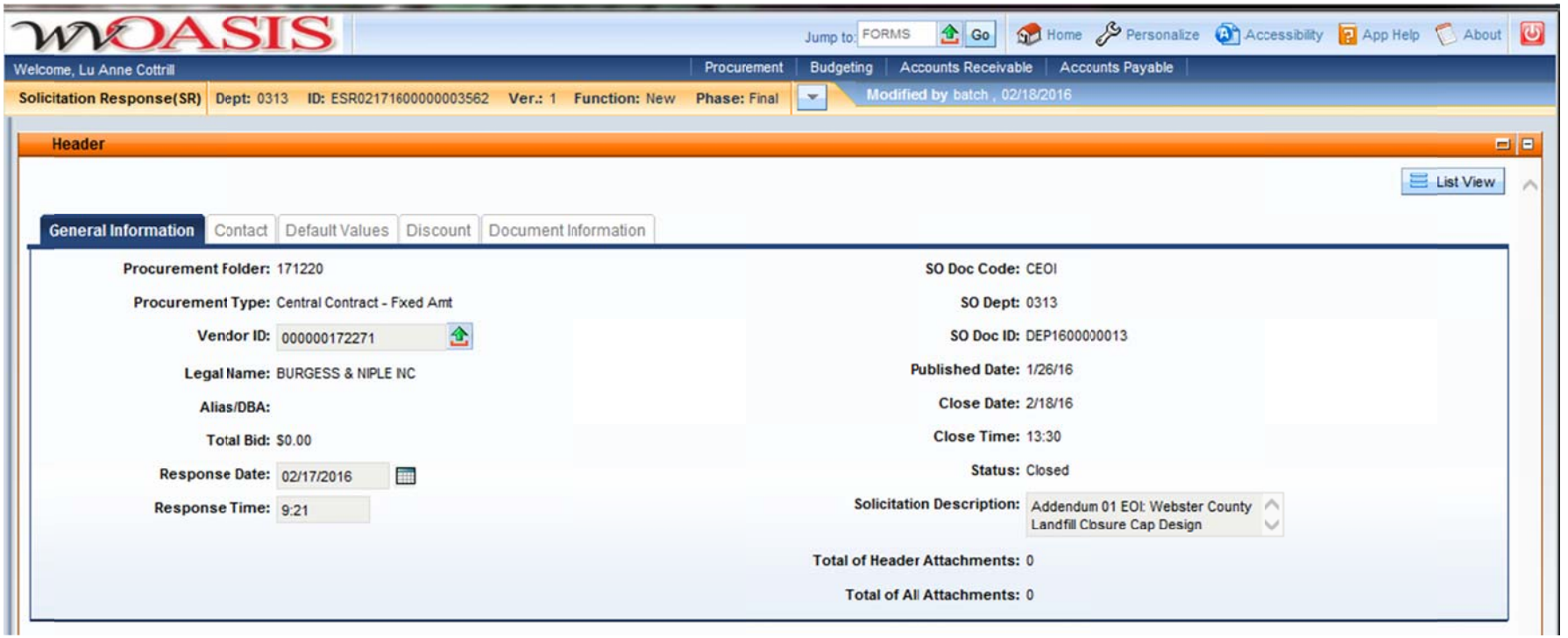
The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at ***wvOASIS.gov***. As part of the State of West Virginia's procurement process, and to maintain the transparency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


WVOASIS
Jump to: FORMS Go
Home
Personalize
Accessibility
App Help
About
Welcome, Lu Anne Cottrill
Procurement
Budgeting
Accounts Receivable
Accounts Payable
Solicitation Response(SR) Dept: 0313 ID: ESR02171600000003562 Ver.: 1 Function: New Phase: Final
Modified by batch , 02/18/2016
Header
List View
General Information
Contact
Default Values
Discount
Document Information
Procurement Folder: 171220
Procurement Type: Central Contract - Fixed Amt
Vendor ID: 000000172271
Legal Name: BURGESS & NIPLE NC
Alias/DBA:
Total Bid: $0.00
Response Date: 02/17/2016
Response Time: 9:21
SO Doc Code: CEOI
SO Dept: 0313
SO Doc ID: DEP1600000013
Published Date: 1/26/16
Close Date: 2/18/16
Close Time: 13:30
Status: Closed
Solicitation Description: Addendum 01 EOI: Webster County Landfill Closure Cap Design
Total of Header Attachments: 0
Total of All Attachments: 0

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

State of West Virginia
Solicitation Response

Proc Folder : 171220

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

Proc Type : Central Contract - Fixed Amt

Date issued	Solicitation Closes	Solicitation No	Version
	2016-02-18 13:30:00	SR 0313 ESR02171600000003562	1

VENDOR

000000172271

BURGESS & NIPLE INC

FOR INFORMATION CONTACT THE BUYER

Beth Collins

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

Signature X **FEIN #** **DATE**

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

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

Comm Code	Manufacturer	Specification	Model #
81100000			

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

BURGESS & NIPLE
Engineers ■ Architects ■ Planners

Expression of Interest

Site Characterization Study

Leachate Management & Closure Cap for Webster County Landfill

Purchase Order No. DEP1600000013

Solid Waste Authority of Central Ohio

February 18, 2016

Submitted to:
West Virginia Department of Environmental Protection | Department of Administration, Purchasing Division
2019 Washington Street East | Charleston, West Virginia 25305-0130

TABLE OF CONTENTS

BURGESS & NIPLE

4424 Emerson Avenue | Parkersburg, WV 26104 | 304.485.8541

Ms. Beth A. Collins
Senior Buyer
Department of Administration, Purchasing Division
2019 Washington Street, East
Charleston, WV 25305

Re: Expression of Interest
Site Characterization Study, Leachate Management and Closure Cap Design for Webster County Landfill (RFQ No. CEOI-DEP1600000013)

February 18, 2016

Dear Ms. Collins:

Burgess & Niple, Inc. (B&N) is pleased to present this Expression of Interest (EOI) to provide engineering services for the Site Characterization Study, Leachate Management and Closure Cap Design for Webster County Landfill (RFQ No. CEOI-DEP1600000013). The project is being completed by the West Virginia Department of Environmental Protection (WVDEP) under the Landfill Closure Assistance Program (LCAP). Specifically, the scope of services is anticipated to include the following:

- Site investigation of existing features, surveying and mapping, laboratory analysis of soil and water, subsurface investigations to determine location as well as limits and depths of waste, location of potential borrow areas either on site or near-by.
- Engineering and design of the capping system to be installed including grading plans and cross sections of the cap system, leachate collection and storage systems, sediment and erosion control plans including required ponds.
- Preparation of construction contract drawings and specifications suitable for letting of construction bids and the bidding process.
- All applicable permit applications, right-of-ways, right-of entries, and approvals shall also be a part of the work to be performed. The Bidder shall furnish all personnel, facilities, equipment, material, supplies, and services for all of the scope of work required by this contract. The contractor shall review and reference all work to insure compliance with 33CSR1.

B&N has completed more than 840 solid waste management related projects since the late 1970s for municipalities, counties, regions, private individuals, and industries. Our staff has experience in nearly every facet of solid waste management, from siting and construction to operation and post-closure. We stay apprised of the best available and emerging technologies in the industry such as the use of green technologies for wastewater management and the new Closure Turf that replaces the traditional expansive vegetative soil cap at a more affordable cost and lower long-term maintenance requirements. In addition to our design capabilities, we have provided site investigations and regulatory mandated monitoring for a majority of our solid waste clientele as well. However, there are many firms that have similar resumes to B&N.

The unique qualifications that B&N can provide to the WVDEP is our experience with passive "green solution" leachate management systems. The Webster County Landfill is located in a rural area with minimal options for

wastewater collection and treatment. These types of facilities often necessitate numerous man-hours to collect leachate by vacuum truck from an underground storage tank (UST) or storage basin and transport to a local wastewater treatment plant for disposal. Some facilities have found that the hauling operations are not able to keep up with the volume of leachate generated at the landfill and ultimately must either pay a premium in order to capture all site leachate or allow leachate outbreaks to occur in violation of the environmental regulations. We believe that in order to manage the waste stream effectively and economically, an onsite self-sustaining passive leachate management system is needed. B&N has designed a number of such systems for our clients that utilize phytoremediation and/or engineered wetland treatment cells. It appears that the Webster County Landfill had initially intended to use a wetland treatment cell for leachate management at the facility; however, the system ultimately did not function as intended. This system could be reengineered and constructed to operate to the fullest capacity. B&N designed a system of onsite wetland treatment cells for the City of Lancaster, Ohio to manage leachate and impacted groundwater at their Stonewall Cemetery Road Landfill. A summary of the project is presented in the enclosed project data sheets.

Another innovative option that has recently become recognized nationally is the use of phreatophytes, or deep-rooted, high-transpiring, water-loving trees that send their roots into regions of high moisture and that can survive in conditions of temporary saturation. Typical phreatophytes include species such as cottonwoods, poplars, and willows. Although these systems can experience a delay in effectiveness until the vegetation matures (usually within less than 2 years), the long-term benefits and overall "green technology" approach are beginning to become more favorable than a conventionally engineered system. This technology results in a reduced leachate volume through improved performance over a traditional clay cap and also serves to treat any remaining leachate to within discharge limits.

The Watson Road Landfill project in Newark, Ohio (also detailed in the enclosed project data sheets) that B&N recently completed is very similar to the Webster County Landfill. The landfill is a closed municipal solid waste disposal facility that had experienced significant erosion over the years. The erosion, in addition to the insufficient landfill cap system and overall lack of knowledge of waste placement, resulted in numerous leachate outbreaks that discharged to the adjacent surface water tributaries. The City of Newark, Ohio, owner of the facility, initially obtained a preliminary design and cost estimate to engineer a cutoff wall and install a leachate transfer line roughly one half mile down the valley away from the site, under a major river, and connect into the existing sanitary utilities. Upon the City's efforts to seek additional options, B&N proposed the use of phytoremediation and enhanced landfill cap design as a solution. The City chose to proceed with our approach and construction of the first successfully designed and constructed phytoremediation system at a solid waste disposal facility in Ohio was completed in 2012. Leachate that had previously discharged to surface water at various locations has now been restricted to one discharge point subsequent to treatment.

The City has a unique permit in Ohio to discharge landfill leachate in accordance with a facility-specific National Pollution Discharge Elimination System (NPDES) Permit. Prior to B&N's involvement, the City reported 241 exceedances of the NPDES permit maximum discharge limits between 2003 and 2009. Constituents of concern included ammonia, bis(2-ethylhexyl)phthalate, biochemical oxygen demand (BOD), cadmium, copper, cyanide, methyl blue active substances (MBAS), oil & grease, and total suspended solids. Seventy-two of the 241 exceedances were for ammonia. Subsequent to completion of construction activities in 2012, the City has not has an NPDES permit maximum discharge limit exceedance for ammonia. Except for February 2013 and September 2015 minor exceedances of oil & grease, and a March 2014 exceedance of MBAS, there have been no other NPDES permit limit

exceedances. As the trees continue to mature, zero exceedances are anticipated as phytoremediation has been proven to reduce or eliminate all site-specific constituents of concern.

We look forward to the opportunity to work with WVDEP on this project and would appreciate the chance to further discuss our project approach. If you have any questions regarding this EOI or need additional information, please call us at (304) 485-8541.

Sincerely,

BURGESS & NIPLE, INC.

Michael E. Leone, Project Director

James P. Garrison, PE, Executive Vice President

MEL:cmc
Enclosure

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

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

Proc Folder: 171220

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

Proc Type: Central Contract - Fixed Amt

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

BID RECEIVING LOCATION

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

VENDOR

Vendor Name, Address and Telephone Number:

Burgess & Niple, Inc.
4424 Emerson Avenue
Parkersburg, WV 26104
304-485-8541

FOR INFORMATION CONTACT THE BUYER

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

James P. Garrison, PE, Executive Vice President

Signature X J. Garrison **FEIN #** 31-0885550 **DATE** 2/05/16

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

ADDITIONAL INFORMATION:

Addendum No. 01
This addendum is issued to modify the solicitation per the attached documentation and the following:
1. To publish answers to vendor submitted questions.
2. To modify the bid opening date to February 18, 2016 at 1:30 PM, EST.
No other changes.

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

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

Line	Comm Ln Desc	Qty	Unit Issue
1	Water testing services		

Comm Code	Manufacturer	Specification	Model #
81100000			

Extended Description :

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

SCHEDULE OF EVENTS

Line	Event	Event Date
1	Tech Question Submittal Deadline at 5:00 PM EST	2015-01-08

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

EXPRESSION OF INTEREST

Site Characterization Study, Leachate Management & Closure Cap
for
Webster County Landfill

TABLE OF CONTENTS:

SECTION ONE: GENERAL INFORMATION

1. **PURPOSE:** The Acquisition and Contract Administration Section of the Purchasing Division ("Purchasing Division") is soliciting Expression(s) of Interest ("EOI" or "Bids") for The West Virginia Department of Environmental Protection ("Agency"), from qualified firms to provide architectural/engineering services ("Vendors") as defined herein.

2. **PROJECT:** The mission or purpose of the project for which bids are being solicited is to provide services for the West Virginia Department of Environmental Protection's Landfill Closure Assistance Program (LCAP). Project titled Site Characterization Study, Leachate Management and Closure Cap Design for the Webster County Landfill. ("Project").

3. **SCHEDULE OF EVENTS:**

Release of the EOI.....	?
Firm's Written Questions Submission Deadline.	01/08/2016
Addendum Issued	?
Expressions of Interest Opening Date.....	01/28/2016
Estimated Date for Interviews (wk of ?).....	?

EXPRESSION OF INTEREST

Site Characterization Study, Leachate Management & Closure Cap
for
Webster County Landfill

SECTION TWO: INSTRUCTIONS TO VENDORS SUBMITTING BIDS

Instructions begin on the next page.

INSTRUCTIONS TO VENDORS SUBMITTING BIDS

1. REVIEW DOCUMENTS THOROUGHLY: The attached documents contain a solicitation for bids. Please read these instructions and all documents attached in their entirety. These instructions provide critical information about requirements that if overlooked could lead to disqualification of a Vendor's bid. All bids must be submitted in accordance with the provisions contained in these instructions and the Solicitation. Failure to do so may result in disqualification of Vendor's bid.

2. MANDATORY TERMS: The Solicitation may contain mandatory provisions identified by the use of the words "must," "will," and "shall." Failure to comply with a mandatory term in the Solicitation will result in bid disqualification.

3. PREBID MEETING: The item identified below shall apply to this Solicitation.

☑ A pre-bid meeting will not be held prior to bid opening

☐ A **NON-MANDATORY PRE-BID** meeting will be held at the following place and time:

☐ A **MANDATORY PRE-BID** meeting will be held at the following place and time:

All Vendors submitting a bid must attend the mandatory pre-bid meeting. Failure to attend the mandatory pre-bid meeting shall result in disqualification of the Vendor's bid. No one person attending the pre-bid meeting may represent more than one Vendor.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. The State will not accept any other form of proof or documentation to verify attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing.

Additionally, the person attending the pre-bid meeting should include the Vendor's E-Mail address, phone number, and Fax number on the attendance sheet. It is the Vendor's responsibility

to locate the attendance sheet and provide the required information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

All Vendors should arrive prior to the starting time for the pre-bid. Vendors who arrive after the starting time but prior to the end of the pre-bid will be permitted to sign in, but are charged with knowing all matters discussed at the pre-bid.

Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. Any discussions or answers to questions at the pre-bid meeting are preliminary in nature and are non-binding. Official and binding answers to questions will be published in a written addendum to the Solicitation prior to bid opening.

4. VENDOR QUESTION DEADLINE: Vendors may submit questions relating to this Solicitation to the Purchasing Division. Questions must be submitted in writing. All questions must be submitted on or before the date listed below and to the address listed below in order to be considered. A written response will be published in a Solicitation addendum if a response is possible and appropriate. Non-written discussions, conversations, or questions and answers regarding this Solicitation are preliminary in nature and are nonbinding.

Submitted e-mails should have solicitation number in the subject line.

Question Submission Deadline: January 8, 2016 at 5:00 PM, EST

Submit Questions to: Beth A. Collins, Senior Buyer
2019 Washington Street, East
Charleston, WV 25305
Fax: (304) 558-4115 (Vendors should not use this fax number for bid submission)
Email: beth.a.collins@wv.gov

5. VERBAL COMMUNICATION: Any verbal communication between the Vendor and any State personnel is not binding, including verbal communication at the mandatory pre-bid conference. Only information issued in writing and added to the Solicitation by an official written addendum by the Purchasing Division is binding.

6. BID SUBMISSION: All bids must be submitted electronically through wvOASIS or signed and delivered by the Vendor to the Purchasing Division at the address listed below on or before the date and time of the bid opening. Any bid received by the Purchasing Division staff is considered to be in the possession of the Purchasing Division and will not be returned for any reason. The Purchasing Division will not accept bids, modification of bids, or addendum acknowledgment forms via e-mail. Acceptable delivery methods include electronic submission via wvOASIS, hand delivery, delivery by courier, or facsimile.

The bid delivery address is:
Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

A bid that is not submitted electronically through wvOASIS should contain the information listed below on the face of the envelope or the bid may be rejected by the Purchasing Division.:

SEALED BID:
BUYER:
SOLICITATION NO.:
BID OPENING DATE:
BID OPENING TIME:
FAX NUMBER:

In the event that Vendor is responding to a request for proposal, the Vendor shall submit one original technical and one original cost proposal plus _____ convenience copies of each to the Purchasing Division at the address shown above. Submission of a response to a request for proposal is not permitted in wvOASIS. Additionally, the Vendor should identify the bid type as either a technical or cost proposal on the face of each bid envelope submitted in response to a request for proposal as follows:

BID TYPE: (This only applies to CRFP)
☐ Technical
☐ Cost

7. BID OPENING: Bids submitted in response to this Solicitation will be opened at the location identified below on the date and time listed below. Delivery of a bid after the bid opening date and time will result in bid disqualification. For purposes of this Solicitation, a bid is considered delivered when confirmation of delivery is provided by wvOASIS (in the case of electronic submission) or when the bid is time stamped by the official Purchasing Division time clock (in the case of hand delivery).

Bid Opening Date and Time: January 28, 2016 at 1:30 PM, EST

Bid Opening Location: Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

8. ADDENDUM ACKNOWLEDGEMENT: Changes or revisions to this Solicitation will be made by an official written addendum issued by the Purchasing Division. Vendor should acknowledge receipt of all addenda issued with this Solicitation by completing an Addendum Acknowledgment Form, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

9. BID FORMATTING: Vendor should type or electronically enter the information onto its bid to prevent errors in the evaluation. Failure to type or electronically enter the information may result in bid disqualification.

10. ALTERNATES: Any model, brand, or specification listed in this Solicitation establishes the acceptable level of quality only and is not intended to reflect a preference for, or in any way favor, a particular brand or vendor. Vendors may bid alternates to a listed model or brand provided that the alternate is at least equal to the model or brand and complies with the required specifications. The equality of any alternate being bid shall be determined by the State at its sole discretion. Any Vendor bidding an alternate model or brand should clearly identify the alternate items in its bid and should include manufacturer's specifications, industry literature, and/or any other relevant documentation demonstrating the equality of the alternate items. Failure to provide information for alternate items may be grounds for rejection of a Vendor's bid.

11. EXCEPTIONS AND CLARIFICATIONS: The Solicitation contains the specifications that shall form the basis of a contractual agreement. Vendor shall clearly mark any exceptions, clarifications, or other proposed modifications in its bid. Exceptions to, clarifications of, or modifications of a requirement or term and condition of the Solicitation may result in bid disqualification.

12. COMMUNICATION LIMITATIONS: In accordance with West Virginia Code of State Rules §148-1-6.6, communication with the State of West Virginia or any of its employees regarding this Solicitation during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited without prior Purchasing Division approval. Purchasing Division approval for such communication is implied for all agency delegated and exempt purchases.

13. REGISTRATION: Prior to Contract award, the apparent successful Vendor must be properly registered with the West Virginia Purchasing Division and must have paid the $125 fee, if applicable.

14. UNIT PRICE: Unit prices shall prevail in cases of a discrepancy in the Vendor's bid.

15. PREFERENCE: Vendor Preference may only be granted upon written request and only in accordance with the West Virginia Code § 5A-3-37 and the West Virginia Code of State Rules. A Vendor Preference Certificate form has been attached hereto to allow Vendor to apply for the preference. Vendor's failure to submit the Vendor Preference Certificate form with its bid will result in denial of Vendor Preference. Vendor Preference does not apply to construction projects.

16. SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES: For any solicitations publicly advertised for bid, in accordance with West Virginia Code §5A-3-37(a)(7) and W. Va. CSR § 148-22-9, any non-resident vendor certified as a small, women-owned, or minority-owned business under W. Va. CSR § 148-22-9 shall be provided the same preference made available to any resident vendor. Any non-resident small, women-owned, or minority-owned business must identify itself as such in writing, must submit that writing to the Purchasing Division with its bid, and must be properly certified under W. Va. CSR § 148-22-9 prior to contract award to receive the preferences made available to resident vendors. Preference for a non-resident small, women-owned, or minority owned business shall be applied in accordance with W. Va. CSR § 148-22-9.

17. WAIVER OF MINOR IRREGULARITIES: The Director reserves the right to waive minor irregularities in bids or specifications in accordance with West Virginia Code of State Rules § 148-1-4.6.

18. ELECTRONIC FILE ACCESS RESTRICTIONS: Vendor must ensure that its submission in wvOASIS can be accessed by the Purchasing Division staff immediately upon bid opening. The Purchasing Division will consider any file that cannot be immediately opened and/or viewed at the time of the bid opening (such as, encrypted files, password protected files, or incompatible files) to be blank or incomplete as context requires, and are therefore unacceptable. A vendor will not be permitted to unencrypt files, remove password protections, or resubmit documents after bid opening if those documents are required with the bid.

19. NON-RESPONSIBLE: The Purchasing Division Director reserves the right to reject the bid of any vendor as Non-Responsible in accordance with W. Va. Code of State Rules § 148-1-5.3, when the Director determines that the vendor submitting the bid does not have the capability to fully perform, or lacks the integrity and reliability to assure good-faith performance."

20. ACCEPTANCE/REJECTION: The State may accept or reject any bid in whole, or in part in accordance with W. Va. Code of State Rules § 148-1-4.5. and § 148-1-6.4.b."

21. YOUR SUBMISSION IS A PUBLIC DOCUMENT: Vendor's entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to

include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

EXPRESSION OF INTEREST

Site Characterization Study, Leachate Management & Closure Cap
for
Webster County Landfill

SECTION THREE: PROJECT SPECIFICATIONS

1. **Location:** Agency is located at 601 57th Street SE, Charleston WV 25304 and the Project will be completed at the Webster County Landfill. The site is located in Webster County, WV. From Camp Caesar, near Cowen, take Route 20 East approximately 2.5 miles to Price Run Road (Rt36) on the left. Take Price Run Road 1 mile to Excelsior Pleasant Ridge Road. Turn right onto Excelsior Pleasant Ridge Road and travel 1 mile. The landfill gate is on the left.

   GPS Coordinates: Lat: 38.444049 Long: 80.454811

2. **Background:** This work involves the site characterization study, engineering design, preparation of site closure drawings and specifications, preparation of appropriate documents and application for all required permits related to this project.

3. **Qualifications and Experience:** Vendors should provide information regarding its employees, such as staff qualifications and experience in completing similar projects; references; copies of any staff certifications or degrees applicable to this project; proposed staffing plan; descriptions of past projects completed entailing the location of the project, project manager name and contact information, type of project, and what the project goals and objectives where and how they were met.

4. **Project and Goals:** The project goals and objectives are:

   4.1. The scope of work shall include site investigation of existing features, surveying and mapping, laboratory analysis or soil and water, subsurface investigations to determine location as well as limits and depths of waste, location of potential borrow areas either on site or near-by.

   4.2. Engineering and design of the capping system to be installed including grading plans and cross sections of the cap system, leachate collection and storage systems, sediment and erosion control plans including required ponds.

   4.3. Preparation of construction contract drawings and specifications suitable for letting of construction bids and the bidding process.

   4.4. All applicable permit applications, right-of-ways, right-of entries, and approvals

shall also be a part of the work to be performed. The Bidder shall furnish all personnel, facilities, equipment, material, supplies, and services for all of the scope of work required by this contract. The contractor shall review and reference all work to insure compliance with 33CSR1.

NOTE: Firms must submit a completed Consultant Qualification Questionnaire

5. **Oral Presentations (Agency Option):** The Agency has the option of requiring oral presentations of all Vendors participating in the EOI process. During oral presentations, Vendors may not alter or add to their submitted proposal, but only clarify information. A description of the materials and information to be presented is provided below:

5.1. Materials and Information Required at Oral Presentation:
The format for the interviews will be a 15-30 minute PowerPoint presentation consisting, at a minimum, of the following:

- Corporate/personnel experience summary as it relates to this project or projects.
- Provide particular information or examples that uniquely qualify your firm for this project.
- Proposed project management plan
- Key personnel available for the work proposed on this project.
- Proposed subcontractors (mapping, geotechnical, etc.).
- Product quality & cost control.

