Initiated a formal US Fish & Wildlife Threatened and Endangered Species Review for the property. Conducting a public meeting and established a repository for the public review of the EA Document.

## **EDUCATION**

B.S. Civil  
Engineering  
VA Tech

## **WORK EXPERIENCE**

TERRADON  
Corporation  
2006-Present

ET 2000, Inc.  
1990-2006

Brackenrich &  
Associates  
1992-1998

Cornerstone Land  
Surveying  
1991-1992

Norfolk Southern  
1989-1991

## **CERTIFICATIONS**

WVDOT Concrete  
& Compaction  
Inspector

## **PHIL REED, PE**

## **SENIOR CIVIL ENGINEER**

Philip Reed serves as TERRADON'S Lewisburg, WV Office Director and provides services to clients for Quality Control, Materials Testing and Engineering Design. Reed provides technical direction on a variety of civil engineering markets including landfills, commercial and industrial developments, housing, energy and infrastructure. Reed is responsible for engineering analysis and modeling, design, regulatory compliance and permitting, in addition to quality control and assurance. He has created numerous residential subdivision designs with roadways and drainage.

## **PROJECT EXPERIENCE**

### **HAM Sanitary Landfill**

Responsible for all aspects of solid waste landfill permitting (H.A.M. Sanitary Landfill, Inc.), including: Certificate of Site Approval through local county Solid Waste Authority; Certificate of Need through Public Service Commission; Part 1 Solid Waste Facility Permit to include geologic and hydrologic evaluation of site; Part 2 Solid Waste Facility Design Application to include site design, leachate modeling, and composite liner design; and solid waste cell construction drawings, Construction Specifications, and Construction Quality Assurance / Quality Control Plan. Also responsible for all aspects of Construction Monitoring, including: monitoring of construction of both municipal solid waste disposal cells and Construction/demolition and asbestos disposal cells; responsible for construction stakeout and monitoring of construction, and Final Certification of construction.

### **Greenbrier County Landfill**

Reed has been working with the facility to address compliance issues in regards to storm water management and leachate management. The facility operated a leachate collection system which flows into two leachate storage ponds. Pre-treatment, in the form of a package plant, is performed on a percentage of the leachate in one of the ponds. The leachate is eventually pumped via approximately four miles of force main to the local PSD collection system. The treatment plant imposes daily flow restrictions and halts flow completely during periods of wet weather when the plant experiences large inflow and infiltration problems.

### **Triana Energy Fresh Water Impoundment**

Responsible for site design, construction certification, and bi-weekly inspections for 15 acre-feet freshwater impoundment in Northern, WV. Responsible for oversight of construction monitoring inspectors, reporting and permit compliance.

### **Summit Bechtel Reserve**

Provided Engineering Support for a 12,000-acre site development in Fayette County, WV. Oversaw site layout, grading, and survey support for one of the largest infrastructure projects in West Virginia. Oversaw all QC services and provided project direction of 20 inspectors and technicians during installation of more than 100 miles of utilities and nearly 50 miles of roadway construction. Additional inspection and monitoring activities included vertical construction of three buildings and an iconic wingtip pedestrian bridge.

## **GREG HARVEY**

## **SENIOR INSPECTOR**

Greg Harvey is a Level III Inspector and is an experienced designer and construction manager for a wide variety of civil engineering projects. Major design and construction projects with which Harvey has been involved include water and sanitary system upgrades, buildings, roadway design, drainage design, site design, abandoned mine land reclamation, permitting, property surveys, construction administration, and oversight.

### **RELEVANT PROJECT EXPERIENCE**

#### **S&S Landfill, Clarksburg, WV**

QA/QC and Inspection which included but was not limited to; Earthwork, Drainage, Concrete and HDPE Liner. The various projects included 3 new MSW cells and one cell that was tied into an existing cell. Total cost was approximately 9 million dollars.

#### **Nicholas County Landfill, Craigsville, WV**

Environmental Study for WV LCAP Program which included but was not limited to; Field work and Final report preparation.

#### **Fayette County Landfill, Cunard, WV**

Design, QA/QC and Inspection which included but was not limited to; Earthwork, Drainage, Concrete and HDPE Liner. The Project was a landfill closure under WWLCAP program.

#### **McDowell County Landfill, McDowell County, WV**

Project Management/ Construction Management, Design, QA/QC and Inspection which included but was not limited to; Earthwork, Drainage, Concrete and HDPE Liner. The Project was a landfill closure under WWLCAP program.

## **CHRIS MORRIS**

## **SENIOR INSPECTOR**

Chris Morris is a Senior Inspector for TERRADON Corporation. He is responsible for quality control testing and inspection for WVDOT, commercial, and residential construction projects throughout West Virginia. He interfaces with site owners (public and private) and contractors to complete testing and inspection projects. Morris is responsible for monitoring contractor's work for conformance to the design plans, specifications and general permit requirements; experience tracking daily quantities, completing daily inspection reports, reviewing payment requisitions and maintaining field sketchbooks and as-built drawings.

### **RELEVANT PROJECT EXPERIENCE**

**Charleston Landfill—Charleston, WV - Observation and Density Control**

**AEP John Amos Plant—Winfield, WV - QA/QC mass concrete pours for large mat foundations and contractor's QC of controlled fill and various concrete placement.**

**AEP Glen Lynn Power Plant, Glen Lynn, VA - Observation and Density Control**

**Winfield Locks and Dam—Winfield, WV - Observation and Density Control**

**Mingo County Airport—Williamson, WV - Primary QA Technician**

**Western Regional Jail—Barboursville, WV - Owners QA Technician of Auger Cast Pile Installation**

**Raleigh Memorial Airport—Beckley, WV - Observation and Density Control**

**Winfield Locks and Dam—Winfield, WV - Observation and Density Control**

**Blennerhassett Bridge—Parkersburg, WV - QA/QC for all facets of construction of new bridge**

**AEP Kyger Creek Power Plant—Cheshire, OH - Observation and Density Control**