EXPRESSION OF INTEREST

Site Characterization Study, Leachate Management & Closure Cap
for
Webster County Landfill

SECTION FOUR: VENDOR PROPOSAL, EVALUATION, & AWARD

1. **Economy of Preparation:** EOI's should be prepared simply and economically, providing a straightforward, concise description of firm's abilities to satisfy the requirements and goals and objectives of the EOI. Emphasis should be placed on completeness and clarity of content. The response sections should be labeled for ease of evaluation.

2. **BIDS MUST NOT CONTAIN PRICE QUOTATIONS:** The State shall select the best value solution according to §5G-1-3 of the West Virginia State Code. In accordance with the Code requirements, no "price" or "fee" information is requested or permitted in the bid response.

3. **Evaluation and Award Process:** Expressions of Interest for projects estimated to cost $250,000 or more will be evaluated and awarded in accordance with West Virginia Code §5G-1-3. That Code section requires the following:

   3.1. **Required Elements of EOI Response**: The director of purchasing shall encourage such firms engaged in the lawful practice of the profession to submit an expression of interest, which shall include a statement of qualifications, and performance data and may include anticipated concepts and proposed methods of approach to the project.

   3.2. **Public Advertisement:** All EOI requests shall be announced by public notice published as a Class II legal advertisement in compliance with the provisions of West Virginia Code §59-3-1 et seq.

   3.3. **Selection Committee Evaluation & Negotiation:** A committee comprised of three to five representatives of the agency initiating the request shall:

      3.3.1. evaluate the statements of qualifications and performance data and other material submitted by the interested firms and select three firms which in their opinion are the best qualified to perform the desired service.

      3.3.2. conduct interviews with each firm selected and the conduct discussions regarding anticipated concepts and the proposed methods of approach to the assignment.

3.3.3. rank in order of preference no less than three professional firms deemed to be the most highly qualified to provide the services required, and shall commence scope of service and price negotiations with the highest qualified professional firm.

3.3.4. Should the agency be unable to negotiate a satisfactory contract with the professional firm considered to be the most qualified, at a fee determined to be fair and reasonable, price negotiations with the firm of second choice shall commence. Failing accord with the second most qualified professional firm, the committee shall undertake price negotiations with the third most qualified professional firm.

3.3.5. Should the agency be unable to negotiate a satisfactory contract with any of the selected professional firms, it shall select additional professional firms in order of their competence and qualifications and it shall continue negotiations in accordance with this section until an agreement is reached.

3.4. **Vendor Ranking:** All evaluation criteria is defined in the Procurement Specifications section and based on a 100 point total score. Points shall be assigned based upon the Vendor's response to the evaluation criteria as follows:

• Qualifications and experience	(80) Points Possible
• Oral interview	(20) Points Possible
Total	100

EXPRESSION OF INTEREST

Site Characterization Study, Leachate Management & Closure Cap
for
Webster County Landfill

SECTION FIVE: TERMS AND CONDITIONS

Terms and conditions begin on the next page.

GENERAL TERMS AND CONDITIONS:

1. CONTRACTUAL AGREEMENT: Issuance of a Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.

2. DEFINITIONS: As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.

2.1. "Agency" or **"Agencies"** means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.

2.2. "Bid" or **"Proposal"** means the vendors submitted response to this solicitation.

2.3. "Contract" means the binding agreement that is entered into between the State and the Vendor to provide the goods or services requested in the Solicitation.

2.4. "Director" means the Director of the West Virginia Department of Administration, Purchasing Division.

2.5. "Purchasing Division" means the West Virginia Department of Administration, Purchasing Division.

2.6. "Award Document" means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the contract holder.

2.7. "Solicitation" means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.

2.8. "State" means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.

2.9. "Vendor" or **"Vendors"** means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

3. CONTRACT TERM; RENEWAL; EXTENSION: The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:

☐ **Term Contract**

Initial Contract Term: This Contract becomes effective on _____ and extends for a period of _____ year(s).
Renewal Term: This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal should be submitted to the Purchasing Division thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Renewal of this Contract is limited to _____ successive one (1) year periods or multiple renewal periods of less than one year, provided that the multiple renewal periods do not exceed _____ months in total. Automatic renewal of this Contract is prohibited. Notwithstanding the foregoing, Purchasing Division approval is not required on agency delegated or exempt purchases. Attorney General approval may be required for vendor terms and conditions.

Delivery Order Limitations: In the event that this contract permits delivery orders, a delivery order may only be issued during the time this Contract is in effect. Any delivery order issued within one year of the expiration of this Contract shall be effective for one year from the date the delivery order is issued. No delivery order may be extended beyond one year after this Contract has expired.

☑ **Fixed Period Contract:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and must be completed within 1096 days.

☐ **Fixed Period Contract with Renewals:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and part of the Contract more fully described in the attached specifications must be completed within _____ days.

Upon completion, the vendor agrees that maintenance, monitoring, or warranty services will be provided for one year thereafter with an additional _____ successive one year renewal periods or multiple renewal periods of less than one year provided that the multiple renewal periods do not exceed _____ months in total. Automatic renewal of this Contract is prohibited.

☐ **One Time Purchase:** The term of this Contract shall run from the issuance of the Award Document until all of the goods contracted for have been delivered, but in no event will this Contract extend for more than one fiscal year.

☐ **Other:** See attached.

4. NOTICE TO PROCEED: Vendor shall begin performance of this Contract immediately upon receiving notice to proceed unless otherwise instructed by the Agency. Unless otherwise specified, the fully executed Award Document will be considered notice to proceed.

5. QUANTITIES: The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.

☐ **Open End Contract:** Quantities listed in this Solicitation are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.

☐ **Service:** The scope of the service to be provided will be more clearly defined in the specifications included herewith.

☑ **Combined Service and Goods:** The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.

☐ **One Time Purchase:** This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.

6. PRICING: The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification.

7. EMERGENCY PURCHASES: The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute of breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One Time Purchase contract.

8. REQUIRED DOCUMENTS: All of the items checked below must be provided to the Purchasing Division by the Vendor as specified below.

☐ **BID BOND:** All Vendors shall furnish a bid bond in the amount of five percent (5%) of the total amount of the bid protecting the State of West Virginia. The bid bond must be submitted with the bid.

☐ **PERFORMANCE BOND:** The apparent successful Vendor shall provide a performance bond in the amount of _____. The performance bond must be received by the Purchasing Division prior to Contract award. On construction contracts, the performance bond must be 100% of the Contract value.

☐ **LABOR/MATERIAL PAYMENT BOND:** The apparent successful Vendor shall provide a labor/material payment bond in the amount of 100% of the Contract value. The labor/material payment bond must be delivered to the Purchasing Division prior to Contract award.
In lieu of the Bid Bond, Performance Bond, and Labor/Material Payment Bond, the Vendor may provide certified checks, cashier's checks, or irrevocable letters of credit. Any certified check, cashier's check, or irrevocable letter of credit provided in lieu of a bond must be of the same amount and delivered on the same schedule as the bond it replaces. A letter of credit submitted in lieu of a performance and labor/material payment bond will only be allowed for projects under $100,000. Personal or business checks are not acceptable.

☐ **MAINTENANCE BOND:** The apparent successful Vendor shall provide a two (2) year maintenance bond covering the roofing system. The maintenance bond must be issued and delivered to the Purchasing Division prior to Contract award.

☑ **INSURANCE:** The apparent successful Vendor shall furnish proof of the following insurance prior to Contract award and shall list the state as a certificate holder:

☑ **Commercial General Liability Insurance:** In the amount of $1,000.000.00 _____ or more.

☐ **Builders Risk Insurance:** In an amount equal to 100% of the amount of the Contract.

☑ Aggregate, $2,000.000.00

☑ Automobile, $1,000.000.00

☑ Professional Liability, $1,000.000.00

☐

☐

The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether or not that insurance requirement is listed above.

☐ **LICENSE(S) / CERTIFICATIONS / PERMITS:** In addition to anything required under the Section entitled Licensing, of the General Terms and Conditions, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits prior to Contract award, in a form acceptable to the Purchasing Division.

☐

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The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications prior to Contract award regardless of whether or not that requirement is listed above.

9. WORKERS' COMPENSATION INSURANCE: The apparent successful Vendor shall comply with laws relating to workers compensation, shall maintain workers' compensation insurance when required, and shall furnish proof of workers' compensation insurance upon request.

10. LITIGATION BOND: The Director reserves the right to require any Vendor that files a protest of an award to submit a litigation bond in the amount equal to one percent of the lowest bid submitted or $5,000, whichever is greater. The entire amount of the bond shall be forfeited if the hearing officer determines that the protest was filed for frivolous or improper purpose, including but not limited to, the purpose of harassing, causing unnecessary delay, or needless expense for the Agency. All litigation bonds shall be made payable to the Purchasing Division. In lieu of a bond, the protester may submit a cashier's check or certified check payable to the Purchasing Division. Cashier's or certified checks will be deposited with and held by the State Treasurer's office. If it is determined that the protest has not been filed for frivolous or improper purpose, the bond or deposit shall be returned in its entirety.

11. LIQUIDATED DAMAGES: Vendor shall pay liquidated damages in the amount of

_____

for _____.

This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy.

12. ACCEPTANCE: Vendor's signature on its bid, or on the certification and signature page, constitutes an offer to the State that cannot be unilaterally withdrawn, signifies that the product or service proposed by vendor meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise indicated, and signifies acceptance of the terms and conditions contained in the Solicitation unless otherwise indicated.

13. FUNDING: This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available.

14. PAYMENT: Payment in advance is prohibited under this Contract. Payment may only be made after the delivery and acceptance of goods or services. The Vendor shall submit invoices, in arrears.

15. TAXES: The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

16. CANCELLATION: The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may also cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules §§ 148-1-6.1.e.

17. TIME: Time is of the essence with regard to all matters of time and performance in this Contract.

18. APPLICABLE LAW: This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code or West Virginia Code of State Rules is void and of no effect.

19. COMPLIANCE: Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendor acknowledges that it has reviewed, understands, and will comply with all applicable laws, regulations, and ordinances.

20. PREVAILING WAGE: Vendor shall be responsible for ensuring compliance with prevailing wage requirements and determining when prevailing wage requirements are applicable.

21. ARBITRATION: Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.

22. MODIFICATIONS: This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any change to existing contracts that adds work or changes contract cost, and were not included in the original contract, must be approved by the Purchasing Division and the Attorney General's Office (as to form) prior to the implementation of the change or commencement of work affected by the change.

23. WAIVER: The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.

24. SUBSEQUENT FORMS: The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.

25. ASSIGNMENT: Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments. Notwithstanding the foregoing, Purchasing Division approval may or may not be required on certain agency delegated or exempt purchases.

26. WARRANTY: The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.

27. STATE EMPLOYEES: State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.

28. BANKRUPTCY: In the event the Vendor files for bankruptcy protection, the State of West Virginia may deem this Contract null and void, and terminate this Contract without notice.

29. PRIVACY, SECURITY, AND CONFIDENTIALITY: The Vendor agrees that it 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/default.html.

30. YOUR SUBMISSION IS A PUBLIC DOCUMENT: Vendor's entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

31. LICENSING: In accordance with West Virginia Code of State Rules § 148-1-6.1.e, Vendor 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 agency or political subdivision. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

32. ANTITRUST: In submitting a bid to, signing a contract with, or accepting a Award Document from any agency of the State of West Virginia, the Vendor agrees to 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 Vendor.

33. VENDOR CERTIFICATIONS: By signing its bid or entering into this Contract, Vendor certifies (1) that its bid or offer was made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, person or entity submitting a bid or offer for the same material, supplies, equipment or services; (2) that its bid or offer is in all respects fair and without collusion or fraud; (3) that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; and (4) that it has reviewed this Solicitation in its entirety; understands the requirements, terms and conditions, and other information contained herein.

Vendor's signature on its bid or offer also affirms that neither it nor its representatives have any interest, nor shall acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency. The individual signing this bid or offer on behalf of Vendor certifies that he or she is authorized by the Vendor to execute this bid or offer or any documents related thereto on Vendor's behalf; that he or she is authorized to bind the Vendor in a contractual relationship; and that, to the best of his or her knowledge, the Vendor has properly registered with any State agency that may require registration.

34. PURCHASING CARD ACCEPTANCE: The State of West Virginia currently utilizes a Purchasing Card program, administered under contract by a banking institution, to process payment for goods and services. The Vendor must accept the State of West Virginia's Purchasing Card for payment of all orders under this Contract unless the box below is checked.

☑ Vendor is not required to accept the State of West Virginia's Purchasing Card as payment for all goods and services.

35. VENDOR RELATIONSHIP: The relationship of the Vendor to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but not limited to, Workers' Compensation and Social Security obligations, licensing fees, etc. and the filing of all necessary documents, forms, and returns pertinent to all of the foregoing.

Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

36. INDEMNIFICATION: The Vendor agrees to indemnify, ~~defend~~, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.

37. PURCHASING AFFIDAVIT: In accordance with West Virginia Code § 5A-3-10a, all Vendors are required to sign, notarize, and submit the Purchasing Affidavit stating that neither the Vendor nor a related party owe a debt to the State in excess of $1,000. The affidavit must be submitted prior to award, but should be submitted with the Vendor's bid. A copy of the Purchasing Affidavit is included herewith.

38. ADDITIONAL AGENCY AND LOCAL GOVERNMENT USE: This Contract may be utilized by other agencies, spending units, and political subdivisions of the State of West Virginia; county, municipal, and other local government bodies; and school districts ("Other Government Entities"). Any extension of this Contract to the aforementioned Other Government Entities must be on the same prices, terms, and conditions as those offered and agreed to in this Contract, provided that such extension is in compliance with the applicable laws, rules, and ordinances of the Other Government Entity. If the Vendor does not wish to extend the prices, terms, and conditions of its bid and subsequent contract to the Other Government Entities, the Vendor must clearly indicate such refusal in its bid. A refusal to extend this Contract to the Other Government Entities shall not impact or influence the award of this Contract in any manner.

39. CONFLICT OF INTEREST: Vendor, its officers or members or employees, shall not presently have or acquire an interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.

40. REPORTS: Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:

☑ Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.

☐ Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at purchasing.requisitions@wv.gov.

41. BACKGROUND CHECK: In accordance with W. Va. Code § 15-2D-3, the Director of the Division of Protective Services shall require any service provider whose employees are regularly employed on the grounds or in the buildings of the Capitol complex or who have access to sensitive or critical information to submit to a fingerprint-based state and federal background inquiry through the state repository. The service provider is responsible for any costs associated with the fingerprint-based state and federal background inquiry.

After the contract for such services has been approved, but before any such employees are permitted to be on the grounds or in the buildings of the Capitol complex or have access to sensitive or critical information, the service provider shall submit a list of all persons who will be physically present and working at the Capitol complex to the Director of the Division of Protective Services for purposes of verifying compliance with this provision. The State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check.

Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

42. PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS: Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:

a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.
b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open heath, basic oxygen, electric furnace, Bessemer or other steel making process. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:
c. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars ($2,500.00), whichever is greater. For the purposes of this section, the cost is the value of the steel product as delivered to the project; or
d. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

43. PREFERENCE FOR USE OF DOMESTIC ALUMINUM, GLASS, AND STEEL: In Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars ($50,000) or public works contracts that require more than ten thousand pounds of steel products.

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a "substantial labor surplus area", as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products. This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

ADDITIONAL TERMS AND CONDITIONS
(Architectural and Engineering Contracts Only)

1. PLAN AND DRAWING DISTRIBUTION: All plans and drawings must be completed and available for distribution at least five business days prior to a scheduled pre-bid meeting for the construction or other work related to the plans and drawings.

2. PROJECT ADDENDA REQUIREMENTS: The Architect/Engineer and/or Agency shall be required to abide by the following schedule in issuing construction project addenda. The Architect/Engineer shall prepare any addendum materials for which it is responsible, and a list of all vendors that have obtained drawings and specifications for the project. The Architect/Engineer shall then send a copy of the addendum materials and the list of vendors to the State Agency for which the contract is issued to allow the Agency to make any necessary modifications. The addendum and list shall then be forwarded to the Purchasing Division buyer by the Agency. The Purchasing Division buyer shall send the addendum to all interested vendors and, if necessary, extend the bid opening date. Any addendum should be received by the Purchasing Division at least fourteen (14) days prior to the bid opening date.

3. PRE-BID MEETING RESPONSIBILITIES: The Architect/Engineer shall be available to attend any pre-bid meeting for the construction or other work resulting from the plans, drawings, or specifications prepared by the Architect/Engineer.

4. AIA DOCUMENTS: Contracts for architectural and engineering services will be governed by the AIA document B101-2007, as amended by the Supplementary Conditions for the State of West Virginia, in addition to the terms and conditions contained herein when procured under Chapter 5G of the West Virginia Code.

5. GREEN BUILDINGS MINIMUM ENERGY STANDARDS: In accordance with West Virginia Code § 22-29-4, all new building construction projects of public agencies that have not entered the schematic design phase prior to July 1, 2012, or any building construction project receiving state grant funds and appropriations, including public schools, that have not entered the schematic design phase prior to July1, 2012, shall be designed and constructed complying with the ICC International Energy Conservation Code, adopted by the State Fire Commission, and the ANSI/ASHRAE/IESNA Standard 90.1-2007: Provided, That if any construction project has a commitment of federal funds to pay for a portion of such project, this provision shall only apply to the extent such standards are consistent with the federal standards.

CERTIFICATIONAND SIGNATURE PAGE

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

Burgess & Niple, Inc.

(Company)

James P. Garrison, Executive Vice President

(Authorized Signature) (Representative Name, Title)

304-485-8541 / 304-485-0238 / 2/15/16

(Phone Number) (Fax Number) (Date)

SOLICITATION NUMBER: CEOI DEP1600000013
Addendum Number: 01

The purpose of this addendum is to modify the solicitation identified as ("Solicitation") to reflect the change(s) identified and described below.

Applicable Addendum Category:

[✓] Modify bid opening date and time

[ ] Modify specifications of product or service being sought

[✓] Attachment of vendor questions and responses

[ ] Attachment of pre-bid sign-in sheet

[ ] Correction of error

[ ] Other

Description of Modification to Solicitation:

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

1. To publish answers to vendor submitted questions.
2. To modify the bid opening date to February 18, 2016 at 1:30 PM, EST.

No other changes.

Additional Documentation: Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

Terms and Conditions:

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.

2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

ATTACHMENT A

CEOI DEP16*013
Questions and Answers

1. Question: Based upon available documentation, it appears that the Webster County Landfill operated subsequent to June 2, 1996. Does the West Virginia DEP anticipate closure of the landfill under the regulatory requirements of 33 CSR 1 (best-available-technology [BAT] design and closure) or would they consider closure under Legislative Rule 47-38 (5/1990). The question is with regards to possible financial savings associated with closure using non-BAT methods.

   Answer: The closure must be designed under 33CSR1.

2. Question: (a) Section Three: Project Specifications of the EOI stipulates that the contractor shall review and reference all work to insure compliance with 33CSR1. Will this include design of explosive gas management system and associated explosive gas monitoring program?

   Answer: Yes.

   (b) Does a groundwater monitoring system exist and will a groundwater monitoring program be required subsequent to completion of landfill closure activities?

   Answer: This shall be determined by Site Characterization Study.

   (c) Specifically, will preparation of monitoring program plans be incorporated into the project tasks or is it more focused directly on site characterization, leachate management, and landfill cap design and permitting?

   Answer: This will be included in Final Closure Cap Design.

3. Question: Can the Agency confirm whether a laterally extensive, properly constructed, and operational BAT landfill liner and leachate collection system are in place?

   Answer: This shall be determined by Site Characterization Study.

4. Question: (a) One of the tasks described includes vertical and lateral delineation of the limits of waste. If the facility does have a constructed BAT liner and leachate collection system, does the Agency anticipate completing borings inside the regulated limits of waste placement?

   Answer: Yes.

   (b) Does the Agency anticipate waste present outside of the limits of waste placement?

   Answer: This shall be determined by Site Characterization Study.

5. Question: (a) Are any data available regarding groundwater or leachate analytical results?

   Answer: Yes past data should be available on a limited basis.

   (b) Existing site topography maps?

   Answer: Yes, conducted in 2015.

   (c) As-built landfill construction drawings?

   Answer: These may be available through document review.

6. Question: Is there a map available that depicts the property boundaries that may be available for preparation of SOQs?

   Answer: Yes developed in 2015.

7. Question: Does any part of the landfill have final cap in place?

   Answer: No.

8. Question: Who will be the responsible party for conducting post-closure care activities?

   Answer: The WV Department of Environmental Protection, Landfill Closure Assistance Program.

9. Question: Would there be any consideration for waste consolidation to minimize the overall footprint of the limits of solid waste placement?

   Answer: Yes, if cost effective.

10. Question: What are the projected contract terms associated with payment structure for this project – lump sum, cost plus, hourly rates plus expenses, etc.?

    Answer: Hourly Rates and expenses.

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: CEOI DEP1600000013

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

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

Addendum Numbers Received:
(Check the box next to each addendum received)

[X]	Addendum No. 1	[ ]	Addendum No. 6
[ ]	Addendum No. 2	[ ]	Addendum No. 7
[ ]	Addendum No. 3	[ ]	Addendum No. 8
[ ]	Addendum No. 4	[ ]	Addendum No. 9
[ ]	Addendum No. 5	[ ]	Addendum No. 10

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

Burgess & Niple, Inc.
Company

Authorized Signature

2/15/16
Date

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

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CONSULTANT CONFIDENTIAL QUALIFICATION QUESTIONNAIRE

Attachment "A"

PROJECT NAME: CEOI-DEP1600000013	DATE (DAY, MONTH, YEAR)	FEIN
Site Characterization Study, Leachate Management and Closure Cap Design for the Webster County Landfill Project	January 28, 2016	31-0885550

1. FIRM NAME	2. HOME OFFICE BUSINESS ADDRESS	3. FORMER FIRM NAME
Burgess & Niple, Inc.	4424 Emerson Avenue Parkersburg, WV 26104	Burgess & Niple, Limited

4. HOME OFFICE TELEPHONE	5. ESTABLISHED (YEAR)	6. TYPE OWNERSHIP	6a. WV REGISTERED DBE
(304) 485-8541	1912	☐ Individual ☒ Corporation ☐ Partnership ☐ Joint-Venture	☐ YES ☒ NO

7. PRIMARY OFFICE: ADDRESS/ TELEPHONE/ PERSON IN CHARGE/ NO. PERSONNEL EACH OFFICE

Parkersburg, WV	4424 Emerson Avenue, Parkersburg, WV 26104	(304) 485-8541	Rodney Holbert, PE, PS	22

8. NAMES OF PRINCIPAL OFFICERS OR MEMBERS OF FIRM		8a. NAME, TITLE & TELEPHONE NUMBER – OTHER PRINCIPALS
Chairman & President – Ron Schultz, PE	Director – Ed Muccillo, PE	Rodney Holbert, PE, PS, Shareholder, Director Parkersburg, (304) 485-8541
Secretary – Jim Garrison, PE	Director – Dennis Thomas, PE	
Treasurer – Mark Bernhardt, PE		
Director – Bob Draper, AIA		

9. NUMBER OF PERSONNEL BY DISCIPLINE (Bold Lettering Indicates Minimum Design Team Members)
Detailed information On Team To Be Included

41 **ADMINISTRATIVE**	0 ECONOMISTS	4 MECHANICAL ENGINEERS	10 OTHER (SURVEY TECHNICIANS)
11 ARCHITECTS	5 ELECTRICAL ENGINEERS	0 MINING ENGINEERS	14 DATA PROCESSORS
1 **BIOLOGISTS**	8 ENVIRONMENTAL SPECIALISTS/TECHNICIANS	0 PHOTOGRAMMETRISTS	1 DRILLERS
13 **CADD OPERATORS/DRAFTERS**	4 ENVIRONMENTAL ENGINEERS	1 PLANNERS: URBAN/REGIONAL	5 FIELD TECHNICIANS
0 CHEMICAL ENGINEERS	(see engineers) **ESTIMATORS**	19 SANITARY ENGINEERS	2 INTERIOR DESIGNERS
97 **CIVIL ENGINEERS**	9 **GEOLOGISTS**	2 **SOIL (GEOTECHNICAL) ENGINEERS**	1 PLAN PROCESSORS
5 **CONSTRUCTION INSPECTORS**	0 HISTORIANS	0 SPECIFICATION WRITERS	31 TRANSPORTATION ENGINEERS
18 **DESIGNERS**	1 **HYDROLOGISTS**	37 STRUCTURAL ENGINEERS	
0 ECOLOGISTS	1 LANDSCAPE ARCHITECTS	6 **SURVEYORS**	**347** **TOTAL PERSONNEL**

TOTAL NUMBER OF WV REGISTERED PROFESSIONAL ENGINEERS IN PRIMARY OFFICE: 9

*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". N/A

10a. HAS THIS JOINT VENTURE WORKED TOGETHER BEFORE? ☐ YES ☐ NO N/A

11. OUTSIDE KEY CONSULTANTS/SUB-CONSULTANTS ANTICIPATED TO BE USED.		
NAME AND ADDRESS: Ecolotree, Inc. 3017 Valley View Ln. NE North Liberty IA. 52317	SPECIALTY: Phytoremediation Specialist/Agronomists, passive wastewater treatment systems	WORKED WITH BEFORE ☒ YES ☐ NO
NAME AND ADDRESS: Cascade Drilling, L.P. 1010 Greene St. Marietta, OH 45750	SPECIALTY: Drilling Services – Direct-Push, Hollow Stem Auger Rig, and Sonic Rig	WORKED WITH BEFORE ☒ YES ☐ NO
NAME AND ADDRESS: Terracon 912 Morris St. Charleston, WV 25301	SPECIALTY: Geotechnical Laboratory Analyses	WORKED WITH BEFORE ☒ YES ☐ NO
NAME AND ADDRESS: Pace Analytical Services, Inc. 7726 Moller Road Indianapolis, IN 46268	SPECIALTY: Groundwater/Surface Water/Soil/Waste Analytical Testing	WORKED WITH BEFORE ☒ YES ☐ NO
NAME AND ADDRESS: Grumman Exploration, Inc. 2309 Dorset Rd. Columbus, OH 43221	SPECIALTY: Geophysical Surveying for Subsurface Investigations	WORKED WITH BEFORE ☒ YES ☐ NO
NAME AND ADDRESS: Henderson Aerial Surveys 3889 Grove City Rd. Grove City, OH 43123	SPECIALTY: Aerial Surveying and Mapping	WORKED WITH BEFORE ☒ YES ☐ NO
NAME AND ADDRESS: Hannah Engineering P.O. Box 2058 Elkins, WV 26241	SPECIALTY: Terrestrial Surveying and Mapping	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?

YES ☒ Description and Number of Projects:

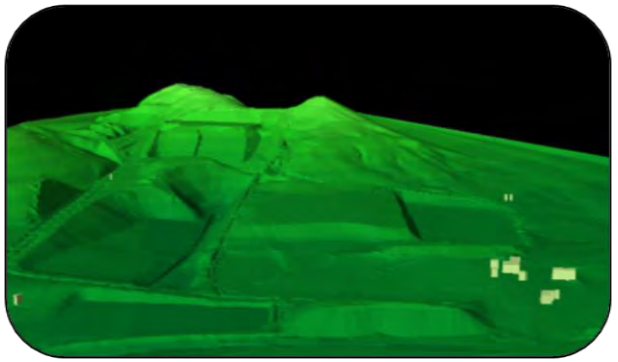
B&N has completed landfill closure design projects since 1980. We have completed closure designs at 43 sites associated with municipal, industrial, and residual solid waste as well as construction & demolition debris.

NO ☐

B. Is your firm experienced in Solid Waste Landfill Site Characterization Assessment and Evaluation?

YES ☒ Description and Number of Projects:

B&N has completed site characterization assessments and evaluations for siting of new landfills and permits to install. Work has included landfill siting studies and hydrogeological investigations for approximately 469 projects in 13 states, plus the District of Columbia and the Philippines. B&N has a staff of geologists, hydrogeologists, and engineers with experience in all aspects of site characterization assessment and evaluations.



NO ☐

C. Is your firm experienced in Landfill Closure Construction Inspection?

YES ☒ Description and Number of Projects:

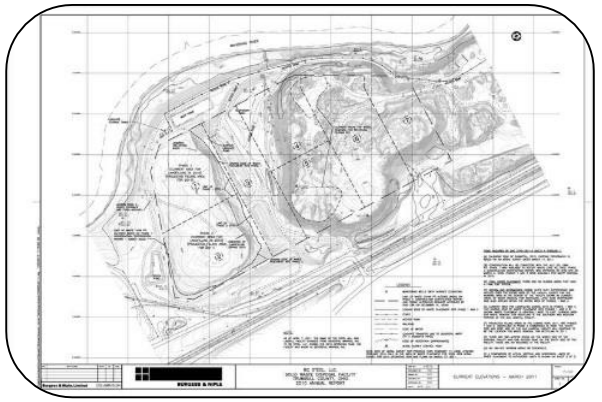
B&N has completed landfill closure projects including engineering oversight, construction inspection, quality assurance/quality control, and closure construction certification including multiple projects at 26 sites.

NO ☐

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

YES ☒ Description and Number of Projects:

B&N has annually prepared contour mapping for solid waste disposal facilities as part of required annual reports since 1992. B&N also prepares contour mapping for landfill permit applications. B&N has completed aerial survey mapping for 40 projects.



NO ☐

E. Is your firm experienced in Evaluating Groundwater Contamination, such as may be associated with landfills?

YES ☒ Description and Number of Projects:

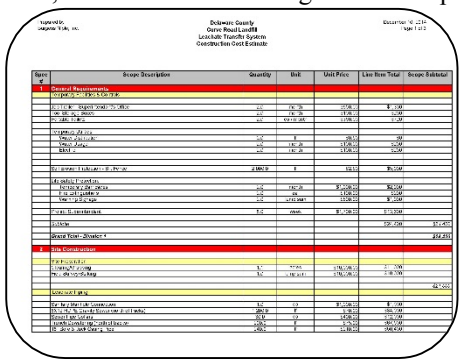
B&N is experienced in all aspects of groundwater work associated with landfills. Our geology staff is experienced with hydrogeological investigations, routine sampling and analysis, reporting requirements and statistics. B&N is also experienced with groundwater issues associated with acid mine drainage. B&N has completed approximately 255 projects at multiple sites.

NO ☐

F. Is your firm experienced in Landfill Closure Cost Estimating?

YES ☒ Description and Number of Projects:

B&N is experienced in cost estimating for landfill closure, landfill permitting, landfill construction, and landfill monitoring. B&N has prepared landfill closure cost estimating on 114 projects at multiple sites.



NO ☐

13. PERSONAL HISTORY STATMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR LANDFILL CLOSURE DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE		
Holbert, Rodney D., PE, PS Director, Parkersburg Office Principal-in-Charge		YEARS OF ENGINEERING EXPERIENCE: 30	YEARS OF MANAGERIAL EXPERIENCE: 26	YEARS OF CONSTRUCTION SERVICES EXPERIENCE: 4

Brief Explanation of Responsibilities:
Mr. Holbert is Director of B&N's Parkersburg office. His experience includes serving as project manager on Indefinite Delivery/Indefinite Quantity contracts for U.S. Army Corps of Engineers, U.S. Forest Service, U.S. Fish & Wildlife, West Virginia National Guard, and West Virginia Department of Transportation. Mr. Holbert provided engineering and project management services for various projects including highway and bridge designs, bridge inspection and rehabilitation, railroads, flood insurance studies throughout West Virginia, hydraulic studies, utility improvements, storm sewer evaluations, and construction services.

EDUCATION (DEGREE, YEAR, SPECIALIZATION)
West Virginia Institute of Technology – BS Civil Engineering, 1985; West Virginia University – MBA, 1989

MEMBERSHIP IN PROFESSIONAL ORGANIZATION:	REGISTRATION (Type, Year, State)
Engineers Without Borders, Mid-Ohio Valley Professional Chapter, President, 2011-Present Chamber of Commerce of the Mid-Ohio Valley, Chairman Transportation Committee, 1996-2001; Board of Directors 2003-2005 American Society of Civil Engineers – Outstanding Membership Chair Award and Top Recruiter Award, 1997 West Virginia ASCE – Secretary, 1993-94; Vice-President, 1994-95; President, 1995-96 West Virginia Young Civil Engineer of the Year, 1996 ASCE District 6 Chairman, 1997 West Virginia Association of Consulting Engineers – Chairman Transportation Committee 2002-2003; Chairman QBS Committee 2003-2006	Professional Engineer – Kentucky (2013) Michigan (2014) Ohio (1991) Virginia (1998) West Virginia (1990) Professional Surveyor – West Virginia (1997)

13a. PERSONAL HISTORY STATMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR LANDFILL CLOSURE & SITE CHARACTERIZATION PROJECT MANAGEMENT** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)		YEARS OR EXPERIENCE		
Leone, Michael E., CPG Project Director		YEARS OF LANDFILL PROJECT MANAGEMENT EXPERIENCE: 18	YEARS OF LANDFILL CLOSURE EXPERIENCE: 22	YEARS OF LANDFILL MONITORING EXPERIENCE: 22

Brief Explanation of Responsibilities:
Mr. Leone is a geologist in the Environmental Division and is the director of regulatory compliance for B&N's municipal, industrial, residual, and hazardous waste landfills. Project director of landfill closure projects involving waste delineation, site characterization of groundwater, surface water, leachate, and explosive gas, borrow soils investigations, leachate outbreak elimination, landfill capping, surveying, wetland delineation and mitigation, and installation of both passive and active leachate management systems. Mr. Leone has been responsible for completing geostatistical groundwater analysis plans, regulatory sampling, analysis, and reporting, and overall regulatory compliance. He has completed every one of the over 120 projects he has managed on time and on budget.

EDUCATION (DEGREE, YEAR, SPECIALIZATION)
Miami University – BA Geology, 1994; Wright State University – Post-graduate studies 1994-1995

MEMBERSHIP IN PROFESSIONAL ORGANIZATION:	REGISTRATION (Type, Year, State)
American Institute of Professional Geologists – Certified Professional Geologist	

13b. PERSONAL HISTORY STATMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR LANDFILL CLOSURE DESIGN & QA/QC** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE		
Gray, Curtis W., PE Landfill Engineer		YEARS OF ENGINEERING EXPERIENCE: 33	YEARS OF LANDFILL CLOSURE DESIGN EXPERIENCE: 24	YEARS OF LANDFILL CLOSURE QA/QC EXPERIENCE: 24

Brief Explanation of Responsibilities:
Preparation of landfill permits to install (PTIs), permit alterations, and closure plans. Preparation of construction plans, technical specifications, and bid documents. Preparation of volume calculations and engineer's cost estimating. Provides engineering services during bidding and construction. Certification of closure, PE certification of construction, annual operations reports. Coordination of aerial photography and mapping. Leachate management systems for onsite and offsite leachate treatment. NPDES permitting.

EDUCATION (DEGREE, YEAR, SPECIALIZATION)
Colorado School of Mines – BS Geophysical Engineering, 1982

MEMBERSHIP IN PROFESSIONAL ORGANIZATION:	REGISTRATION (Type, Year, State)
Ohio Society of Professional Engineers National Society of Professional Engineers Society of Exploration Geophysicists	Professional Engineer – Colorado (1986) Ohio (1988)

13c. PERSONAL HISTORY STATMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR LANDFILL LEACHATE MANAGEMENT SYSTEM & STORMWATER MANAGEMENT DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)		YEARS OR EXPERIENCE		
Tornes, Brian W., PE Environmental Engineer		YEARS OF ENGINEERING EXPERIENCE: 25	YEARS OF LANDFILL LEACHATE MANAGEMENT SYSTEM EXPERIENCE: 20	YEARS OF STORMWATER MANAGEMENT EXPERIENCE: 25

Brief Explanation of Responsibilities:
Mr. Tornes is Director of the Environmental Engineering Section. He has experience in design of stormwater and wastewater treatment facilities for both industrial and municipal clients. Treatment systems have included the use of biological and chemical reduction and precipitation, dissolved air flotation, ion exchange, membrane and mixed media filtration, solids screening, activated carbon, and the use of constructed wetlands and phytoremediation for a variety of waste streams. Mr. Tornes also has been responsible for the design of constructed wetlands, site development, and the remediation of impacted soils.

EDUCATION (DEGREE, YEAR, SPECIALIZATION)
Ohio State University – BS Civil Engineering, 1990

MEMBERSHIP IN PROFESSIONAL ORGANIZATION:	REGISTRATION (Type, Year, State)
American Society of Civil Engineers Water Environment Federation	Professional Engineer – Indiana (2005) Ohio (1995) West Virginia (2005)

13d. PERSONAL HISTORY STATMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR LANDFILL CLOSURE DESIGN** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE		
VanZandt, Ryan L. Landfill Designer		YEARS OF CADD DESIGN EXPERIENCE: 25	YEARS OF LANDFILL CADD DESIGN EXPERIENCE: 25	YEARS OF CONSTRUCTION PLAN PRODUCTION EXPERIENCE: 25

Brief Explanation of Responsibilities:
Mr. VanZandt is the lead Designer of the Environmental Division. He is skilled in working with AutoCAD Civil 3D, Micro Station, and Inroads software packages in the design and preparation of permit and construction drawings. Mr. VanZandt has been involved in the design and preparation of many landfill projects in his 25 years with the firm. Designer responsible for preparation of Permit-to-Install drawings, volume estimates, processing aerial survey data, preparation of landfill phasing drawings, and landfill PTI alteration drawings.

EDUCATION (DEGREE, YEAR, SPECIALIZATION)
Northeast Career Center – Certificate, 1990

MEMBERSHIP IN PROFESSIONAL ORGANIZATION:	REGISTRATION (Type, Year, State)

13e. PERSONAL HISTORY STATMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR LANDFILL SITE INVESTIGATIONS** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE		
Smith, Brent R., LPG, CPG Project Geologist		YEARS OF LANDFILL EXPERIENCE: 17	YEARS OF SITE INVESTIGATION EXPERIENCE: 17	YEARS OF EXPERIENCE:

Brief Explanation of Responsibilities:
Mr. Smith is a geologist in the Environmental Division. He has completed tasks for hydrogeologic investigations at solid waste sites, Phase I and II Environmental Site Assessments, remedial studies and investigations, groundwater and surface water monitoring, statistical evaluations of municipal and industrial landfill groundwater data, investigations and groundwater monitoring programs for RCRA hazardous waste sites, and vapor sampling and analyses. He currently manages groundwater monitoring projects and/or statistical projects for various clients under applicable RCRA, landfill, and VAP regulations.

EDUCATION (DEGREE, YEAR, SPECIALIZATION)
Ohio State University – BS Geology, 1998

MEMBERSHIP IN PROFESSIONAL ORGANIZATION:	REGISTRATION (Type, Year, State)
American Institute of Professional Geologists – Certified Professional Geologist American Institute of Professional Geologists, Ohio Chapter 2016 President-Elect	<u>Professional Geologist</u> Indiana (2007) <u>Remediation Specialist</u> West Virginia (2013)

13f. PERSONAL HISTORY STATMENT OF PRINCIPALS AND ASSOCIATES **RESPONSIBLE FOR LANDFILL SURFACE WATER/WETLAND PERMITTING** (Furnish complete data but keep to essentials)

NAME & TITLE (Last, First, Middle Int.)		YEARS OF EXPERIENCE		
Walker, Jennifer L., PWS Environmental Scientist/Biologist		YEARS OF SURFACE WATER PERMITTING EXPERIENCE: 18	YEARS OF WETLAND PERMITTING EXPERIENCE: 18	YEARS OF LANDFILL EXPERIENCE: 10

Brief Explanation of Responsibilities:
Ms. Walker is an Environmental Scientist in the Environmental Division. She has experience in the ecological and NEPA fields including wetland delineations and Clean Water Act (CWA) Section 404/401 permitting and mitigation, aquatic surveys, ecological investigations, and preparation of Categorical Exclusions (CEs) and Environmental Assessments (EAs). Ms. Walker has conducted wetland delineations according to the U.S. Army Corps of Engineers *Wetlands Delineation Manual* (1987) and new regional supplements utilizing hydric soil characterization, hydrophytic vegetation, and evidence of wetland hydrology. She has conducted a variety of ecological investigations including vegetation surveys, Qualitative Habitat Evaluation Index (QHEI) Assessments, Headwater Habitat Evaluation Index (HHEI) Assessments, Headwater Macroinvertebrate Field Evaluation Index (HMFEI) assessments, completed aquatic surveys of fish and macroinvertebrate communities, conducted biological assessments and endangered species habitat surveys.

EDUCATION (DEGREE, YEAR, SPECIALIZATION)
Ohio Northern University – BS Biology, 1995
Ohio University – MS Environmental Science, 1997

MEMBERSHIP IN PROFESSIONAL ORGANIZATION:	REGISTRATION (Type, Year, State)
Society of Wetland Scientists, Professional Wetland Scientist	

13g. PERSONAL HISTORY STATMENT 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 OR EXPERIENCE		
Moore, John C. Construction Services		YEARS OF CONSTRUCTION SERVICES EXPERIENCE: 24	YEARS OF EXPERIENCE:	YEARS OF EXPERIENCE:

Brief Explanation of Responsibilities:
Mr. Moore is a construction resident project representative and has significant experience in construction related industries. He has been the resident project representative on numerous projects involving installation of utility piping, vaults, booster stations and additional facilities. Mr. Moore also provides services such as observance of construction, grade adjustments, extension layouts, and compliance with plans and specifications. Mr. Moore has provided environmental support to complement B&N's environmental consulting division.

EDUCATION (DEGREE, YEAR, SPECIALIZATION)
Mount Union College – BS Geology, 1987

MEMBERSHIP IN PROFESSIONAL ORGANIZATION:	REGISTRATION (Type, Year, State)

14. **PROVIDE A LIST OF SOFTWARE AND EQUIPMENT AVAILABLE IN THE PRIMARY OFFICE WHICH WILL BE USED TO COMPLETE SITE CHARACTERIZATION STUDY, LEACHATE MANAGEMENT AND CLOSURE CAP.**
Computer for each employee and a variety of network printers and plotters
Microsoft Office Software
Microsoft Project Scheduling Software
AutoCAD Civil 3D Versions 2014 and 2016
ESRI ArcView GIS (Version 3.2) and Mapping Software (Version 10.2)
Hydraulic Evaluation Landfill Performance (HELP) Model
HYDRAIN Software for Surface Water Drainage Modeling
PCSTABL Slope Stability Software
Adobe Acrobat Professional (Version 10.0.0)
Aquifer Win32 (Version 5.0) Software for Slug Test Analyses
Minitab Statistical Software (Releases 16.0 and 17.0)
Microsoft Access In-House Application for Data Management and Analysis
Landtec GEM 2000 Landfill Gas Meter
Garmin eTrex 20 Hand-Held GPS Unit (2)
Oakton pH/CON 10 Field Water Quality Meter (2)
Hach Turbidity Meter (2)
QED MP15 Control & Power Pack for Bladder Pump Sampling (2)
Proactive Well Development Pumps (various)
Stainless Steel Bladder Pump
Solinst Water Level Meter (3)
Hermit 3000 Data Logger and Pressure Transducers
In-House Document Production Services

15. CURRENT ACTIVITIES ON WHICH YOUR FIRM OR EMPLOYEES ARE THE DESIGNATED ENGINEER OF RECORD.

PROJECT NAME, TYPE AND LOCATION	NAME AND ADDRESS OF OWNER	NATURE OF YOUR FIRM'S RESPONSIBILITY	ESTIMATED CONSTRUCTION COST	PERCENT COMPLETE
City of Newark Watson Road Landfill Cap Repair and Site Remediation Newark, Ohio	City of Newark, Ohio John Trujillo, Stormwater Coordinator 34 South 5th Street Newark, OH 43055	Site investigation, delineation of waste, detailed design and specifications for waste consolidation and landfill closure, phytoremediation design, stormwater management system enhancement detail design and specifications, explosive gas delineation and passive landfill gas extraction system detail design and specifications, 404/401 permitting, solid waste closure permitting, endangered species assessment, SWP3, wetland delineation and mitigation, construction services and administration, as-built drawings, and Certification Report.	$1,460,000	Design 100% Construction 100% Continued Landfill Gas Monitoring, Phytoremediation O&M
City of Delaware Curve Road Landfill Leachate Management System Improvements Delaware, Ohio	City of Delaware, Ohio Bill Ferrigno – Public Works Director/City Engineer 440 East William Street Delaware, OH 43015	Design of a new leachate transfer line at this closed municipal solid waste landfill to transport leachate from a 20,000 gallon underground storage tank to an existing sanitary sewer main located north of the property. Services include delineation of on-site and off-site wetlands in the vicinity of the proposed leachate line tract, site survey, detail design and specifications of the new utility, design and specifications of new control panels and electrical surge protection, and associated permitting and agency negotiations.	$513,000	Design 100% Construction 40%
Barium and Chemicals Design-Build RCRA Landfill Corrective Measure Remedy Steubenville, Ohio	Barium and Chemicals, Inc. Deborah Venci P.O. Box 218 515 Kingsdale Rd. Steubenville, OH 43952	Detailed design and specifications of the waste consolidation and closure of landfill, construction management services, post-closure groundwater monitoring assessment.	$320,000	Design 100% Construction 95%
City of Mount Vernon Former American National Can Site Remediation Mount Vernon, Ohio	City of Mount Vernon, Ohio Joel Daniels, Safety Service Director City Hall 40 Public Square, Suite 206 Mount Vernon OH 43050	Site investigation, delineation of existing limits of waste, detailed design and specifications for waste consolidation and landfill closure, 404/401 permitting, solid waste closure permitting, endangered species assessment, SWP3, waste treatment specifications prior to closure, construction services and administration.	$2,200,000	Design 100% Construction 100% Reporting 95%
EOLM, Inc. C&DD Waste Disposal Cell Closure Lima, Ohio	EOLM, Inc. Ben Hefner, Owner 1500 Ft. Amanda Rd. Lima, OH 45804	Detailed design and specifications for closure of specific portions of this active construction and demolition debris landfill. Prepared applications and obtained applicable licenses, continue to provide closure assistance.	$1,500,000	Design 100% Construction 2%

TOTAL NUMBER OF PROJECTS:	TOTAL ESTIMATED CONSTRUCTION COSTS:
# 5	$ 5,993,000

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 FIRM'S RESPONSIBILITY	NAME AND ADDRESS OF OWNER	ESTIMATED COMPLETION DATE	ESTIMATED CONSTRUCTION COST:	
				ENTIRE PROJECT:	YOUR FIRM'S RESPONSIBILITY:
Remedial Action Former Lockbourne Air Force Base Formerly Used Defense Site Property No. G05OH0007 USACE Project No. G05OH0007 03 Lockbourne, Ohio	Subcontractor to CAPE Environmental Management, Inc. to provide numerous services including assistance with Sampling and Analysis Plan, development of existing monitoring wells and piezometers, quarterly sampling and analysis of groundwater and surface water, abandonment of select existing monitoring wells and installation of replacement and additional wells, associated well development and slug test analyses, wetland delineation and mitigation, endangered species investigation, off-property receptor well investigation, groundwater modeling, risk assessment, background water quality evaluation, SWP3 inspections and reporting, data management, and preparation of Long-Term Management Plan. Also provided engineering support services during construction for overall local regulatory compliance as well as Independent Technical Review of Remedial Action Completion Report.	U.S. Army Corps of Engineers – Louisville District Cynthia Ries – Contracting Officer's Representative P. O. Box 59, Room 351 Louisville, KY 40201-0059	Dec 2016	$12,600,000	$930,000

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)**
BDM Warren Residual Solid Waste Landfill Phase 3 Construction Drawings Warren, Ohio	BDM Warren Steel Operations, LLC (formerly WCI Steel and RG Steel)	$1,300,000	2012	NO (company closed)
BDM Warren Residual Solid Waste Landfill Slope Stability Analysis Warren, Ohio	BDM Warren Steel Operations, LLC (formerly WCI Steel and RG Steel)	NA	2012	NO (company closed)
BDM Warren Residual Solid Waste Landfill Phase 3 Soil Borrow Study Warren, Ohio	BDM Warren Steel Operations, LLC (formerly WCI Steel and RG Steel)	NA	2012	NO (company closed)
Nicky Boulevard Landfill Immediate Corrective Measures Leachate Collection System Design Cuyahoga Heights, Ohio	Boyas Contributions, LLC 10055 Sweet Valley Drive Valley View, OH 44125	$525,000	2013	YES
Jackson Pike Transfer Station Upgrade Design Columbus, Ohio	Solid Waste Authority of Central Ohio	$320,000	2013	YES

18. COMPLETED WORK WITHIN LAST 5 YEARS ON WHICH YOUR FIRM HAS BEEN A SUBCONSULTANT TO OTHER FIRMS (INDICATE PHASE OF WORK FOR 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
N/A					

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.

B&N has completed more than 840 solid waste management related projects since the late 1970s for municipalities, counties, regions, private individuals, and industries. Our staff has experience in nearly every facet of solid waste management, from siting and construction to operation and post-closure. We stay apprised of the best available and emerging technologies in the industry such as the use of green technologies for wastewater management and the new *Closure Turf* that replaces the traditional expansive vegetative soil cap at a more affordable cost and lower long-term maintenance requirements. In addition to our design capabilities, we have provided site investigations and regulatory mandated monitoring for a majority of our solid waste clientele as well. However, there are many firms that have similar resumes to B&N.

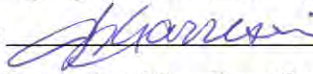
The unique qualifications that B&N can provide to the WVDEP is our experience with passive "green solution" leachate management systems. The Webster County Landfill is located in a rural area with minimal options for wastewater collection and treatment. These types of facilities often necessitate numerous man-hours to collect leachate by vacuum truck from an underground storage tank (UST) or storage basin and transport to a local wastewater treatment plant for disposal. Some facilities have found that the hauling operations are not able to keep up with the volume of leachate generated at the landfill and ultimately must either pay a premium in order to capture all site leachate or allow leachate outbreaks to occur in violation of the environmental regulations. We believe that in order to manage the waste stream effectively and economically, an onsite self-sustaining passive leachate management system is needed. B&N has designed a number of such systems for our clients that utilize phytoremediation and/or engineered wetland treatment cells. It appears that the Webster County Landfill had initially intended to use a wetland treatment cell for leachate management at the facility; however, the system ultimately did not function as intended. This system could be reengineered and constructed to operate to the fullest capacity. B&N designed a system of onsite wetland treatment cells for the City of Lancaster, Ohio to manage leachate and impacted groundwater at their Stonewall Cemetery Road Landfill. A summary of the project is presented in the enclosed project data sheets.

Another innovative option that has recently become recognized nationally is the use of phreatophytes, or deep-rooted, high-transpiring, water-loving trees that send their roots into regions of high moisture and that can survive in conditions of temporary saturation. Typical phreatophytes include species such as cottonwoods, poplars, and willows. Although these systems can experience a delay in effectiveness until the vegetation matures (usually within less than 2 years), the long-term benefits and overall "green technology" approach are beginning to become more favorable than a conventionally engineered system. This technology results in a reduced leachate volume through improved performance over a traditional clay cap and also serves to treat any remaining leachate to within discharge limits.

The Watson Road Landfill project in Newark, Ohio (detailed above as well as in the enclosed project data sheets) that B&N recently completed is very similar to the Webster County Landfill. The landfill is a closed municipal solid waste disposal facility that had experienced significant erosion over the years. The erosion, in addition to the insufficient landfill cap system and overall lack of knowledge of waste placement, resulted in numerous leachate outbreaks that discharged to the adjacent surface water tributaries. The City of Newark, Ohio, owner of the facility, initially obtained a preliminary design and cost estimate to engineer a cutoff wall and install a leachate transfer line roughly one half mile down the valley away from the site, under a major river, and connect into the existing sanitary utilities. Upon the City's efforts to seek additional options, B&N proposed the use of phytoremediation and enhanced landfill cap design as a solution. The City chose to proceed with our approach and construction of the first successfully designed and constructed phytoremediation system at a solid waste disposal facility in Ohio was completed in 2012. Leachate that had previously discharged to surface water at various locations has now been restricted to one discharge point subsequent to treatment.

The City has a unique permit in Ohio to discharge landfill leachate in accordance with a facility-specific National Pollution Discharge Elimination System (NPDES) Permit. Prior to B&N's involvement, the City reported 241 exceedances of the NPDES permit maximum discharge limits between 2003 and 2009. Constituents of concern included ammonia, bis(2-ethylhexyl)phthalate, biochemical oxygen demand (BOD), cadmium, copper, cyanide, methyl blue active substances (MBAS), oil & grease, and total suspended solids. Seventy-two of the 241 exceedances were for ammonia. Subsequent to completion of construction activities in 2012, the City has not has an NPDES permit maximum discharge limit exceedance for ammonia. Except for February 2013 and September 2015 minor exceedances of oil & grease, and a March 2014 exceedance of MBAS, there have been no other NPDES permit limit exceedances. As the trees continue to mature, zero exceedances are anticipated as phytoremediation has been proven to reduce or eliminate all site-specific constituents of concern.

20. The foregoing is a statement of facts.

Signature: 

Date: 2/15/16

Title: Executive Vice President

Printed Name: James P. Garrison, PE

Rev. 04/14

State of West Virginia
VENDOR PREFERENCE CERTIFICATE

Certification and application* is hereby made for Preference in accordance with ***West Virginia Code***, §5A-3-37. (Does not apply to construction contracts). ***West Virginia Code***, §5A-3-37, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the ***West Virginia Code***. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Vendor Preference, if applicable.

1. **Application is made for 2.5% vendor preference for the reason checked:**

✓ Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,**

___ Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; or 80% of the ownership interest of Bidder is held by another individual, partnership, association or corporation resident vendor who has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification; **or,**

___ Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; **or,**

2. **Application is made for 2.5% vendor preference for the reason checked:**

___ Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**

3. **Application is made for 2.5% vendor preference for the reason checked:**

___ Bidder is a nonresident vendor employing a minimum of one hundred state residents or is a nonresident vendor with an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia employing a minimum of one hundred state residents who certifies that, during the life of the contract, on average at least 75% of the employees or Bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; **or,**

4. **Application is made for 5% vendor preference for the reason checked:**

___ Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; **or,**

5. **Application is made for 3.5% vendor preference who is a veteran for the reason checked:**

___ Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; **or,**

6. **Application is made for 3.5% vendor preference who is a veteran for the reason checked:**

___ Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.

7. **Application is made for preference as a non-resident small, women- and minority-owned business, in accordance with *West Virginia Code* §5A-3-59 and *West Virginia Code of State Rules.***

___ Bidder has been or expects to be approved prior to contract award by the Purchasing Division as a certified small, women- and minority-owned business.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) reject the bid; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Under penalty of law for false swearing (West Virginia Code, §61-5-3), Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: Burgess & Niple, Inc. **Signed:** [signature]

Date: 2/15/16 **Title:** Executive Vice President

RFQ No. DEP1600000013

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 exceed 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: BURGESS & NIPLE INC

Authorized Signature: _____ Date: 2/15/16

State of Ohio

County of Franklin, to-wit:

Taken, subscribed, and sworn to before me this 16 day of February, 2016.

My Commission expires 2/8/16, 20___.

AFFIX SEAL HERE

NOTARY PUBLIC, STATE OF OHIO
CHRISTINE BRAHLER
DELAWARE COUNTY
My Commission Expires _____

NOTARY PUBLIC Christine Brahler

BURGESS & NIPLE
Engineers ■ Architects ■ Planners

Solid Waste Services

February 2016

TABLE OF CONTENTS

1.0 INTRODUCTION

Who is Burgess & Niple, Inc.

Burgess & Niple (B&N) was founded in Columbus, Ohio in 1912 and has been in continuous operation since that time. The original expertise and one of the continuing strengths of B&N has been the field of water and wastewater engineering. Building on a sound reputation of providing quality engineering services to our municipal, industrial, and private clients, B&N has grown to 350 professional and support personnel and provides many types of engineering service. B&N has consistently ranked in the top 150 engineering firms in the United States in the past 10 years as reported by the *Engineering News Record*. B&N is currently ranked 159th in the latest listing. The following is a general list of the varied services provided by B&N.

Architecture

Facilities Programming
Space Planning
Design
Landscape Architecture

Construction Services

Contract Administration
Resident Project Representation
Shop Drawing Review
Record Drawings

Environmental Engineering

Site Assessments
Soil & Groundwater Remediation
Water & Wastewater Treatment
Solid & Hazardous Waste
Geotechnical Services
Groundwater Development
Compliance Assistance
Wetlands Assistance

Hydraulics & Hydrology

Watershed Planning
Reservoir & Dam Studies
Hydraulic Structures Design
Hydroelectric Power Facilities

Mechanical Engineering

Energy Studies
Heating/Ventilating/Air Conditioning
Plumbing Design
Fire Suppression

Electrical Engineering

Substations
Power Distribution
Lighting Design
Controls & Instrumentation

Structural Engineering

Building Design
Foundation Systems
Inspection/Evaluation

Municipal Engineering

Planning
Stormwater Management
Utility Engineering
Land Development
Rate Studies

Transportation

Street & Highway Design
Bridge Design & Inspection
Traffic Engineering
Railway Design

Water & Wastewater

Treatment Plants
Water Distribution Systems
Sanitary Sewer Systems
Sludge Handling
O&M Manuals

Offices

Columbus
5085 Reed Road
Columbus, OH 43220
614.459.2050
614.451.1385 Fax

Akron
Akron Centre Plaza
50 South Main St., Ste. 600
Akron, OH 44308
330.376.5778
330.376.5741 Fax

Austin
4029 Capital of Texas
Highway, Ste. 220
Austin, TX 78704
512.306.9266
512.306.9550 Fax

Cincinnati
312 Plum Street, 12th Floor
Cincinnati, OH 45202
513.579.0042
513.579.0321 Fax

Dallas
12750 Merit Drive
Park Central 7, Ste. 425
Dallas, TX 75251
972.620.1255
972.620.8028 Fax

Dulles
4160 Pleasant Valley Road
Chantilly, VA 20151
703.631.9630
703.631.6041 Fax

Fort Worth
3950 Fossil Creek Blvd.
Ste. 210
Fort Worth, TX 76137
817.306.1444
817.306.1555 Fax

Houston
10701 Corporate Drive, Ste. 118
Stafford, TX 77477
281.980.7705
281.980.0455 Fax

Indianapolis
Capital Center, Ste. 920
251 North Illinois Street
Indianapolis, IN 46204
317.237.2760
317.237.2755 Fax

Louisville
400 Blankenbaker Parkway
Ste. 300
Louisville, KY 40243
502.254.2344
502.254.3008 Fax

Midland
1030 Andrews Hwy., Ste. 211
Midland, TX 79701
432.689.8909
432.689.8911 Fax

Orlando
1800 Pembrook Drive, Ste. 265
Orlando, FL 32810
407.401.8527
407.660.4994 Fax

Painesville
100 West Erie Street
Painesville, OH 44077
440.354.9700
440.352.8373 Fax

Parkersburg
4424 Emerson Avenue
Parkersburg, WV 26104
304.485.8541
304.485.0238 Fax

Phoenix
1500 N Priest Drive
Ste. 102
Tempe, AZ 85281
602.244.8100

Richmond
5101 Cox Road, Ste. 150
Glen Allen, VA 23060
804.320.2667
804.323.5131 Fax

Virginia Beach
440 Monticello Avenue
Ste. 1240
Norfolk, VA 23510
757.490.3566
757.490.9224 Fax

Woodbridge
12700 Black Forest Lane
Ste. 100
Woodbridge, VA 22192
703.670.6400
703.670.6250 Fax

Environmental Services

The Environmental Division of B&N, located at our main office in Columbus, is an ensemble of 25 chemical and civil engineers, geologists, hydrogeologists, biologists, environmental scientists, regulatory specialists, designers, and support personnel. Below is a general list of the services provided by the Environmental Division. The Division is made up of the Engineering and NEPA/Ecological Sections.

The Division was organized in the early 1970s to meet the demand for industrial wastewater treatment design services precipitated by the Federal Water Pollution Control Act of 1972, as well as provide hydrogeologic services to municipalities and industries. The group has grown to include landfill design and permitting, solid and hazardous waste management planning, foundation investigation, geotechnical and civil engineering services, wetland jurisdictional determinations and permitting, environmental site assessment, site remediation, abandoned mine lands and associated acid mine drainage, stormwater management, spill prevention planning, and other related environmental engineering services.

Solid Waste Management

Waste Management Plans
Landfill Design
Landfill Permitting
Closure Plans
Waste Minimization
Yard Waste
Waste Characterization
Recycling

Environmental Statistics

Landfill Compliance
Lagoon Closures
Phase 2 Investigations
Statistical Consulting

Wetlands Assistance

Preliminary Evaluations
Wetlands Delineation
Section 404/401 Permits
Mitigation Alternatives

Soil & Groundwater Remediation

RI/FS Investigations
Remedial Action Plans
Soil & Groundwater Monitoring
Treatment System Design
Waste Removal
Risk Assessments
Soil Remediation
UST Closure Assessment and Remediation

Environmental Site Assessments

Phase 1 & 2 Assessments
Site Inspections
Subsurface Investigation
Remediation Cost Estimates
Corrective Action Plans

Hazardous Waste Management

RCRA Permits
RCRA Compliance Assistance
TSD Facilities Permits
RCRA Closure Plans

Stormwater Management

Permit Applications
Management Plans
Diversion & Retention Structures
Treatment System Designs
Pollution Prevention Plans

Geotechnical Services

Erosion Control
Foundation Investigations
Landslide & Slip Evaluations
Subsidence Control
Dewatering Plans

Compliance Assistance

Clean Air Act Assistance
Wastewater Permits
Natural Resource Permits
SARA Title III Reporting
Spill Plans
Pretreatment Programs

Water Supply Development

Feasibility Studies
Hydrogeologic Investigations
Groundwater Modeling
Well Field Development
Wellhead Protection

Air Quality Services

Permit Applications
BAT/BACT Determinations
Air Quality Modeling
Emission Controls Design
Odor Studies and Controls Design
Title V Compliance
Emission Inventories

Water & Wastewater Treatment

Feasibility Studies
Pilot & Bench Scale Tests
Treatment System Design
Plans & Specifications
O&M Manuals
Construction Services

Commitment to Quality

At B&N, we "build-in" design quality. The training and experience of our staff is the first line of defense. Next we have our project approach: kickoff, preliminary design review, detailed design review. And finally we check contract documents and issue addenda as necessary prior to bidding.

Design quality is frequently measured by client satisfaction. Nearly 80 percent of our business is from previous clients. We believe this clearly indicates client satisfaction.

We encourage our professionals to secure and maintain credentials in their respective disciplines. This parameter is applied to those disciplines for which there is a recognized licensing, registration, or certification program. Currently more than 75 percent of eligible professionals are licensed.

Another parameter we are proud of is our low personnel turnover. This reflects the stability of our work force. We encourage our employees to develop and grow by filling supervisory and management positions primarily from within the company. Low turnover builds a strong experience base in our organization. An experienced staff is essential in building quality into constructed projects.

As stated earlier, quality ***needs to be built in and not just added on at the end***. We achieve this by planned intermediate reviews as well as the final review. Assuming a reasonable schedule/program at the start, the enemy of quality is a design change. If a design change is made late in the schedule, time and effort must be expended to implement that design change. We make every effort to decrease the likelihood of major changes late in the schedule by maintaining you as a very important member of the project team. Likewise, an acceleration of schedule toward the end of a project must not compromise the final review. B&N's record on thoroughness and completeness of plans is very good. This is reflected in our low constructed cost/bid cost ratio (few change orders). Contractors and Owners can attest to our reputation in this regard.

B&N's approach to quality combines management, people, and procedures to ensure delivery of quality products and services to AEP. We will develop a project work plan at the onset of each project regardless of size or complexity. This document is essential to ensuring high-quality deliverables are consistently produced from kick-off to close-out. The project work plan will be distributed to B&N staff and subconsultants. Early planning helps mitigate potential issues, rework, and lost time.

Key aspects of the work plan generally include:

- Quality control plan
- Critical success factors
- Process and standards
- Communications protocols
- Scope
- Schedule
- Budget

B&N's internal Quality Control process makes certain that high-quality products are a commitment of all team members.. All deliverables will undergo a thorough internal process. This typically includes:

- Conducting an internal kickoff meeting to set team quality expectations/accountability
- Holding frequent recurring team meetings
- Following project-specific quality checklists for all deliverables
- Conducting independent reviews of calculations, reports, and Plans
- Carrying out stage submittal constructability reviews

Support Services

Support services play a key role in the successful completion of complex projects. Burgess & Niple's mechanical, electrical, and structural engineering disciplines support our earth sciences and engineering staff engaged in environmental, architectural, industrial, municipal, and transportation projects.

Our library contains more than 6,000 volumes and has subscriptions to more than 150 technical publications.

B&N outsources field survey services, and our subconsultants use the latest technology and equipment, including high accuracy GPS equipment, to obtain field data that is transferred directly into our CADD system for preparation of topographic mapping and other displays. All field survey work is coordinated, directed, and reviewed by Chris LeRoy, PS, on our staff.

Burgess & Niple's cost estimating personnel use a proprietary, computer-based estimating system to record, monitor, and analyze bid data from our projects. This database, together with cost and labor productivity information from other sources, is a resource used in preparing project cost estimates.

Our printing department provides full publishing, blueprinting, and copying services to our technical staff. Our full-time graphics department produces illustrations, word processing, and graphics for specialized presentational applications.

Computer Resources

Computing technology at B&N is based on up-to-date Windows/Intel systems. Each of our 18 offices in eight states has high-end workstations connected via Local Area Networks that operate at speeds up to 4 Gbps. All of our offices are connected to our externally hosted data center and to each other via a high-speed Wide Area Network with each location using at least two network connections for redundancy and connection speeds averaging 50 Mbps. Our externally hosted data center location provides a highly secure and power-protected environment to assure the highest availability of all of our data and systems and supports aggregate connectivity at speeds up to 200 Mbps.

B&N's extensive inventory of computers is continuously being upgraded. One-fourth of our stations are replaced every year with current high-end systems. PCs using computationally intensive applications hardware are updated regularly with the latest technology. Software at B&N is centrally controlled and managed to ensure uniformity and interoperability. Software upgrades, updates, and patches are put in place as soon as they are available by centralized IT systems. This rapid deployment of new updates is one piece of our in-depth security policy.

Through our wide area network, the engineers, architects, scientists, and technicians assigned to your project have immediate real-time access to all of B&N's digital systems, including extensive information developed over time on other projects. This capability is being expanded to include automated search of our current and historic knowledge base. If schedule requirements dictate, technical talent from other offices can be easily and immediately applied to your project.

Collaboration among our staff members is facilitated by using ***Microsoft Exchange*** and ***SharePoint*** for email, discussions, document sharing, and calendaring; ***ProjectWise*** for engineering design coordination and control; ***Windows Server*** for file and print services; ***Dell SonicWALL*** Virtual Private Network (VPN) for communication and coordination with remote systems users; and our own Intranet for internal communications, collaboration, and support functions. Our primary design tools consist of current versions ***from Autodesk and Bentley Systems***. B&N also utilizes analytical software systems for a variety of engineering, environmental, architectural, transportation, and traffic projects.

2.0 SOLID WASTE SERVICES

B&N has completed more than 840 solid waste management related projects in Ohio since the late 1970s for municipalities, counties, regions, private individuals, and industries. Our staff has experience in nearly every facet of solid waste management, from siting and construction to operation and post-closure, and we stay apprised of the best available and emerging technologies in the industry.

The next page is a graphical representation of our solid waste projects and their location by county. This is followed by a listing of recent projects we have completed, broken down by type of work performed. A description of the different types of solid waste projects is presented below.

Landfill Design Services

B&N has completed many designs for new landfills, landfill expansions, environmental improvements, and landfill closures since the passage of best available technology regulations in 1989. This experience includes composite bottom liner system design, leachate collection and removal system design, surface water collection and sediment pond system design, composite final cover design, gas venting system design, detailed operational phasing design, and roadway design. These designs and the fact that our engineers are encouraged to attend conferences to keep abreast with new developments has given our staff the experience and expertise in all facets of designing a state-of-the-art landfill.

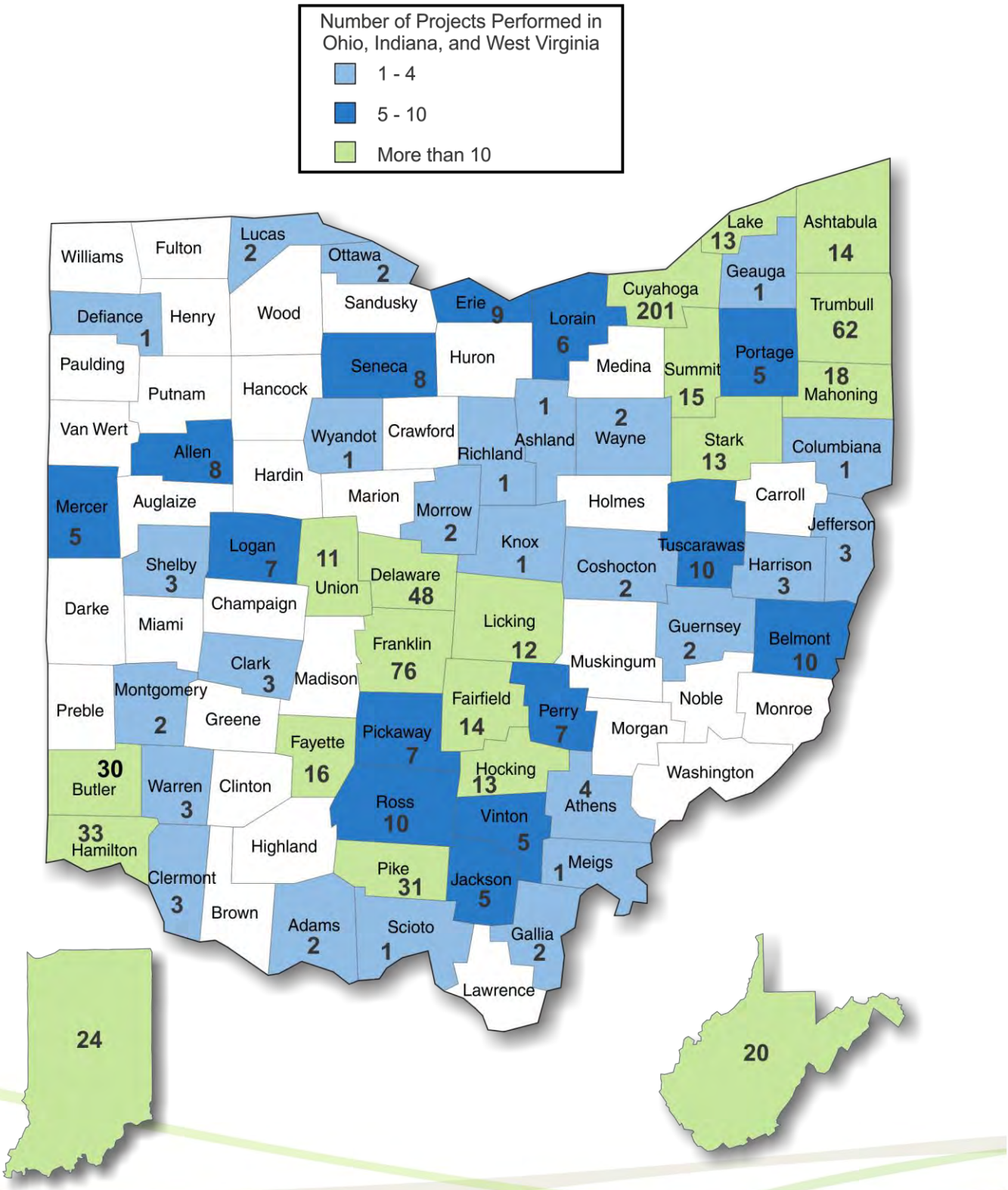
Our experience has also included innovative solutions to site conditions in order to minimize construction costs. These have included reinforced earth walls, groundwater cut-off walls, synthetic alternatives to liner components such as geosynthetic clay liners and synthetic drainage nets, and side riser pipes for leachate sump access.

Our staff also includes geotechnical engineers experienced in performing stability analyses for excavations and embankments, settlement analyses of landfill sub-grade, and the design of specialized earthworks features including synthetic liner systems and reinforced earth walls. This staff also has extensive experience in conducting soil borrow studies to determine the location, extent, and physical properties of soils for landfill construction and operation.

Our design engineers are fully complemented by technicians and drafters experienced in preparing cross-sections, development plans, and details. Permit drawings are completed to near-construction quality. AutoCAD is used to quickly upgrade the permit drawings to construction detail.

SOLID WASTE MANAGEMENT

PROJECTS SINCE 1980



Burgess & Niple, Inc.
Landfill Design, Plans, Permitting, and Closure Projects

Project	Location	Client	Description
American (Former) National Can Facility	Knox Co.	City of Mount Vernon	Unpermitted landfill closure
Barium & Chemicals Facility	Jefferson Co.	Barium & Chemicals, Inc.	Unpermitted landfill closure
Bedford I Landfill	Franklin Co.	Claycraft Co.	Two expansions & permits; Landfill closure plans
Bedford II Landfill	Franklin Co.	Claycraft Co.	Landfill closure plans
Buckeye Gas Plan	Belmont Co.	Buckeye Reclamation Co.	Methane gas plans
Buckeye Reclamation	Belmont Co.	Ohio Resource Corp.	Landfill environmental improvement/closure
Central Landfill	Cuyahoga Co.	LTV Steel Company	Vertical expansions; Landfill closure plans
Central Waste Landfill	Mahoning Co.	Central Wastes, Inc.	Three new landfill cells & permits; Explosive gas monitoring plan
Central Wastes C&D Site	Mahoning Co.	Central Wastes, Inc.	Demolition debris landfill design
Cherokee Run Landfill	Logan Co.	Allied Waste Systems	Landfill expansion permitting
Cherry Street Landfill	Delaware Co.	City of Delaware	Closure alternatives evaluation
Clarksburg Landfill	Harrison Co. WV	Clarksburg WV	Landfill closure plans & specs
Clow Landfill	Coshocton Co.	Clow Water Systems	Landfill closure evaluation
Corning Glass Landfill	Wood Co. WV	Corning Glass Works	Landfill closure application
Countywide Landfill	Stark Co.	Integrated Waste	Landfill design & permit
Cravat Coal Landfill	Belmont Co.	Ohio Resource Corp.	Landfill design
Curve Road Landfill	Delaware Co.	City of Delaware	Leachate control study; leachate transfer line design
Dorset Residual landfill	Ashtabula Co.	LTV Steel Co.	New landfill design & permit
Dublin Road Landfill	Franklin Co.	Arter & Hadden	Landfill closure
EOLM C&DD Landfill	Allen Co.	EOLM	C&DD License
Eastlake Landfill	Lake Co.	City of Eastlake	Explosive gas monitoring plan
Eysenbach Landfill	Allen Co.	SCA Services	Landfill design
Fairfield Landfill	Fairfield Co.	Allied Roto Rooter	New landfill design & permit
Fairfield Landfill	Fairfield Co.	Allied Roto Rooter	New landfill gas plan
Fayette County Landfill	Fayette Co.	Fayette Co. Engineer	C&DD landfill expansion design
Green II Landfill	Hocking Co.	PPG Industries, Inc.	Landfill closure

Burgess & Niple, Inc.
Landfill Design, Plans, Permitting, and Closure Projects (Cont.)

Project	Location	Client	Description
Green II Landfill	Hocking Co.	PPG Industries, Inc.	Methane control plans
Hamilton Sludge Landfill	Butler Co.	City of Hamilton	Closure design
Hershberger Landfill	Union Co.	PPG Industries, Inc.	Remedial Design
Hodapp Landfill	Hamilton Co.	City of Hamilton	Explosive gas monitoring plan
Indiana Dept. of Environmental Management	Marion Co., IN	Indiana Department of Environmental Mgt.	PTI application review; Sampling & Analysis Plan review
Jackson Landfill	Jackson Co.	SCS, Inc.	Expansion
Jackson Landfill	Jackson Co.	SCS, Inc.	Landfill closure plans
Lancaster Landfill	Fairfield Co.	City of Lancaster, Ohio	Landfill closure evaluation and design; Onsite wetlands treatment cells design
Lancaster Sludge Landfill	Fairfield Co.	City of Lancaster, Ohio	Landfill design & permit
Lawrenceburg Landfill	Hamilton Co.	CG&E	New landfill design & permit
Lima Landfill	Allen Co.	SCA Services, Inc.	New landfill design; New landfill gas plan
Martin Landfill	Harrison Co.	ENCON Management	Expansion; Landfill closure evaluation
McArthur Landfill	Vinton Co.	City of McArthur, Ohio	Explosive gas monitoring plan
Miamiview Road Ash Landfill	Hamilton Co.	CG&E	New landfill design & permit
Model Landfill	Franklin Co.	Solid Waste Authority of Central Ohio	Landfill closure evaluation
Nicky Boulevard Landfill	Cuyahoga Co.	Boyas Excavating Co.	Surface water & wetland permits; Leachate collection and transfer line design
North Residual Landfill	Cuyahoga Co.	LTV Steel Co.	New landfill design & permit; annual report
Paint Street Landfill	Ross Co.	Mead Paper Co.	Landfill closure
Robenalt Landfill	Allen Co.	Robenalt, et. al.	New landfill design
Scotts Co. Landfills	Union Co.	The Scotts Co.	Landfill closure
Seiberling Street Landfill	Summit Co.	Goodyear Tire & Rubber	Post-closure evaluation; Explosive gas monitoring plan
Severstal Warren Landfill	Trumbull Co.	Severstal Warren, Inc./ RG Steel, Inc./WCI Steel, Inc.	Closure design & new permit; Leachate transfer line design; Annual reports

Burgess & Niple, Inc.
Landfill Design, Plans, Permitting, and Closure Projects (Cont.)

Project	Location	Client	Description
Sorg-Miller Landfill	Butler Co.	Sorg Paper Co.	Expansion; Closure, Landfill closure plans
Statewide Landfill	Stark Co.	SCA Services, Inc.	Explosive gas control plans
Suburban Landfill	Licking Co.	Waste Management, Inc.	Landfill expansion
Wasteland Closure	Tuscarawas Co.	Waste Management, Inc.	Final closure evaluation
Watson Road Landfill	Licking Co.	City of Newark	Landfill closure improvements; Phytoremediation; Stormwater management system improvements; wetland delineation and mitigation
Wellston Landfill	Jackson Co.	SCS, Inc.	Landfill closure

Burgess & Niple, Inc.
Landfill Monitoring

Project	Location	Client	Description
ArcelorMittal Cleveland Area B, Area C, & Vista Pointe Landfills	Cuyahoga Co.	ArcelorMittal Cleveland LLC/ISG Cleveland Inc./LTV Steel, Inc.	Groundwater sampling/analysis
Athens-Hocking Reclamation	Athens Co.	Kilbarger Construction Co.	Groundwater statistical analysis
Bedford I Landfill	Franklin Co.	Claycraft Co.	Groundwater sampling/analysis Gas survey & methane monitoring
Bedford II Landfill	Franklin Co.	Claycraft Co.	Leachate sampling/analysis
Big Walnut Park	Franklin Co.	Morrison Road Dev. Co.	Methane gas survey
Buckeye Reclamation	Belmont Co.	Ohio Resources Corp.	Leachate sampling/analysis
Butler Co. Landfill	Butler Co.	Water Association	Groundwater quality evaluation
Central Waste Landfill	Mahoning Co.	Central Wastes, Inc.	Groundwater, surface water sampling/analysis
Cherry Street Landfill	Delaware Co.	City of Delaware, Ohio	Explosive gas monitoring Leachate investigation
Confidential	Franklin Co.	Arter and Hadden	Groundwater sampling/analysis
Countywide Landfill	Stark Co.	Integrated Waste	Groundwater sampling/analysis
Curve Road Landfill	Delaware Co.	City of Delaware, Ohio	Groundwater, surface water, leachate sampling/analysis; Leachate Investigation; Explosive gas monitoring
DP&L Sampling	Adams Co.	Dayton Power & Light	Leachate sampling/analysis
Eastlake Landfill	Lake Co.	City of Eastlake, Ohio	Groundwater sampling/analysis
Erie Co. Landfill	Erie Co.	Erie Co. Commissioners	Groundwater sampling/analysis
Fairfield Landfill	Fairfield Co.	Allied Roto Rooter	Groundwater sampling/analysis
Fayette Co. Landfill No. 3	Fayette Co.	Fayette Co. Commissioners	Groundwater, surface water sampling/analysis
Green II Landfill	Hocking Co.	PPG Industries, Inc.	Leachate sampling/analysis
Hamilton Sludge Landfill	Butler Co.	City of Hamilton	Groundwater sampling/analysis
Heckett Landfill	Mahoning Co.	WCI Steel, Inc.	Groundwater sampling/analysis
Hodapp Landfill	Butler Co.	Champion Int'l Corp.	Groundwater sampling/analysis
Hodapp Landfill	Butler Co.	City of Hamilton	Groundwater sampling/analysis

Burgess & Niple, Inc.
Landfill Monitoring (Cont.)

Project	Location	Client	Description
Island Road Landfill	Pickaway Co.	Estate of J. Bowers	Groundwater sampling/analysis
Jackson Landfill	Jackson Co.	SCS, Inc.	Groundwater sampling/analysis
Lancaster Landfill	Fairfield Co.	City of Lancaster, Ohio	Groundwater sampling/analysis
Lancaster Sludge Landfill	Fairfield Co.	City of Lancaster, Ohio	Groundwater sampling/analysis
Lawrenceburg Landfill	Hamilton Co.	CG&E	Groundwater sampling/analysis
Lima Landfill	Allen Co.	SCA Services, Inc.	Groundwater sampling/analysis
Lockbourne (Former) Air Force Base Landfill	Franklin Co.	USACE-Louisville District	Groundwater & surface water sampling/analysis; groundwater modeling
Miamiview Landfill	Hamilton Co.	CG&E	Groundwater sampling/analysis
Middletown Sampling	Butler Co.	City of Middletown, Ohio	Groundwater sampling/analysis
Model Landfill	Franklin Co.	Solid Waste Authority of Central Ohio	Groundwater & surface water sampling/analysis
Mt. Eaton Landfill	Wayne Co.	Wayne Co. Comm.	Groundwater sampling/analysis
Nicky Boulevard Landfill	Cuyahoga Co.	Boyas Excavating Company	Groundwater, surface water, leachate sampling/analysis
Oxford Township Landfill	Delaware Co.	Oxford Township Trustees	Groundwater sampling/analysis
Pike Sanitation Landfill	Pike Co.	Rumpke Waste, Inc./Pike Sanitation, Inc.	Groundwater, surface water, leachate sampling/analysis
San-Lan/Sunny Farms Landfill	Seneca Co.	Kilbarger Construction Co./Sunny Farms Landfill, LLC	Groundwater sampling/analysis Explosive gas monitoring
Seiberling Street Landfill	Summit Co.	Goodyear Tire & Rubber	Groundwater sampling/analysis
Severstal Warren Landfill	Trumbull Co.	Severstal Warren Inc./ /BDM Steel Inc./RG Steel, Inc./WCI Steel, Inc.	Groundwater, surface water, leachate sampling/analysis
Sorg-Miller Landfill	Butler Co.	Sorg Paper Co.	Groundwater sampling/analysis
Statewide Landfill	Stark Co.	SCA Services, Inc.	Groundwater sampling/analysis
Suburban Landfill	Licking Co.	Waste Management, Inc.	Groundwater sampling/analysis
Wayne Reclamation & Recycling	Whitley Co., IN	City of Columbia City, IN	Groundwater sampling/analysis
Yucca Flats Landfill	Cuyahoga Co.	LTV Steel Company	Groundwater sampling/analysis

Burgess & Niple, Inc.
Landfill/Facility Evaluation and Siting

Project	Location	Client	Description
Allen Co. Landfill	Allen Co.	SCA Services	New landfill siting
Amsted Landfill Evaluation	Mahoning Co.	Amsted	Landfill evaluation
Ashtabula Co. Landfill	Ashtabula Co.	SCA Services	Engineering services for landfills
Bedford I Landfill	Franklin Co.	Claycraft Co.	Hydrogeologic investigation
Belmont Transfer Station	Belmont Co.	Belmont Co.	Feasibility study
Central Landfill	Cuyahoga Co.	LTV Steel Co.	Hydrogeologic investigation
Cardinal Plant	Belmont Co.	AEP	Landfill Siting Study
Central Wastes Landfill	Mahoning Co.	Central Wastes, Inc.	Hydrogeologic investigation
Central Wastes Landfill	Mahoning Co.	Central Wastes, Inc.	Wetlands delineation
CG&E Borrow Studies	Hamilton Co.	CG&E	Clay availability studies
Cherokee Run Landfill	Logan Co.	Allied Waste System	Hydrogeologic investigation
Cherokee Run Landfill	Logan Co.	Allied Waste System	Wetlands permitting
Clark Co. Landfill	Clark Co.	City of Springfield	Tritium Study
Countywide Landfill	Stark Co.	Integrated Waste	Hydrogeologic investigation
Countywide Landfill	Stark Co.	Waste Management, Inc.	Property survey
Curve Road Landfill	Delaware Co.	City of Delaware	Hydrogeologic investigation
Dorsett Residual Landfill	Ashtabula Co.	LTV Steel, Inc.	Hydrogeologic investigation
Dublin Road Landfill	Franklin Co.	Arter & Hadden	Hydrogeologic investigation
Dundee Landfill	Tuscarawas Co.	SCA Services	Aerial photography review
Erie Landfill	Erie Co.	Erie Co. Comm.	Hydrogeologic investigation
Elkins Sanitary Landfill	Randolph Co. WV	Elkins WV Sanitary Board	Leachate study
Fairfield Landfill	Fairfield Co.	Allied Roto Rooter	Hydrogeologic investigation
Fairfield Landfill	Fairfield Co.	Waste Management	Survey/aerial photography
Green II Landfill	Hocking Co.	PPG Industries, Inc.	Hydrogeologic investigation
Green II Landfill	Hocking Co.	PPG Industries, Inc.	Landfill report
Hodapp Landfill	Butler Co.	City of Hamilton	Hydrogeologic investigation
Island Road Landfill	Pickaway Co.	Estate of J. Bowers	Hydrogeologic investigation
Jackson Landfill	Jackson Co.	SCS, Inc.	Hydrogeologic investigation
Lancaster Landfill	Fairfield Co.	City of Lancaster	Hydrogeologic investigation

Burgess & Niple, Inc.
Landfill/Facility Evaluation and Siting (Cont.)

Project	Location	Client	Description
Lancaster Sludge Site	Fairfield Co.	City of Lancaster	Sludge siting study
Lawrenceburg Landfill	Hamilton Co.	CG&E	Hydrogeologic investigation
Lewiston Cost Estimates	Lewiston, NY	Battelle	Landfill cost estimates
Licking Hills Landfill	Licking Co.	Waste Management, Inc.	Feasibility study
Martin Landfill	Harrison Co.	ENCON Management	Expansion feasibility
Martin Landfill	Harrison Co.	ENCON Management	Closure cost estimates
Mitchell Plant	West Virginia	AEP	Landfill Siting Study
Metro Manila Study	Republic of the Philippines	Dizon SGC	Pro Forma and Cost Estimates
Middletown Landfill	Butler Co.	City of Middletown	Water quality review
Model Landfill	Franklin Co.	Solid Waste Authority of Central Ohio	Hydrogeologic investigation
Mt. Eaton Landfill	Wayne Co.	Wayne Co. Commissioners	Hydrogeologic investigation
North Residual Landfill	Cuyahoga Co.	LTV Steel Co.	Hydrogeologic investigation
OEUI Landfill	Ohio	Fuller & Henry	Landfill evaluation
Ohio Edison	Lorain Co.	Ohio Edison Co.	Landfill feasibility study and cost estimate
Paint Street Landfill	Ross Co.	Mead Paper	Clay availability study
Paint Street Landfill	Ross Co.	Mead Paper Co.	Landfill investigation
Paint Street Landfill	Ross Co.	Mead Paper Co.	EBR hearing on landfill
Pike Sanitation Landfill	Pike Co.	Rumpke Waste, Inc./Pike Sanitation	Hydrogeologic investigation
PPG Lagoon Site	Summit Co.	SCA Services	Waste disposal study
Richland Landfill	Richland Co.	Jackson Township	Richland landfill review
Robenalt Landfill	Allen Co.	Robenalt, et. al.	Hydrogeologic investigation
SCA Landfill Facilities	Logan Co.	SCA Services	Solid and hazardous landfill consulting
Scotts Company Landfills	Union Co.	The Scotts Company	Hydrogeologic Investigation
Severstal Warren Landfill	Trumbull Co.	Severstal Warren, Inc./RG Steel, Inc./WCI Steel, Inc.	Hydrogeologic investigation
Sorg-Miller Landfill	Butler Co.	Sorg Paper Co.	Landfill evaluation
Suburban Landfill	Licking Co.	Waste Management, Inc.	Hydrogeologic investigation

Burgess & Niple, Inc.
Landfill/Facility Evaluation and Siting (Cont.)

Project	Location	Client	Description
Suburban Landfill	Licking Co.	Waste Management	Leachate and runoff monitoring
Wasteland Landfill	Tuscarawas Co.	Waste Management, Inc.	Hydrogeologic investigation
Wasteland Reclamation	Tuscarawas Co.	Waste Management, Inc.	Evaluation and monitoring
Watson Road Landfill	Licking Co.	City of Newark	Site investigation, waste delineation, leachate characterization
Willow Creek Landfill	Portage Co.	Browning-Ferris Ind.	Wetlands permitting

Burgess & Niple, Inc.
Environmental Statistics

Project	Location	Client	Description
A. J. Weigand Lagoon	Tuscarawas Co.	A. J. Weigand Inc.	Sludge and water statistics
Athens-Hocking Reclamation Center	Athens Co.	Kilbarger Construction, Inc.	Groundwater statistics
BDM Landfill	Trumbull Co.	BDM Warren Steel	Groundwater Statistics
Central Waste Landfill	Mahoning Co.	Central Waste	Groundwater statistics
Curve Road Landfill	Delaware Co.	City of Delaware, OH	Groundwater statistics
Fayette Co. Landfill No. 3	Fayette Co.	Fayette Co. Commissioners	Groundwater statistics
Ford Disposal Areas	Erie Co.	Ford Motor Co.	Soil and water quality statistics
Franklin Co. Landfills	Franklin Co.	Solid Waste Authority of Central Ohio	Leachate and groundwater statistics
Groundwater Quality in Ohio	Ohio	Fuller & Henry	Groundwater statistics
Indiana Dept. of Environmental Management	Marion Co., IN	Indiana Dept. of Environmental Mgt.	Consultation and plan review
Kenworth Truck Company	Ross Co.	Kenworth Truck Company	Groundwater statistics
LTV Steel Indust. Waste Landfill	Cuyahoga Co.	LTV Steel	Groundwater statistics
Lockbourne (Former) Air Force Base Landfill	Franklin Co.	USACE Louisville District	Groundwater/surface water statistics
McArthur WWTP	Vinton Co.	Village of McArthur	Groundwater statistics
Nicky Boulevard Landfill	Cuyahoga Co.	Boyas Excavating Company	Groundwater statistics
Oxford Township Landfill	Delaware Co.	Oxford Township Trustees	Groundwater statistics
Pike Sanitation Landfill	Pike Co.	Rumpke Waste, Inc./Pike Sanitation, Inc.	Leachate and groundwater statistics
Pillsbury WWTP	Jackson Co.	The Pillsbury Co.	Groundwater statistics
San-Lan/Sunny Farms Landfill	Seneca Co.	Kilbarger Construction, Inc./Sunny Farms Landfill, LLC	Groundwater statistics
Seiberling Street Landfill	Summit Co.	Goodyear Tire & Rubber	Groundwater statistics
Severstal Warren Landfill	Trumbull Co.	Severstal Warren, Inc./ RG Steel Inc./WCI Steel, Inc.	Groundwater statistics
Tube-Tech, Inc.	Columbiana Co.	Tube-Tech, Inc.	Groundwater statistics
Ward Voluntary Action Site	Franklin Co.	Ward Engineering	Soil statistics
Wayne Reclamation & Recycling	Whitley Co., IN	City of Columbia City	Groundwater statistics

Burgess & Niple, Inc.
Landfill Construction Services

Project	Location	Client	Description
Central Waste Landfill	Mahoning Co.	Central Waste, Inc.	QA plans, specifications, project representative
Fairfield Landfill	Fairfield Co.	Allied Roto Rooter	Project representative
Ford Disposal Areas	Erie Co.	Ford Motor Co.	QA plans, specifications, project representative
Franklin Co. Landfill	Franklin Co.	Solid Waste Authority of Central Ohio	Plans, specifications, project representative
Hamilton Sludge Landfill	Butler Co.	City of Hamilton	Plans, specifications, project representative
Lawrenceburg Landfill	Hamilton Co.	CG&E	QA plans, specifications, project representative
LTV Central Landfill	Cuyahoga Co.	LTV Steel, Co.	Plans, specifications, project representative
Miamiview Landfill	Hamilton Co.	CG&E	QA plans & specifications
Ottawa Co. Landfill	Ottawa Co.	BFI of Ohio	QA plans, specifications, project representative
Paint Street Landfill	Ross Co.	Mead Paper Co.	QA plans, specifications, project representative
Scotts Landfill	Union Co.	The Scotts Co.	Plans, specifications, project representative
Severstal Warren Landfill	Trumbull Co.	Severstal Warren, Inc./ RG Steel, Inc./WCI Steel, Inc.	Plans, specifications, project representative
Watson Road Landfill	Licking Co.	City of Newark	Plans, specifications, project representative

Burgess & Niple, Inc.
Other Related Environmental Services

Project	Location	Client	Description
Akron Sludge Disposal	Summit Co.	City of Akron	Sludge disposal study
Ashtabula Waste Study	Ashtabula Co.	City of Ashtabula	Solid waste study
Belmont Waste Study	Belmont Co.	Belmont Resources Co.	Transfer facility feasibility
Cleveland Tire Shredder	Cuyahoga Co.	Cleveland, Ohio	Shredder/transfer station
Delaware Waste Management	Delaware Co.	Delaware Co.	Collection and disposal study
Detrex Chemical	Ashtabula Co.	Detrex Chemical Ind.	Treatment of runoff
Detrex Chemical	Ashtabula Co.	Detrex Chemical Ind.	Hazardous waste closure
DuPont Closure	Pickaway Co.	E. I. DuPont & de Nemours	Drum storage closure
Ford Delisting	Erie Co.	Ford Motor Co.	Paint sludge delisting
Ford Sandusky	Erie Co.	Ford Motor Co.	Treatment of hazardous waste
Ford Waste Removal	Erie Co.	Ford Motor Co.	Waste removal services
Franklin Waste Study	Franklin Co.	Malcolm Pirnie	Waste stream study
GM-Fisher Closure	Franklin Co.	GM-Fisher Guide	Storage pad closure
GM-Fisher Delisting	Franklin Co.	GM-Fisher Guide	Hazardous waste delisting
Green II Landfill	Hocking Co.	PPG Industries, Inc.	Treatment of leachate
Heekin Can Study	Hamilton Co.	Heekin Can, Inc.	Industrial waste disposal
LTV Closures	Ohio & Indiana	LTV Steel Co.	Hazardous waste closures
LTV Waste Study	Cuyahoga Co.	LTV Steel Co.	Waste management alternatives
McCoy Treatment	Perry Co.	Nelson McCoy Pottery	Treatment of hazardous waste
Naples Airport Landfill	Naples, Florida	National Energy Corp.	Landfill mining permit
NEA Compost PTI	Jackson Co.	NEA Enterprises	Compost storage PTI
Nelson McCoy	Perry Co.	Nelson McCoy Pottery	Surface impoundment closure
ODNR Waste Study	Ohio	ODNR	Collection/disposal costs
Ohio EPA Study	Franklin Co.	Ohio EPA	Used tire recovery plan
Orrville Recycling Program	Wayne Co.	City of Orrville	Collection contracts and specifications
Shepherd Chemical	Hamilton Co.	Shepherd Chemical Co.	Treatment of hazardous waste
Synthetic Products Closure	Cuyahoga Co.	Synthetic Products Co.	Drum storage closure
WCI Recycling Study	Mahoning Co.	WCI Steel, Inc.	Residual waste recycling
WCI Waste Study	Mahoning Co.	WCI Steel, Inc.	Waste management alternatives

Burgess & Niple, Inc.
Other Related Environmental Services

Project	Location	Client	Description
Weigand Lagoon	Tuscarawas Co.	A.J. Weigand, Inc.	Treatment of waste impoundment
WV Waste Study	West Virginia	WV Regional Council	Solid waste study

SOLID WASTE SERVICES (CONT.)

Facility Siting Services

Many factors are incorporated into determining if a site is suitable for a solid waste disposal facility both in terms of being able to obtain a permit and economic feasibility. These factors include hydrogeologic conditions, existence and location of wetlands, environmental conditions of the site, soil conditions of the site, property availability, and location restrictions.

B&N has extensive experience in determining site conditions. We have completed more than 100 feasibility studies for landfill siting. Our staff of hydrogeologists has performed hydrogeologic investigations for over 25 landfill sites.

Our staff of environmental scientists has completed more than 180 wetland delineations, 404/401 permit applications, and mitigation alternatives. We have also completed over 1,350 Phase I and Phase II site assessments to determine the environmental liability due to past practices at the site.

Landfill Permitting Services

B&N has completed and obtained Permits to Install (PTIs) for new landfills, landfill expansions, environmental improvements, and closures. We also have extensive experience in completing the other permits associated with landfill including National Pollution Discharge Elimination System (NPDES) permits, 401/404 permits, fugitive dust permits, and other air permits.

B&N has an excellent track record for obtaining permits for our clients. Our success in obtaining permits for facilities can be attributed to high quality of design work, knowledge of regulations, and communication with the applicable regulatory agencies throughout the design and permitting process.

Hydrogeologic Site Investigations

Ohio solid waste, residual waste, industrial waste, and construction and demolition debris (C&DD) landfill regulations require that solid waste facilities adequately characterize the hydrogeology. B&N's staff of hydrogeologists has more than 115 years of experience in their field, much of this involving hydrogeologic investigations for landfill projects. We have performed more than 25 hydrogeologic investigations at proposed, operating, and closed sites.

In determining the site hydrogeology, our staff understands how to properly characterize the site conditions including: depth to the uppermost aquifer and perched zones; depth to bedrock; and direction and rate of groundwater flow.

Also, our staff has installed hundreds of monitoring wells and borings, collected thousands of groundwater samples, evaluated thousands of analytical results to characterize groundwater quality, and prepared hundreds of reports and permit documents describing groundwater quality and flow characteristics.

SOLID WASTE SERVICES (CONT.)

Landfill Closure Services

B&N has provided closure services for municipal solid waste and industrial solid waste clients. Closure services start with the permitting of closure designs and carry through to construction and certification of closure. Closure may involve waste relocation and compaction, site grading, capping, construction of surface water drainage control features, and construction of leachate controls. Landfill caps have been constructed with recompacted clay, synthetic liners, and geosynthetic clay liners (GCLs). Closure designs have included municipal, industrial, residual, C&DD, and hazardous waste facilities.

As part of landfill closure, B&N provides construction inspection services, preparation of as-built drawings and certification of closure. Some facilities that have completed closure are now being used in a beneficial way (golf course, parking areas, etc.).

Wetlands Permitting

Ohio municipal, industrial, residual, and C&DD solid waste regulations require that no waste be placed within a jurisdictional wetland without a waiver from the Ohio EPA Director. Furthermore, the Clean Water Act amendments of 1977 require a Section 404 permit from the U.S. Army Corps of Engineers for projects impacting wetlands. Impacts include placing dredged or fill material in wetlands and draining or filling wetlands.

Major elements of the landfill siting and permitting processes are the identification and delineation of wetland boundaries in order to demonstrate that no wetlands are within the setback distance to waste placement. The 404 permit applicants must document efforts to avoid or minimize filling wetlands and must mitigate lost wetland functions when avoidance is not possible. Mitigation may include restoration of degraded wetlands, creation of new wetlands, or preservation of existing wetlands.

Wetlands related services provided by B&N consist of the following:

Permitting & Mitigation	Constructed Wetlands
Preliminary Evaluations	Feasibility Studies
Wetland Delineations	Treatment System Design
Functional Assessments	Details Plans & Specifications
Section 404/401 Permit Applications	Construction Monitoring
Mitigation & Monitoring Plans	Post-Construction Monitoring

Construction Services

B&N has provided construction services to our clients since 1912.

The Environmental Division is experienced in providing detailed construction drawings, specifications, and bid documents for landfills and other solid waste management facilities.

Our division is also experienced in performing Quality Assurance Construction Services including nuclear moisture-density tests and geosynthetic liner destructive and nondestructive tests. We have personnel certified by the National Institute for Certification in Engineering Technologies (NICET) and experienced in providing site construction representation to our clients.

SOLID WASTE SERVICES (CONT.)

Groundwater and Explosive Gas Monitoring Programs

B&N has been conducting environmental monitoring for more than 40 years at over 100 facilities. This monitoring has included the sampling and analysis of groundwater, surface water, leachate, soil, air, waste, and explosive landfill gas.

B&N has a thorough understanding of the Ohio regulations that govern groundwater monitoring at municipal, industrial, residual, and C&DD solid waste disposal facilities. We have prepared numerous groundwater monitoring plans as part of detection monitoring, assessment monitoring, compliance monitoring, and corrective measures programs. B&N has provided groundwater monitoring services to more than 30 solid waste disposal facilities since the early 1970s, devising groundwater monitoring networks that are effective at detecting a release from the landfill. We have performed extensive hydrogeologic evaluations with regard to the communication between groundwater and surface water, assessing the effects on geochemistry, and have incorporated surface water monitoring into the groundwater monitoring program when deemed necessary. Historical leachate analytical data has been used to establish site-specific parameter lists for groundwater monitoring. Low-flow sampling techniques are utilized whenever possible to provide the most representative samples of naturally occurring conditions. We have established an efficient method for reporting analytical data, which minimizes the chance for clerical errors that can result in identifying an impact where none exists.

B&N has also conducted landfill explosive gas monitoring at municipal solid waste disposal facilities. We have prepared explosive gas monitoring plans and certification reports, installed temporary and permanent explosive gas monitoring probes, conducted punch bar testing, designed and implemented contingency procedures, and completed the necessary regulatory correspondence.

Environmental Statistics

B&N is very familiar with environmental statistical evaluations, having provided these services to numerous clients since 1990. We perform state-of-the-art statistical evaluations on all types of data related to soils, surface water, leachate, and groundwater to establish background conditions, determine trends over time, provide analysis of detection and compliance monitoring data, and examine impacts of facility operations on the subsurface environment.

B&N has been extensively involved in the use of graphical methods, control charts, prediction and tolerance intervals, Analyses of Variance (ANOVA), t-tests, trend analyses, regression, and many other statistical methods. B&N has completed analyses of effects of outlier data and false positives in soils, surface water, and groundwater quality data. We are familiar with many statistical computer programs including DUMPStat, Minitab, StatPro, GEOPACK, GRITS-STAT, and Excel.

B&N has been at the forefront in the development of statistical analysis plans for compliance/detection groundwater monitoring that meet Subtitle D solid waste landfill monitoring requirements. Procedures for the development of statistical plans has typically included evaluation of the hydrogeologic positions of monitoring wells, determining the adequacy of background data, evaluation of customized statistical indicator parameter lists, handling of outliers and below detection limit values, analyses of statistical power, determination of false statistical positive rates, and definition of the most appropriate statistical analysis methodologies for site-specific data. Our goal is to use a comprehensive knowledge of the site hydrogeology, groundwater quality, regulatory requirements, and potential pitfalls and benefits for each statistical method in order to limit the number of false statistical results. Common references utilized in our preparation of statistical analysis plans include ASTM (1996), Gibbons (1994), Gilbert (1987), and U.S. EPA (1989 and 1992).

SOLID WASTE SERVICES (CONT.)

We are currently utilizing the above methods and computer-based analyses to maintain monitoring compliance at 11 active or closed municipal, industrial, and residual solid waste disposal facilities. Compliance includes performing the analyses, evaluating the results, submittal of reports to the appropriate regulatory agencies, and subsequent support activities and negotiations on behalf of our clients.

Based on our reputation, B&N was contracted by the Indiana Department of Environmental Management to perform evaluations of the Statistical Evaluation Plans (StEPs) submitted by many of the solid waste disposal facilities in Indiana. We were also recommended by Ohio EPA to assist in reevaluating the groundwater monitoring program at a closed municipal solid waste facility in Fayette County, Ohio. B&N was one of a select few consultants to provide support to Sanitas Technologies during completion of updates to the company's statistical software package that is designed for groundwater monitoring programs at solid waste disposal facilities.

Miscellaneous Related Services

B&N has the experience and expertise to provide a wide variety of other services related to the field of solid waste management. Included in these services are:

- Transfer facility and material recovery facility designs
- Composting facility designs
- Waste characterization studies
- Solid waste management plan preparation
- Spill Prevention Control & Countermeasure (SPCC) plan preparation
- Stormwater Pollution Prevention Plan (SWPPP) preparation
- Risk assessment studies
- Resource Conservation and Recovery Act (RCRA) permitting
- Underground storage tank (UST) closure assessment and remediation services
- Mine reclamation services
- Waste removal/mining studies
- Expert testimony
- Rezoning studies
- Groundwater Modeling

3.0 SPECIFIC PROJECT EXPERIENCE

Design

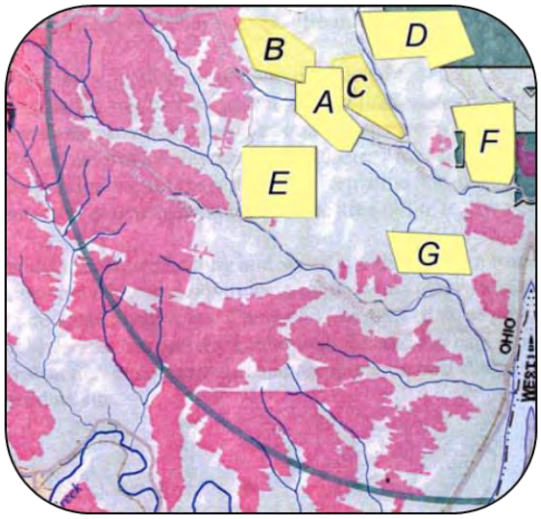
Residual Solid Waste Disposal Facility
Severstal Warren (formerly WCI Steel)
Warren, Ohio

Burgess & Niple (B&N) was retained to provide detailed design services for the construction of a residual solid waste disposal facility for their Warren, Ohio plant. The facility is to be developed partially on the site of an existing disposal facility. As materials were removed from the existing facility, space was cleared for the construction of the new facility in the area occupied by the existing landfill.

The facility design incorporates a recompacted soil and membrane liner system, a leachate collection system, stormwater run-on and run-off controls, and a cap system consisting of a soil barrier with protective cover soil. A high density polyethylene (HDPE) liner was selected for the bottom liner of the landfill. Waste materials were mixed to attain an appropriate moisture and density for compaction in the landfill cell to attain a suitable stability within the fill.

In one area of the facility, a leachate collection structure was constructed on top of the liner system. A foundation was designed for the structure in order to protect the underlying HDPE liner. In addition, a leachate collection tank system was designed and constructed to store the leachate collected from within the landfill.

Residual Solid Waste Disposal Facility
Ohio and West Virginia



B&N was retained to complete two landfill-siting studies for locating two new residual waste landfills for bottom ash and fly ash disposal. One landfill siting study was completed to site a new facility in the State of Ohio and a second study was completed to select a site for landfill development in the State of West Virginia.

A graphic information system (GIS) was used to gather data from publicly available sources and compile maps identifying possible landfill development sites that would have a minimum of a 15-year capacity. Landfill siting criteria was based on Ohio Environmental Protection Agency (EPA) regulations for the site to be located in Ohio and on West Virginia Department of Environmental Protection (WVDEP) regulations for the site to be developed in West Virginia.

The site screening process identified available areas for landfill development, after which a fatal-flaw assessment and numerical analysis were conducted to rank the perspective sites. After preliminary site selection identified a number of candidate sites, a field reconnaissance was completed to gather site-specific information and further rank the candidate sites.

A conceptual landfill design was completed for each selected site. The conceptual designs included landfill site layout, phase construction, and site closure presented in map and cross-section view. Property plat information was researched and compiled to identify and summarize property ownership in the area of the top two candidate sites.

Methods for waste hauling and specific transportation routes were also studied. Dedicated rail transportation and construction of a dedicated haul road were considered. Construction costs estimates and an operation cost estimate was generated for each candidate site.

Lawrenceburg Road Ash Landfill
Cinergy Gas Company
Cleves, Ohio

The Lawrenceburg Road Ash Landfill is located on 60 acres of abandoned sand and gravel mines adjacent to the Miami River floodplain. The design includes a 5-foot recompacted soil liner with an overlying 60-mil-high density polyethylene synthetic membrane liner and leachate collection system.

B&N was retained to develop construction plans and specifications for construction of the 22-acre first cell at this facility from permit level plans. Construction of this cell was accomplished over two construction seasons.

Construction plans detailing subgrade elevations and surface water control structures were prepared and implemented for the first construction season. Construction plans for the second season included details for the liner system, leachate collection system and site appurtenances such as a leachate treatment pond, and effluent conduit to the Miami River. Project specifications included a rigorous construction quality control program.

B&N provided full-time on-site representation during the second phase of construction. In addition, B&N provided engineering support for submittal review, and collection and review of construction certification information.

Solid Waste Disposal Facility Expansion
LTV Steel Company
Cleveland, Ohio

B&N prepared the Permit to Install application for a vertical expansion of an operating 40-acre solid waste disposal facility and for closure of a 14-acre inactive facility located on a nearby site. Both facilities incorporate a cover system design utilizing a geomembrane barrier and a geonet drainage layer.

Engineering features of the active site include surface water and sediment control. Closure of the inactive site incorporated a reinforced earth embankment to minimize movement of waste during closure. Surface water controls were also incorporated into the closure.

Site constraints required the design of four separate sediment ponds and a system of connecting sewers. Storm flows are attenuated by the pond system before being outletted to a large existing culvert.

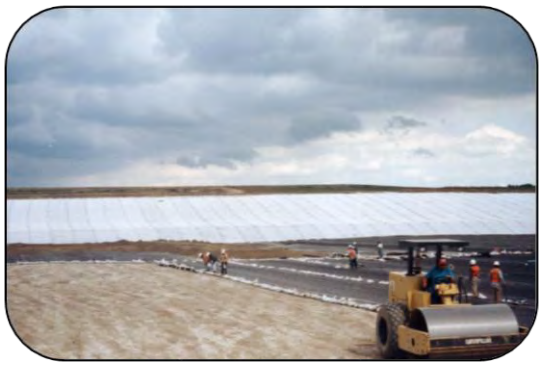
Services provided by B&N included the development of construction plans and specifications for the site closure and on-site representation during construction. B&N also prepared a certification report for the closure. B&N continues to provide services by preparing the Ohio EPA Annual Report for this facility utilizing aerial surveying.

Construction and Demolition Debris Program Technical Support
Barberton Health District
Barberton, Ohio

B&N was retained by the Barberton Health District to provide technical support for administration of the C&DD disposal program that is under the jurisdiction of the local health districts in Ohio. B&N reviewed information provided by C&DD disposal facilities within the Barberton Health District regarding previously issued notices of deficiency (NODs). After technical review, B&N prepared written comments on behalf of the Health District. B&N also met with the Health District representatives and site owners to resolve technical issues associated with the previous NODs.

At the request of the Barberton Health District, B&N prepared a groundwater monitoring plan for a C&DD disposal facility in their district. B&N also reviewed annual and quarterly groundwater monitoring reports that are required for the C&DD disposal facilities. Of particular interest at one facility was protection of an adjacent municipal well field that is used as a public drinking water source.

Ottawa County Landfill
BFI of Ohio, Inc.
Port Clinton, Ohio



B&N was retained to prepare construction plans and specifications for BFI's 17-acre landfill expansion from permit level plans. The expansion involved construction of a new Subtitle D bottom liner landfill cell for disposal of municipal solid waste. This landfill was divided into multiple phases for construction. Phase IV construction included:

- 730,000 sf of geomembrane
- 59,000 sf of filter fabric
- 286,000 sf of drainage composite
- 150,000 cubic yards of low permeability soil liner
- leachate collection manholes
- force mains
- access road and staging area construction
- clay borrow evaluation

Following construction, B&N prepared a certification report including as-constructed drawings for submittal to Ohio EPA and the local Health Department.

Services provided by B&N include preparation of construction plans and specifications, review of shop drawings, supervision of surveying and Quality Assurance testing subcontractors, and full-time on-site representation during construction.

Sediment Pond No. 1
Franklin County Sanitary Landfill
Solid Waste Authority of Central Ohio
Franklin County, Ohio

B&N was retained by the Solid Waste Authority of Central Ohio to provide plans and specifications for Sediment Pond No. 1 and a new access road embankment. The sediment pond and access road were needed as a part of the future expansion of the landfill. Construction plans and specifications were developed from Permit-to-Install drawings for the landfill expansion.

The sediment pond is 17 feet deep with a capacity of approximately 30 acre-feet. The sediment pond features a floating baffle system and a compacted clay liner. The access road embankment is approximately 2,000 feet long with a maximum height of 25 feet. The project also included the design of a

liner system for an existing leachate lagoon. The liner system consisted of 2 feet of compacted clay liner and a 60-mil HDPE geomembrane.

As part of design services B&N conducted an investigation of on-site borrow materials and provided surveying. In addition, B&N provided full-time representation for the owner during construction and provided a certified technician for QA/QC during construction of the HDPE geomembrane.

Landfill Construction
The Cincinnati Gas & Electric Company
Cincinnati, Ohio

B&N was retained by the Cincinnati Gas & Electric Company to prepare construction plans for a newly permitted landfill to receive ash from the Miami Fort Power Station. This new landfill incorporates a multiplayer bottom liner system consisting of a recompacted clay liner beneath a geomembrane and leachate collection system.

B&N prepared the construction plans, specifications, and contact documents from the landfill Permit to Install. Construction of the facility was conducted in phases. Phase I consisted of subgrade preparation. The second phase was constructed in the following construction season. Phase II was a multimillion dollar construction project involving the placement of 130,000 cubic yards of low permeability soil and 800,000 square feet of High Density Polyethylene geomembrane. A leachate collection system and 250,000 cubic yards of ash were also installed. B&N provided project management and resident engineering services. Quantities were determined to facilitate preparation of cost estimates and control construction costs. Revised-as-constructed drawings were prepared utilizing advanced surveying techniques.

EOLM Construction and Demolition Debris Landfill
Lima, Ohio

B&N has provided professional engineering services to the EOLM C&DD Landfill located in Lima, Ohio since the disposal of C&DD became regulated by Ohio EPA in 1997. Initially, B&N completed the hydrogeological site characterization report and facility design plans to obtain the first site license from the Allen County Health Department in 1998. As part of the site characterization and facility design, it was determined that the site did not require annual groundwater monitoring for the C&DD disposal operation.

C&DD facilities in the State of Ohio are required to submit an annual application by the last day of September each year in order to obtain a license for the following calendar year. B&N has completed the annual license application for the EOLM C&DD Landfill each year since 1998. As part of the annual license application, site surveying has been conducted through a local surveyor to update site mapping in the active part of the disposal facility. B&N has also completed the required Ohio EPA forms for composting operations at the EOLM Landfill.

Landfill Leachate Transfer System

Severstal Warren, Inc. (formerly WCI Steel, Inc.)
Warren, Ohio

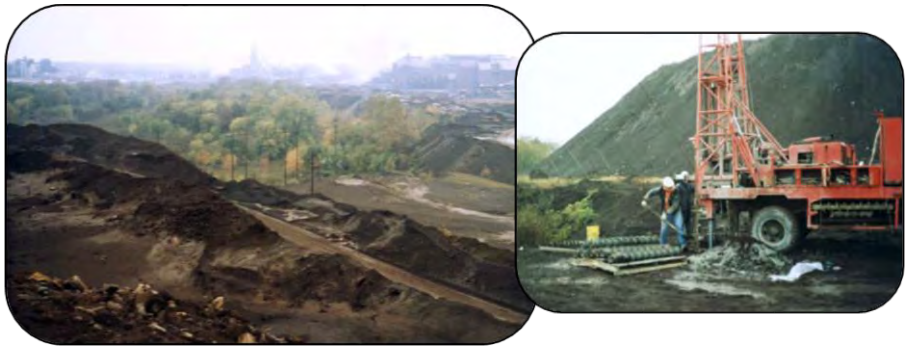
B&N was retained by WCI Steel, Inc. to provide detailed design services for the construction of a new leachate transfer system for its Warren, Ohio plant. WCI Steel operates a residual solid waste disposal facility for on-site disposal of residual wastes generated through the steel making process. Liquid that accumulates in the solid waste disposal facility is considered landfill leachate and is required to be handled in accordance with Ohio EPA regulations.

B&N designed a leachate transfer system to pump landfill leachate from the landfill to the existing WCI Steel wastewater treatment plant (WWTP). The leachate transfer system included temporary storage tanks, transfer pumps, a pump building, over 6,500 feet of force main piping, flow meter, and associated valves to transfer leachate from the landfill to the WWTP. A complete design of the electrical system to operate the transfer system was included.

B&N prepared design plans and bid specifications for the leachate transfer system and landfill cap maintenance project and B&N prepared a construction certification report documenting the work for Ohio EPA.

Solid Waste Disposal Facility

Severstal Warren, Inc. (formerly WCI Steel, Inc.)
Warren, Ohio



B&N was retained by WCI Steel, Inc. to design a solid waste disposal facility and conduct permitting services for this Warren, Ohio plant. Services included subsurface investigations, groundwater evaluations, leachate studies, and preparation of permit applications required to develop and operate a residual solid waste disposal facility.

The landfill is located in northeastern Ohio adjacent to the Mahoning River. The Mahoning River Valley has long been an area of heavy industrial activity, which makes the interpretation of groundwater quality somewhat complex. The site consists of a 12-acre area of residual waste generated by the facility from steel-making dating back to 1947. Portions of the subsurface contain up to 25 feet of slag that causes a mounding effect of groundwater within the surrounding alluvial and glaciofluvial deposits. B&N installed soil borings and groundwater monitoring wells, performed hydrogeologic testing, sampled groundwater, and prepared a hydrogeologic investigation report and groundwater monitoring plan. B&N determined through the hydrogeologic investigation that a portion of a shallow significant saturated zone could be excavated during construction.

B&N was responsible for an inventory of solid wastes proposed for landfilling, including analysis of wastes in light of state and federal regulations on solid wastes. Wastes were classified as to their potential hazard and method of handling and disposal.

B&N completed 36 test pits to evaluate existing soil onsite in order to pre-approve the material for construction. Services included preparation of a detailed design for the proposed site, monitoring systems, leachate control systems, and surface water control systems. WCI received approval from the Ohio Environmental Protection Agency for its 38-acre residual solid waste disposal facility expansion in July 1999.

Seiberling Street Landfill Rule 13 Authorization and Landfill Cap Maintenance
Akron, Ohio

B&N was contracted by The Goodyear Tire and Rubber Company to complete a Rule 13 Application and prepare design plans and specifications for a cap maintenance project at the Seiberling Street Landfill in Akron, Ohio. B&N prepared a Rule 13 Application in accordance with Ohio Administrate Code 3745-29-13 in order to obtain authorization from the Ohio EPA for maintenance on a closed landfill.

B&N prepared design plans and bid specifications for the landfill cap maintenance project. Landfill cap maintenance activities included flattening steep side slopes, replacing cap materials on areas of erosion, site drainage improvements, and restoring vegetation on the landfill cap. We also provided on-site project representation during the landfill cap maintenance project to monitor contractor performance and prepared a certification report documenting the work for Ohio EPA.

Proposed Metro Manila Landfill Solid Waste Landfill
Dizon Mines
San Marcelino, Philippines

In February 1999, Dizon Copper Silver Mining Company contracted B&N to perform a conceptual solution for a solid waste landfill in a closed copper mine pit in San Marcelino. Dizon Mines approached Metro Manila Development Authority to solve the MMDA sold waste disposal problems for the next 20 to 40 years. B&N will define the design criteria to design Manila transfer stations, transport waste from Manila to San Marcelino, and retrofit the mine pit for waste disposal. B&N will provide Dizon Mines with a report documenting costs, potential problems, and alternatives for waste handling.

Leachate Toe Drain

Willow Creek Landfill
BFI of Ohio

B&N was retained by Browning Ferris Industries of Ohio, Inc. (BFI) in 2003 to complete a Preliminary Design Report for a leachate toe drain and leachate treatment using constructed wetlands at the Willow Creek Landfill. The Willow Creek landfill is a closed municipal solid waste disposal facility that was experiencing leachate seeps through the cap system. The design included toe drains placed around a portion of the perimeter of the landfill to reduce the leachate seeps. Conveyance of recovered leachate will utilize an existing landfill gas condensate collection system. A new leachate storage tank will also be installed to store collected leachate.

B&N was also retained by BFI to prepare a "Rule 13 Application" for the proposed leachate collection system in accordance with Ohio Administrative Code (OAC) 3745-27-13. A Rule 13 Application was required since installation of the leachate toe drain system would involve construction activities on, or within 300 feet of, a closed landfill facility. The Rule 13 Application addressed issues regarding excavation and relocation of existing waste at the facility in order to install a leachate collection system. Slope stability, surface water drainage, and restoration of the landfill cap system were addressed in the application.

After Rule 13 authorization was received from Ohio EPA, B&N prepared the detail design for the leachate collection system. The detail design included the electrical system to operate the leachate pumps. B&N prepared bid documents for BFI.

Ohio Proposed Rule Revision Review and Response

Ohio Steel Group

B&N was retained by the Ohio Steel Group (OSG) to review the September 2000 proposed rule revisions to the industrial and residual solid waste groundwater monitoring regulations included in Ohio Administrative Code 3745-29-10 and 30-08 and prepare a response letter on behalf of the steel industry. B&N worked with Squires, Sanders, & Dempsey – Counselors at Law, the OSG's legal team, during preparation of the response letter.

Steel industry companies that were represented in the OSG included: AK Steel Company; CSC Ltd.; J&L Specialty Steel; LTV Steel Company, Inc.; Republic Technologies International, LLC; The Timken Company; Severstal Warren, Inc. (formerly WCI Steel, Inc.); and Wheeling Pittsburgh Steel Company.

The response letter included comments to:

- Eliminate many of the ambiguities included in the rules
- Clarify the specific analytical parameter list requirements
- Present recommended additions to the regulations that were not addressed in the proposed revisions
- Address any clerical errors encountered

Sorg Paper Company
Middletown, Ohio

B&N was retained by the Sorg Paper Company to prepare plans and specifications to increase capacity and improve operations of a landfill receiving Sorg's papermaking sludge. These plans were intended to improve internal slope stability by improvements in operation and waste placement. Subsequently B&N conducted a subsurface investigation to characterize the site's hydrogeology. An existing monitoring well was used in conjunction with new wells to monitor groundwater quality and provide a means of determining future effects of the landfill on groundwater quality. The landfill is located in the rolling hills of southwestern Ohio and the monitoring wells were sited in glacial fill material.

Hydrogeologic Investigations and Permitting

Landfill Expansion Hydrogeologic and Engineering Services
Pike Sanitation, Inc.
Waverly, Ohio

B&N has been working with Pike Sanitation, Inc. since 1988, assisting with groundwater monitoring program, providing engineering consultation, and performing hydrogeologic investigations. The facility is located in Pike County, just south of Waverly, Ohio. The site is situated along the eastern edge of the Big Beaver Creek Valley, tributary to the Scioto River Valley, and extends up the valley wall. Due to the location of the facility, eight distinct hydrogeologic units are monitored at the landfill.

Pike Sanitation, Inc. received approval from the Ohio EPA in 1996 for a Permit to Install to increase the existing 23-acre site to 137 acres of proposed landfill expansion. Since then, Pike has been redesigning the phasing within the limits of the proposed landfill. During this process, B&N has provided engineering consultation, slope stability evaluations, and a hydrogeologic investigation to determine the feasibility of dewatering the uppermost aquifer under the landfill during construction. B&N continues to perform all groundwater monitoring, laboratory analyses, and statistical evaluations for the facility.

Curve Road Landfill
City of Delaware, Ohio

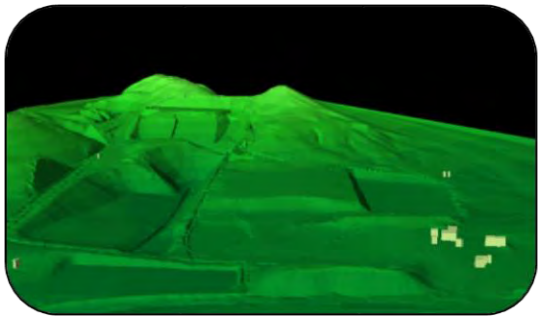
B&N was retained by the City of Delaware to perform a hydrogeologic site investigation at their Curve Road Landfill, a closed municipal solid waste disposal facility that was operated between 1975 and 1990. B&N has also provided groundwater monitoring services and statistical evaluation of the data since 1993. Due to the unique hydrogeology, field sampling techniques and statistical methodologies were modified to account for the spatial variability that had historically affected groundwater quality.

B&N completed a series of leachate studies to assess the chemical characteristics and define the extent of the leachate within the landfill. One-inch piezometers were installed into the saturated portion of the waste. These wells, in addition to several leachate surface seeps identified around the perimeter of the landfill, were used to evaluate the leachate quality and prepare leachate potentiometric surface maps. This data was then compared to regulatory limits and site groundwater conditions.

Based upon the initial results of the leachate investigation, B&N completed a leachate seep control study that provided several options for collection and transport of leachate to the wastewater plant. The study also addressed the need for a Rule 13 Application in the event a leachate collection system was proposed for the site. B&N continues to provide this long-term client with groundwater and explosive gas consultation for this closed waste disposal facility. B&N also helps the City to maintain compliance with the applicable Ohio regulations.

Pike Sanitation Landfill Modeling
Waverly, Ohio

B&N has conducted semiannual groundwater sampling since 1988 at the Pike Sanitation Landfill. When it came time for Pike to expand operations, they came to B&N for assistance.



The operations manager at Pike needed to know the depth to bedrock in the expansion area. Since it is much more costly to excavate in solid rock than unconsolidated till or topsoil, knowing what the depth limitations were would help the operations manager calculate the horizontal dimensions of the excavation area based on a target capacity.

Through current and past investigations of the site, numerous soil borings and monitoring wells had been drilled. Survey data from the wells and borings, and associated boring log information were gathered and imported into GIS. Using various boring log attributes and existing surface mapping from the site, a 3-D model of the site was created depicting the surface and subsurface geology. The upper and lower limits of each of the five main unconsolidated deposits were also delineated. Volumes of the clay units were calculated to obtain an estimate of how much on-site soil would be available for landfill construction and closure.

In GIS, terrain modeling tools allowed for the model to be viewed and rotated in many ways for a better understanding of the geology below the site. Volume calculations reports were generated for the operations manager from GIS based on horizontal and depth extents.

By knowing what the geologic constraints were in the beginning, the operations manager was able to avoid cost overruns.

Cherokee Run Landfill Expansion
Preliminary Site Investigation
Allied Waste Industries, Inc.
Logan County, Ohio

B&N was retained by Allied Waste Industries, Inc. to perform a site investigation for expansion of their Cherokee Run Landfill. The services included a preliminary site hydrogeologic investigation, wetlands delineation, and preliminary site layout and volume calculations.

The landfill is located in west-central Ohio in an area of complex glacial deposits. B&N completed 12 borings, 11 of which were to the glacial till / bedrock interface. The twelfth boring was terminated at a depth of 146-feet without encountering bedrock. All saturated zones (often discontinuous) were identified so that the bottom of the landfill could be placed accordingly with respect to hydrogeologic units. Six of the borings were completed as piezometers within the deepest saturated zones encountered. Limited specific capacity testing was conducted subsequent to piezometer development.

Split-spoon samples were evaluated for evidence of glacial till fracturing and were documented on the boring logs. Samples representing individual soil types were collected at each boring and vacuum-sealed in plastic bags for future reference. These samples can provide visual evidence regarding till fracturing if deemed necessary.

The permitting hydrogeologic information for the existing adjacent landfill and the results of the preliminary site investigation were used to prepared cross sections for the proposed development area. These cross sections and the results of the concurrent wetlands delineation were used to prepare preliminary site layouts.

Solid Waste Landfill Expansion Hydrogeologic Investigation and Engineering Services
Central Waste, Inc.
Alliance, Ohio

B&N was retained by Central Waste, Inc. to prepare a Permit to Install for a municipal solid waste landfill expansion in Alliance, Ohio. The facility initially consisted of an existing dedicated sludge disposal site. Expansion for the permitted municipal solid waste was approved in 1992. B&N later assisted Central Waste, Inc. in acquiring a waiver of the 15-foot separation layer under Ohio EPA Guidance Document No. GD0202.104 for the vertical and lateral expansion.

The landfill is located in northeastern Ohio in an area that had previously experienced extensive coal mining. Portions of the permitted cells at the facility overlie mine spoil that was placed in a portion of a former excavation. These deposits have added a level of complexity to the hydrogeology and groundwater geochemistry. The hydrogeologic investigation involved detailed physical and geochemical characterization of mine spoil deposits, surrounding glacial deposits, and underlying bedrock materials.

Seiberling Street Landfill Closure Investigations
The Goodyear Tire and Rubber Company
Akron, Ohio

B&N was contracted by The Goodyear Tire and Rubber Company to evaluate the regulatory status of their Seiberling Street landfill. B&N negotiated closure under the 1976 State of Ohio Solid Waste Regulations, and prepared and submitted both Groundwater Monitoring and Explosive Gas Monitoring Plans for the site. These documents have been prepared to assess the potential environmental impacts of the facility.

Field investigations have included installation of additional groundwater monitoring wells, an explosive gas monitoring network, and explosive gas and groundwater sampling and analysis. In addition, B&N performed a field inspection of existing landfill slopes to assess slope stability and erosion. Reports summarizing the findings of these activities were submitted to the appropriate regulatory agencies, and recommendations made for further monitoring and closure activities.

A Certificate of Closure and No Further Action was obtained from Ohio EPA. Monitoring well abandonment in accordance with Ohio EPA and ODNR guidance documents was performed.

Steel Mill Residual Waste Landfill

LTV Steel Company
Cleveland, Ohio

B&N was hired to conduct hydrogeologic investigations and prepare permitting documents for a grandfathered solid waste facility at the Cleveland Works. The location of the landfill has been used for industrial activities since the 1800s. The deeply incised drainage systems have been filled over the years with the by-products of this industrial activity. It is known that several generations of steel making activities, including the manufacture of coke, have taken place and that coke manufacturing by-products have been placed on the site. The groundwater monitoring plan developed for the site takes into account the effects of these past activities. B&N is currently conducting groundwater monitoring activities at the site for LTV Steel.

Landfill Permit Applications, Reviews, and Permitting

State of Indiana Department of Environmental Management
Indianapolis, Indiana

B&N provided the State of Indiana Department of Environmental Management (IDEM) expert review services of backlogged landfill permit applications. In this capacity, B&N has provided complete regulatory and technical review of landfill applications according to current state regulations, acting as IDEM's representative. During the course of the review and permitting process, B&N has acted as IDEM's representative in meetings, discussions, and negotiations with the applicants. The complete review includes evaluations of completeness with respect to the regulatory requirements, geologic and hydrogeologic interpretations, technical completeness, and feasibility of the engineering design narrative and plans, and compliance with closure requirements including monitoring and financial assurance.

Landfill Hydrogeologic Investigation
The Scotts Company

B&N conducted a hydrogeologic investigations at 5 former landfills used for disposal of process waste from the production of lawn care products that included fertilizer, pesticides and herbicides. The work was conducted in glacial till deposits of central Ohio. The extent of the landfills was determined by reviewing historic aerial photographs and with hand auger borings. Groundwater monitoring wells were installed at the perimeter of each landfill and sampled. Groundwater flow directions were determined and significant saturated zone pathways of migration were evaluated for each landfill. Results of the investigation were used to develop recommendations for closure of the landfills with a 1976 soil cover.

B&N also prepared a design for closure of one of these landfills and negotiated approval of the technology with Ohio EPA. B&N performed the Construction Quality Assurance and prepared the certification report.

Landfill Closure

Watson Road Landfill Post-Closure Repair
City of Newark, Ohio

Burgess & Niple provided professional engineering services to the City of Newark, Ohio for their closed Watson Road Landfill. Repairs were necessary to meet the applicable surface water discharge limits within their NPDES permit for leachate discharge to a stream adjacent to the facility.

Initially, B&N completed a site investigation that included a landfill cap evaluation; monitoring well replacement; sampling and analysis plan; monitoring well installation and testing; site survey; groundwater, surface water, and leachate sampling and analysis; NPDES permitting assistance; and wetlands delineation. The findings of the initial investigation were submitted in a preliminary design report to the City and Ohio EPA. The conceptual design solution included reduction of surface water infiltration through the existing pre-1976 landfill cap, point-source landfill cap repairs, elimination of wetlands on top of the cap, stream restoration and slope stabilization to minimize erosion, and the addition of phytoremediation. Phytoremediation includes the use of specific types of trees, planted on the landfill cap and adjacent to the streams, to reduce the levels of saturation within the subsurface and treat on-site leachate prior to discharge.

B&N prepared detail design and acquired the required permits for the landfill cap repairs, wetland removal, drainage improvement, waste relocation, phytoremediation, and stream restoration. As part of the detail design, wetland permits, Rule 13 Applications, SWPPP, Clean Water Act Section 401, and Section 404 permits were prepared. Costly wetland mitigation was avoided by establishing a preservation program for the remaining onsite wetlands. Leachate surface seeps have been eliminated by redirecting subsurface flow through a collection trench and discharging through a controlled single point discharge pipe. Trees have been planted and are growing. Treatment of the water quality, as well as extraction of water from the subsurface and prevention of precipitation infiltration, will follow as trees continue to mature.

B&N's innovative conceptual "green" design will save the City a substantial amount of public funds compared to the initial typical conventional design and cost estimates previously submitted to them by others. B&N's design is viewed as an environmentally friendly solution and has been accepted by the community and state agencies.

Stonewall Cemetery Road Landfill Closure

City of Lancaster
Lancaster, Ohio

B&N prepared construction plans and specifications for closure of the Stonewall Cemetery Road Landfill. B&N also provided part-time on-site representation during construction and prepared the closure certification document for submittal to Ohio EPA. This 32-acre landfill was originally closed in the 1970s. Plans were developed for the reconstruction of an existing landfill cap to bring it into compliance with 1976 regulations. The project included a bentonite/soil slurry groundwater cutoff wall and two gravel-filled groundwater collection trenches. A series of seven wetland cells were constructed to treat impacted groundwater extracted from the groundwater collection trenches. Two wetland cells were constructed with a double LLDPE synthetic liner on top of the landfill cap.

Leachate-impacted groundwater is collected from groundwater collection drains and directed to the wetlands treatment system. Ammonia and metals are the primary constituents of concern. The wetlands were developed using on-site soils and vegetated with Typha latifolia (cattail) and Scirpus atrovirens (bulrush).

The plans consist of:

- Consent order with Ohio EPA
- Engineered cap to meet State of Ohio requirements
- Surface drainage improvements
- Geomembrane barrier wall to intercept groundwater
- Groundwater collection drain
- Engineered wetlands treatment system

Nicky Boulevard Landfill Closure Design

Boyas Excavating, Inc.
Cuyahoga County, Ohio

B&N provided professional engineering services to Boyas Excavating, Inc. for landfill closure design of the Nicky Boulevard Landfill located in Cuyahoga Heights, Ohio. Initially, B&N completed a hydrogeological characterization for the site and installed permanent monitoring wells.

B&N prepared engineering plans and specifications to cap and close the landfill in accordance with Ohio EPA residual solid waste regulations. The end use for the site was an equipment storage area and the client desired a flat slope on the surface of the closed landfill. As part of the closure design, an exemption was obtained from Ohio EPA to install the top cap of the facility with a 2 percent slope rather than the 5 percent minimum slope required in the solid waste regulations. The exemption request included a revision in the drainage layer design of the cap.

Since the site has closed B&N has performed quarterly post-closure inspections and routine groundwater monitoring in accordance with Ohio EPA regulations. Quarterly inspections have resulted in continued maintenance of the facility relative to cap soil erosion from stormwater. To minimize future erosion of landfill slopes and cap soils from off-site surface water entering the site, B&N is assisting Boyas in the design and permitting of a storm sewer to route offsite stormwater around the closed facility. As part of the storm sewer design, a wetlands jurisdictional evaluation was completed. Implementation of the storm sewer installation will require wetland mitigation and submittal of a Rule 13 Application to the Ohio EPA.

Implementation of Final Corrective Measure Remedy under Administrative Order of Consent
Barium & Chemicals, Inc.
Steubenville, Ohio

Barium & Chemicals, Inc. (Barium) contracted B&N to prepare a final design for a landfill cap over waste contained on their property and to implement the final corrective measure remedy as required via an Administrative Order of Consent (AOC) issued by the U.S. EPA under the Resource Conservation and Recovery Act (RCRA) of 1976 and amendments. The final remedy was to place a combination synthetic liner and soil cap over an area on the property that contained waste generated by Barium and the previous property owner. Barium had worked with the U.S. EPA over a number of years to address several areas of concern and solid waste management units. The last area of concern was the area to be capped with groundwater sampling as the means of determining the effectiveness of the remedy. B&N helped establish the groundwater monitoring plan that would be implemented post cap construction.

B&N entered into a Design-Build agreement with Barium to implement the remedy. The area was defined by a steep embankment that separated an upper terrace and a lower terrace in which the lower area was part of the flood plain of the Ohio River. B&N teamed with an environmental contractor to address all aspects of the construction project including preparing a storm water pollution prevention plan, clearing the land, consolidating on-site waste, preparing an under-cap surface in which to construct the synthetic liner, and placing a clay cap and top soil layer on top of the liner. B&N was the lead and construction supervisor on the project.

Several construction situations concerning erosion and drainage popped up during construction that were immediately addressed by the design-build team. B&N prepared a Construction Completion Report to be submitted to U.S. EPA and met all deadlines of the AOC. B&N will prepare a groundwater monitoring report upon the completion of the three-year monitoring program.

VAP Phase II Property Assessment, Remediation/Clean Ohio Assistance and Revitalization Fund
Former American National Can Site
Mount Vernon, Ohio



The City of Mount Vernon and B&N have been collaborating on the assessment and cleanup of the former American National Can (ANC) site over the past several years to turn a local underused property into one that will have both a recreational use as well as generate electricity for a nearby manufacturing facility through the installation of several thousand solar panels. The property had been occupied since 1922 by a variety of manufacturers that produced various products including cellophane products, cans, and plastic products. In addition, an approximate 13-acre portion of the property, located adjacent to the Kokosing River, had been used as an unlicensed landfill to dispose of waste generated from an onsite incinerator. In 2003, all structures at the property were demolished. The concrete floor slabs were left in place that cover approximately 8 acres.

B&N has taken the property through several phases of the Ohio EPA Voluntary Action Program (VAP) including a Phase I Property Assessment (PA), Phase II PA, remediation, and a VAP closure certification. Specific tasks have included:

- Assistance in preparing a Clean Ohio Assistance Fund grant.
- Assistance in preparing a Clean Ohio Revitalization Fund grant.
- Preparation of environmental permit applications including Section 404/401, Rule 13 Application through Ohio EPA to test and remove waste from the site, Storm Water Pollution Prevention Plan, and an Indian Bat Survey.
- Phase II PA work included the advancement of 64 soil probes, excavation of 51 test pits, the installation of 19 groundwater monitoring wells, and the sampling of sediments and surface water in the Kokosing River within 15 VAP Identified Areas (IAs).
- Preparation of a Remedial Action Plan to address three IA's requiring remediation. The most complicated area was IA-10, an area along the river where incinerate waste and other industrial waste were buried and covered for the most part.
- Stream restoration along the Kokosing River.
- Completion of remedial action.

Prior to remedial construction activities, the waste in IA-10 was characterized and delineated. Although minor organics were identified, the waste contained high concentrations of lead and to a lesser degree, chromium, which exceeded toxicity characteristic leaching procedure (TCLP) standards, and a few other metals at low concentrations. B&N prepared cost estimates for several options to address the cleanup of the site. Ultimately, the plan called for the removal and treatment of up to 2 feet of waste where present and disposal of the material as a non-hazardous solid waste. Treatment consisted of the mixing of waste with a chemical called Enviroblend which binds the metals and reduces leaching. A clean soil cover of at least 2 feet thick was then placed on top of any waste that remained and the area was seeded and landscaped. This area is earmarked to be used as a recreational site as part of the City's park system. Approximately, 15,000 cubic yards of waste were removed and over 9,000 cubic yards treated.

The other two IA's requiring remediation only included impacted soil and waste to be removed and disposed of at a solid waste disposal facility. These areas were adjacent to the concrete slabs left in place. The future use of the property will be to construct over 10,000 solar panels using a low cost/high technology plastic solar panel that will concentrate solar energy and ultimately generate electricity for a local manufacturing company.

Landfill Closure

Solid Waste Authority of Central Ohio (SWACO)
Model Landfill

SWACO retained B&N to determine the environmental impact of a 185-acre closed landfill. The landfill first accepted waste in 1967 and closed in 1986, however, SWACO decided to evaluate the facility in a manner similar to a Remedial Investigation/Feasibility Study. As part of the study, groundwater, surface water, explosive gas migration, and air emission pathways were investigated.

The hydrogeologic setting of the Model Landfill was complicated by dewatering activities at a nearby quarry, which is significantly deeper than the landfill. A total of 15 groundwater monitoring wells were installed for the investigation. The resulting monitoring well network was used to determine groundwater quality at the site.

A risk assessment was conducted to evaluate human health risk from exposure to air, soil, and water at the facility. The risk assessment evaluated exposure risks for local residences, trespassers, and possible future recreational users and maintenance workers. Results of the site investigation indicated that the risk associated with recreational use at the site was below levels established by the Ohio EPA and SWACO pursued development of the landfill site as a golf course.

B&N developed plans and specifications to upgrade the cap and stormwater drainage system, provided ongoing support in evaluating bids for golf course development, and evaluated bids for conventional closure. A private golf course implementing the closure has been developed at the site. B&N also provided construction services for the new golf course.

Model Landfill
Solid Waste Authority of Central Ohio
Columbus, Ohio

B&N was retained by the Solid Waste Authority of Central Ohio (SWACO) to prepare and implement closure of the Model Landfill, which is located south of downtown Columbus, Ohio. This project was initially to be conducted as a RCRA Remedial Investigation/Feasibility Study. Activities performed during the investigation phase included aerial mapping, construction and sampling of monitoring wells, characterization of the landfill cover, evaluation of the effects of the facility on flooding of State Route 104, air emission sampling and analysis, and negotiation with the Ohio EPA.

The site remedial investigation phase demonstrated that the facility is having relatively small impact on the environment, and that minor cover and drainage improvement were warranted. A risk assessment performed as part of the study indicated that the site was suitable for redevelopment with some form of beneficial reuse of the facility.

B&N worked closely with SWACO to develop a request for proposal for “beneficial use” that incorporated the maintenance work. A proposal was received and accepted for development of a golf course on the facility. B&N represented SWACO on technical issues during construction of the new Phoenix Golf Links.

The Scotts Company Landfill Closures
The Scotts Company
Marysville, Ohio

B&N prepared plans, specifications and construction Storm Water Pollution Prevention Plans (SWPPPs) for RCRA closure of former hazardous waste landfills. This project included five landfills and seven former lagoon/pond closures that were being closed under a consent order with the Ohio EPA.

This was a design/build project with Pro-Terra Environmental Contractors that required containment of all runoff, movement of waste, construction of sheet pile walls, closure and construction under conditions requiring worker protection. B&N also estimated construction quantities and negotiated with the Ohio EPA. Services provided included design, submittal review, construction SWPPP preparation, construction management, construction quality assurance and construction certification.

The Scotts Company Landfill No. 1 Closure
The Scotts Company
Marysville, Ohio

B&N prepared plans, specifications, and a quality assurance plan for the construction of a railroad through an existing hazardous waste landfill. This was a fast-track, design/build project with Pro-Terra Environmental Contractors that required containment of all runoff, movement of waste, construction of two sheet pile walls, closure, and construction under conditions requiring worker protection. B&N also estimated construction quantities, negotiated with the Ohio EPA, through a consent order and ensured compliance with the request to engage in construction activities. Services provided included design, submittal review, construction, management, construction quality assurance, and construction certification.

This project was one of five landfills and seven former lagoon/pond closures that were negotiated through a consent order with Ohio EPA. B&N provided Scotts with closure criteria that has saved The Scotts Company over $6 million versus initial Ohio EPA mandates. A Rule 13 application presenting the negotiated technical aspects of the closure was prepared by B&N and submitted to the Ohio EPA for approval.

Closure of Nonsteel-Making Waste Landfill

LTV Steel Cleveland Works
Cleveland, Ohio

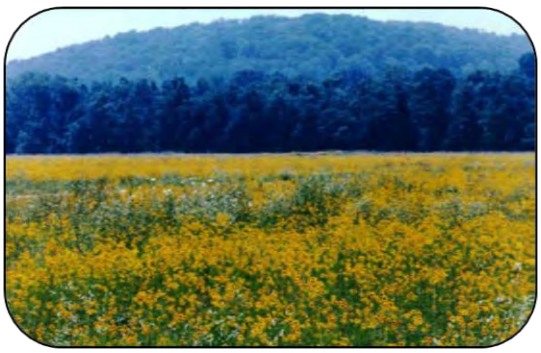
B&N was hired to conduct hydrogeologic investigations and prepare closure documents for a nonsteel-making waste landfill at the Cleveland Works. The site the landfill has been used for industrial activities since the 1800s. The deeply incised drainage systems have been filled over the years with the by-products of this industrial activity.

Prefilling drainage is routed beneath the landfill in storm water culverts. It is known that several generations of steel making activities, including the manufacture of coke have taken place and that coke manufacturing by-products have been placed on the site. The groundwater monitoring plan developed for the site takes into account the effects of these past activities and pathways created along the culverts in the prefill drainage features. B&N is currently conducting groundwater monitoring activities at the site for LTV Steel.

Hamilton Sludge Landfill Reclamation

City of Hamilton, Ohio

B&N was retained by the City of Hamilton to close an old landfill consisting of more than 2,000 wastewater treatment plant sludge pits (20' x 10' x 10' deep) across 80 acres. Ohio EPA imposed findings and orders against the city to close the landfill with a 2-foot clay cap.



B&N determined that over 90 percent of water that came into contact with sludge came from groundwater rising into the unlined pits. Therefore, the cost to close the landfill with a clay cap ($20 million) was not worth preventing only 10 percent of the water to come into contact with the sludge.

The cost savings was over $16 million using soil cover material consisting of 1x10-4cm/s permeability versus the Ohio EPA proposed 1x10-7cm/s. The closed landfill has been incorporated into a nature preserve consisting of wildflower/prairie grass on top of the landfill with nature trails, bike paths, bird watch towers and osprey posts throughout the landfill.

Project features included:

- Negotiations with Ohio EPA on consent decree
- Negotiation of less stringent landfill final cap design criteria

- Negotiation of less stringent groundwater monitoring program
- Negotiations on all issues of landfill closure were protective of human and ecological environments

Dublin Road Landfill Closure
Arter & Hadden
Grandview Heights, Ohio

B&N was retained to evaluate this former landfill site. The 40-acre site was operated as a landfill from 1960 to 1969 for construction and demolition debris waste. The client entered into the Voluntary Action Program (VAP) to close the landfill in anticipation of future development plans that can be established with no environmental risks. B&N completed an initial Phase 2 ESA in 1994 prior to the VAP existence and has performed periodic groundwater quality monitoring. Currently, B&N is working on the Phase 2 ESA and Risk Based Corrective under VAP.

Subsequent to the VAP activities, B&N was hired by a potential developer to assist with development and negotiation of Ohio EPA Rule 13 issues. B&N provided construction cost estimates for implementation of Rule 13 issues, which the developer used to make a go/no-go decision.

Wetlands and Natural Channel Restoration

Landfill Closure and Wetlands Treatment
City of Lancaster
Lancaster, Ohio

Burgess & Niple was retained by the City of Lancaster to develop remedial design plans for a closed landfill containing municipal and industrial waste. Leachate-impacted groundwater is collected from groundwater collection drains and directed to the wetlands treatment system. Ammonia and metals are the primary constituents of concern. The wetlands were developed using on-site and vegetated with *Typha latifolia* (cattail) and *Scirpus atrovirens* (bulrush).

Key project elements:
- Engineered cap to meet State of Ohio requirements
- Surface drainage improvements
- Geomembrane barrier wall to intercept groundwater
- Groundwater collection drain
- Engineered wetlands treatment system

Constructed Wetlands Treatment Systems

Constructed wetlands are increasingly being used to treat a variety of wastewaters. The inherent natural productivity of wetland ecosystems can be harnessed in constructed systems to successfully treat a wide range of pollutants including nutrients, microbiological contaminants, oxygen demand, heavy metals, and organics. Acid mine drainage, domestic wastewaters, urban and agricultural stormwater runoff, landfill leachate, and industrial wastewaters have all been successfully treated using constructed wetlands systems.

Wetland treatment systems have a number of advantages over conventional systems, primarily realized as lower long-term operation and maintenance costs.

Burgess & Niple (B&N) has experienced environmental scientists and engineers on staff familiar with constructed wetlands treatment systems for acid mine drainage, domestic wastewaters, stormwater, leachate and other wastes.

B&N offers the following services:

- Feasibility Studies
- Detailed Design and Specifications
- Post-Construction Monitoring
- Acid Mine Drainage Treatment
- Domestic Wastewater Treatment
- Sanitary Wastewater Treatment

Stream Sediment Investigation

The Scotts Company
Marysville, Ohio

The Scotts Company (Scotts) and Arter & Hadden contracted with B&N to investigate the presence and origin of waste-indicative constituents that may have been transported from former waste management units into the North Branch Crosses Run and Main Branch Crosses Run in Marysville, Ohio. B&N performed a Phase II ESA under Ohio EPA Voluntary Action Program (VAP) protocol to identify potential sources of contamination. Stream sediment sampling was conducted across the Scotts property corridor and extended to the north/northeast to the point at which Crosses Run merges with Mill Creek.

The project involved:

- Quarterly monitoring of three stream sampling locations;
- Geotechnical characterization of stream sediment samples along North Branch Crosses Run, Crosses Run, and Mill Creek under VAP protocol;
- Identification of several on-site and off-site source areas; and
- Negotiating closure criteria with Ohio EPA, which saved Scotts more than $6 million from initial Ohio EPA requirements.

Wetlands Permitting & Mitigation

Various Locations

Wetlands provide critical fish and wildlife habitat, control flooding and erosion, improve water quality, and recharge groundwater supplies. Section 404 of the Clean Water Act (CWA) requires a permit from the U.S. Army Corps of Engineers for filling impacts to “waters of the U.S.,” including wetlands. Additionally, Section 401 of the CWA requires a state water quality certification for each Section 404 permit issued.

Major elements in the Section 404/401 permitting process for wetlands include identification and delineation of wetland boundaries, evaluation of less impacting project alternatives, assessment of impacts, and mitigation for unavoidable impacts. Mitigation may take the form of restoring or creating compensating wetlands on-site or off-site, or mitigation banking.

B&N certified Professional Wetland Scientists (PWS) are experienced in wetland delineation, permit application preparation, and the agency coordination steps necessary to facilitate wetlands permitting projects.

B&N provides the following wetlands services:

- Preliminary Evaluations
- Wetland Delineations
- Functional Assessments
- Section 404/401 Permit Applications
- Mitigation Plans
- Mitigation Monitoring

Watson Road Landfill Stormwater Management Improvements

City of Newark, Ohio

Burgess & Niple provided professional engineering services to the City of Newark, Ohio for their closed Watson Road Landfill. Subsequent to completion of construction activities to repair the landfill cap system and adjacent surface water drainage features, a large volume of stormwater resulting from 3.118 inches of rainfall over a 24-hour period caused damage to the newly constructed landfill cap repair areas and tributaries. These areas were repaired and additional erosion control features were incorporated to minimize damage during future storm events.

One 36-inch-diameter catch basin was installed on the phytoremediation bench and a 24-inch outlet pipe was installed to discharge to the north into the West Stream. This catch basin was designed to relieve large volumes of surface water flow generated during future storm events that could flood the phytoremediation bench and cause additional erosion or instability at the toe of slope. Straw bales remaining in the drainage channels along the access road at the end of 2012 construction inhibited flow down the channel causing erosional features to form in cap soils as stormwater moved around the straw bale barriers.

Erosion control matting (Flexamat® manufactured by Motz Enterprises, Inc.) was installed across the areas that were determined to be the preferential pathways for surface water flow across the site. Flexamat® is a tied concrete block mat constructed of 5,000 pounds per square inch (psi) air entrained concrete, double net straw blanket and polypropylene geogrid. The Flexamat allows vegetation to grow through the armoring to provide further slope stabilization and flow velocity control. Type C riprap and underlying filter fabric were installed along the south slopes of the West and North Streams to stabilize the slope. Filter fabric and Type C riprap were also installed along the north and south slopes of the West Stream to prevent damage from future stormwater flow along the 12-foot-wide erosion control matting during major storm events. The site access road was improved by adding a combination of ODOT No. 2, No. 4, and No. 304 aggregates.

Model Landfill Redevelopment
Wetlands Delineation & Permitting
Petro Environmental Technologies, Inc.
Columbus, Ohio

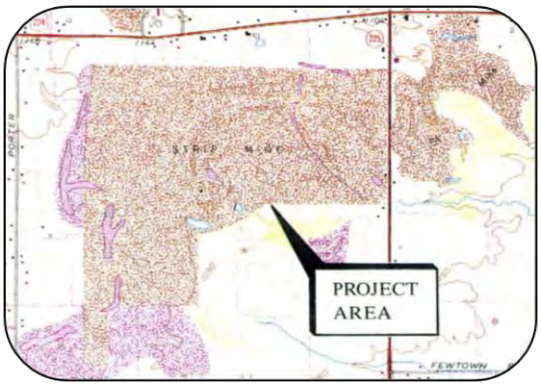
B&N was retained by Petro Environmental Technologies, Inc. to delineate wetlands and other jurisdictional "waters of the U.S." at the former Model Landfill site in southwest Columbus. Petro Environmental proposed to redevelop the site into an 18-hole "links" style golf course. The course design called for placement of fill in a portion of Brown's Run, an intermittent stream on site, in order to construct a series of ponds and two road crossings. B&N delineated no wetlands in the affected area; however, a Pre-Discharge Notification was prepared under Nationwide Permit Nos. 14 and 26 for the proposed impacts to Brown's Run. Authorization was granted by the U.S. Army Corps of Engineers, Huntington District. The golf course has since been constructed and is operating successfully as a popular public course.

Wetlands Assessment and Clean Water Act Permitting
Severstal Warren, Inc. (formerly WCI Steel)
Warren, Ohio

B&N was retained to provide services for a wetland delineation and preparation of a US Army Corp of Engineers Section 404 permit for WCI steel. WCI Steel was permitted by the State of Ohio to construct a new best available technology (BAT) landfill facility on their property in Warren, Ohio. The facility is to be developed partially on the site of an existing disposal facility. As materials are removed from the existing facility, space will be cleared for the construction of the new facility in the area currently occupied by the existing landfill.

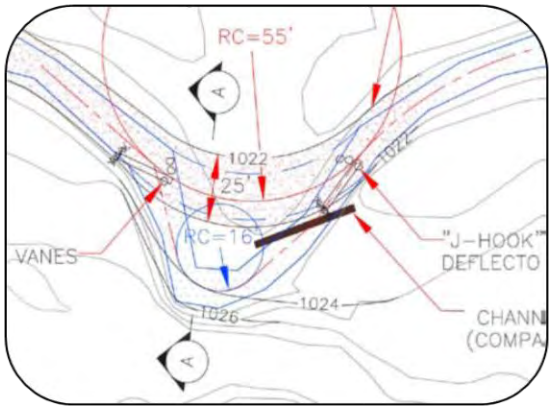
Prior to construction of the new facility, a wetlands assessment was completed to determine if jurisdictional wetlands were present on the construction site. B&N completed a water quality certification pursuant to Section 401 of the Clean Water Act. The wetlands assessment determined wetland mitigation efforts necessary prior to construction of the landfill. In addition to the wetlands assessment and permitting, a letter of map revision (LOMR) was submitted to the US Army Corp of Engineers. The LOMR was completed to revise the regulatory floodway in the area of the landfill.

Willow Creek Landfill
Wetlands Delineation & Permitting
Browning-Ferris Industries
Atwater, Ohio



B&N was retained by Browning-Ferris Industries to provide wetland consulting services related to its controversial proposal to expand a regional landfill on a 700-acre site in Portage County, Ohio. Permit applications were prepared for relocating a stream and filling wetlands and ponds that were created by past mining activities but are not subject to Section 404 jurisdiction under the federal Clean Water Act. Mitigation planning and design included working with the Ohio Department of Natural Resources, Division of Wildlife, to create a series of ponds, wetlands, relocated stream channel, and upland wildlife habitat that complements the State's efforts to manage wildlife habitat on an adjacent wildlife management area. In addition, past coal strip mining activities on the site have resulted in serious concerns about surface water quality associated with acid mine drainage (AMD). The concerns with AMD needed to be resolved before any permits were granted. Consequently, the mitigation plan included additional wetland systems designed to ameliorate the AMD by efficiently and economically removing iron and manganese, and lowering the reaction (pH) level of the surface water.

Stream Restoration Design
City of Hudson, Ohio



B&N was retained by the City of Hudson to develop proposed plans to restore approximately 300 linear feet (lf) of Brandywine Creek that was eroding into historic fill deposits at a closed dump site. Work included stream assessment and biological sampling, and preparation of a conceptual restoration plan. Stream and biological assessment tasks encompassed approximately 900 lf of stream, including the project segment.

Stream assessment results indicated an unstable meander bend with extremely tight radius of curvature was eroding into the historical fill deposits. B&N recommended realignment of the stream at this location to move the channel away from the fill deposits and achieve a more stable radius of curvature. Bank reshaping, construction of bankfull bench areas, installation of log vane deflectors, riparian plantings, and an impervious channel block to seal the old channel course also were included in the conceptual plans. The City plans to construct these measures in 2006 with on-site assistance from B&N. Construction is scheduled to occur concurrently with remediation of a failed floodplain detention basin in the same area.

Groundwater/Explosive Gas Monitoring and Statistics

Environmental Monitoring

B&N has been conducting environmental monitoring for more than 30 years at over 100 facilities. This monitoring has included the sampling and analysis of groundwater, surface water, leachate, soil, air, waste, and explosive landfill gas. We use best-available-technology sampling procedures that are designed to obtain samples that are the most representative of in-situ conditions, as well as comply with all federal and state regulations and guidance documents. Sampling techniques are selected based upon the type of regulatory agency governing the monitoring being conducted, specifications within existing monitoring plans, and the need for minimizing potential interferences of sampling equipment on the types of constituents being analyzed.

When projects warrant the use of statistical evaluation of the data, B&N's staff utilizes a combination of statistical packages that allows for efficient data analysis, hands-on evaluation, and minimization of the potential for clerical errors. B&N has been recognized by the Ohio EPA as one of the top statistical consultants in Ohio.

Fayette County Landfill
Fayette County Commissioners
Fayette County, Ohio

B&N was retained by the Fayette County Commissioners to assist with the groundwater monitoring program at their closed Fayette County Landfill No. 3. The County had previously determined that groundwater had been impacted by the landfill and a corrective measures plan, including the proposed construction of a groundwater/leachate recovery system, had been submitted to Ohio EPA. At the recommendation of Ohio EPA, the County requested B&N's assistance to review the groundwater quality assessment monitoring program and ultimately revise the corrective measures plan.

B&N evaluated and revised the groundwater monitoring network, sampling techniques, background statistical database, and performed additional groundwater quality assessment monitoring in accordance with the Ohio Administrative Code. Through the use of the revised background statistical database and the appropriate statistical methodologies, B&N was able to identify the waste-derived constituents originating from the landfill, defined their extent, and revised the groundwater quality assessment report. Due to the statistically anomalous historical detections of all organic compounds, herbicides, and pesticides, B&N also determined that these detections were due to sources other than the landfill. Based upon the findings of the groundwater quality assessment monitoring program, it was determined that the waste-derived constituents and their lateral extent were not a threat to human health, safety, or the environment. Therefore, no remediation other that accelerated landfill cap maintenance on thin areas of the existing cap was needed for corrective measures. B&N revised the corrective measures plan and included a groundwater monitoring plan as part of the corrective measures program. The revised analytical parameter list for the corrective measures program was significantly smaller than the costly list of constituents required for the assessment monitoring program.

Completion of the improvements to the landfill cap has resulted in reduction of leachate levels/potentiometric surface of the shallow saturated zone at the toe of the landfill by over 4 feet. B&N estimated that the County saved approximately $1.3 million with the revised findings, which does not include the long-term savings resulting from the shorter analytical parameter list.

Cherry Street Landfill
City of Delaware, Ohio

B&N continues to work with the City of Delaware (City) to assist with regulatory compliance at the Cherry Street Landfill – a closed municipal solid waste disposal facility. In accordance with Ohio Administrative Code 3745-27-12, the City conducts semiannual explosive gas monitoring at the facility. Due to the discovery of increasing concentrations of landfill gas within some of the gas probes, bimonthly monitoring was initiated as part of implementation of contingency procedures.

The City's wastewater treatment plant and public works office are located within 200 feet of waste placement on the northern portion of the property. All occupied structures have been equipped with permanent explosive gas alarms. Additional monitoring probes were installed within the backfill of a new utility line located along the west side of the landfill, as the backfill appears to be a preferential pathway for gas migration to the north toward the occupied structures.

Historically, U.S. EPA, Ohio EPA, and the Ohio Department of Health have expressed concern regarding observed leachate outbreaks that are entering the Olentangy River situated adjacent to the east side of the landfill. B&N provided the City with agency mediation during the most recent investigations completed by the Ohio EPA. To date, no Ohio EPA actions have been issued to remediate the leachate seeps.

Pike Sanitation Landfill
Groundwater Quality Assessment
Pike Sanitation, Inc.
Waverly, Ohio

B&N completed a groundwater quality assessment monitoring program at the Pike Sanitation Landfill between September and October 2000 to further investigate chloride concentrations that were determined to be statistically significant during the detection monitoring program. Specifically, chloride concentrations had exhibited a significant increasing trend in each of the downgradient monitoring wells completed within the Berea Sandstone Unit. Results of the assessment monitoring program concluded that chloride concentrations were increasing both upgradient and downgradient of the facility, and the amount of increase and the relative concentrations were proportional to the amount of bedrock overburden at each well. A correlation was also made between chloride concentrations and the amount of

naturally occurring hydrocarbons noted within the boring during well installation. Brines within the unit were determined to be the primary source of the chloride concentrations. The increase in chloride concentrations across the site is possibly a result of a minor earthquake registered in Pike County in 1994, as the tremor may have disturbed the chemical equilibrium of the fluids in the saturated portion of the aquifer. Because groundwater flow within the Berea Sandstone Unit is relatively slow, the effects of the earthquake have been gradual. The Director of the Ohio EPA approved reinstatement of the groundwater detection monitoring program at the facility.

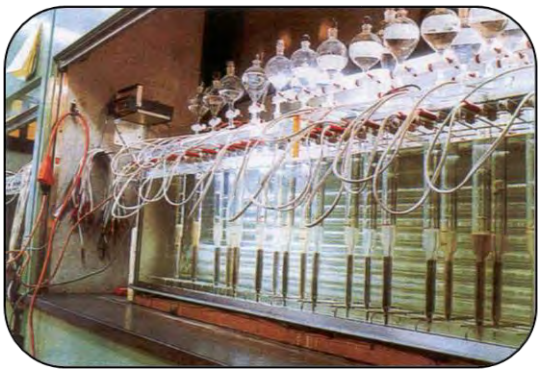
Groundwater Monitoring

Wayne Reclamation and Recycling Facility
City of Columbia City, Indiana

Burgess & Niple has performed groundwater monitoring at the Wayne Reclamation and Recycling Facility since 2000 for the City of Columbia City, Indiana. The facility is located in Whitley County, just northeast of town along the Blue River. The site is part of the 30-acre Wayne Reclamation Superfund Site consisting of a former oil reclamation operation and municipal landfill.

Columbia City has conducted semiannual groundwater monitoring across the northern portion of the site in the vicinity of the municipal landfill since 1995 as part of a consent decree. The area of the former oil reclamation operation is owned by a separate party and has been under remedial action for soil and groundwater contamination of petroleum hydrocarbons and chlorinated solvents. Groundwater quality results generated by the City are used to evaluate the progress of the site remediation south of the landfill.

Isotope Analysis to Age Date Groundwater at Solid Waste Facilities

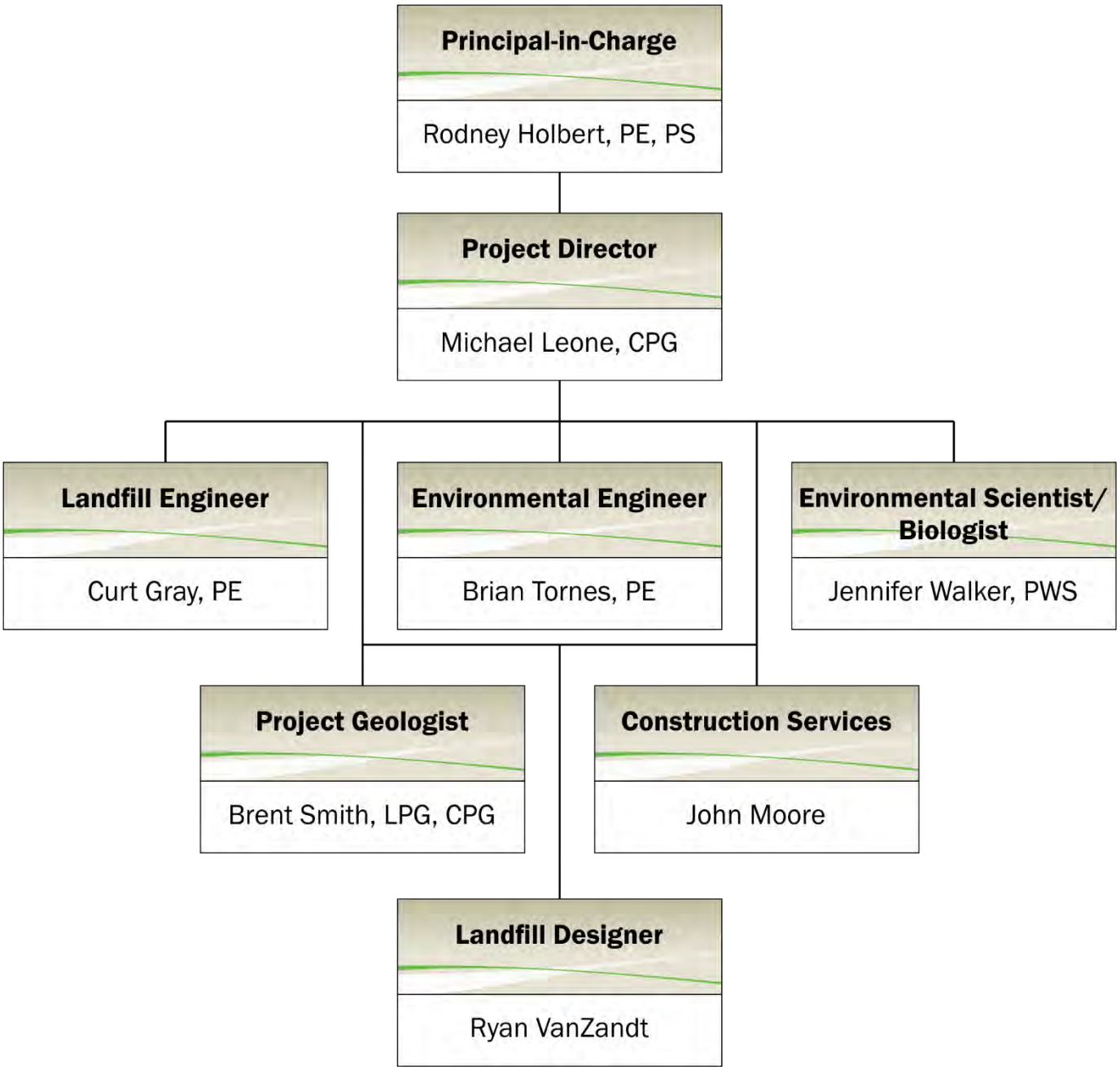


B&N has used groundwater tritium isotope analyses on previous projects to establish the minimum age of groundwater within specific hydrogeologic units. The concept behind the tritium analysis is to determine if waters that were exposed to the atmosphere within the past 40 to 50 years have come in contact with the hydrogeologic unit in question. If tritium is not present, groundwater in the sampled hydrogeologic unit must predate 1952 nuclear bomb testing.

B&N conducted tritium sampling and analysis at the Central Waste, Inc. Landfill in Mahoning County, Ohio. The investigation was performed to identify a difference in tritium concentrations between two hydrogeologic units; thus, it was concluded that the two units were not interconnected. Isotech Laboratories, Inc., was utilized to perform the analyses.

B&N also conducted tritium sampling and analysis at the Danis Clanko Landfill in Clark County, Ohio. The study was conducted to determine the relative age of groundwater in the uppermost aquifer system. The tritium analysis demonstrated that groundwater in the uppermost aquifer system was not hydraulically connected with shallower saturated zones.

4.0 PROJECT TEAM



Rodney D. Holbert, PE, PS, Principal

Principal-in-Charge

Mr. Holbert joined Burgess & Niple in 1985 and is Director of B&N's Parkersburg office. His experience includes serving as project manager on Indefinite Delivery/Indefinite Quantity contracts for U.S. Army Corps of Engineers, U.S. Forest Service, U.S. Fish & Wildlife, West Virginia National Guard, and West Virginia Department of Transportation. Mr. Holbert provided engineering and project management services for various projects including highway and bridge designs, bridge inspection and rehabilitation, railroads, flood insurance studies throughout West Virginia, hydraulic studies, utility improvements, storm sewer evaluations, and construction services.

Relevant Background

Bridge and Structural Inspections – Project engineer responsible for the inspection of bridges ranging in length from 20 feet to 2,400 feet. Services included preparation of reports and stress analysis and load ratings. Representative bridge inspections include:

- New River Gorge Bridge, Fayetteville, West Virginia
- Market Street Bridge over the Ohio River, Steubenville, Ohio/Weirton, West Virginia
- East Street Bridge over the Little Kanawha River, Parkersburg, West Virginia
- Fifth Street Bridge over the Little Kanawha River, Parkersburg, West Virginia
- South Charleston-Dunbar I-64 Bridge over Kanawha River, West Virginia
- 40 Bridges, District One, West Virginia Department of Transportation 1998 - 2004
- 12 Bridges, Oregon Department of Transportation
- Assisted in formatting, compiling, and editing of *1990 West Virginia Bridge Inspection Manual*
- 184 Bridge Inspections, U.S. Army Corps of Engineers, Huntington District

Representative hydraulic steel structure gate inspections include:

- 131 Hydraulic Steel Structure Gates, U.S. Army Corps of Engineers, Huntington District
- 20 Hydraulic Steel Structure Gates, U.S. Army Corps of Engineers, Nashville District

Bridge Design – Project engineer responsible for design, review, and coordination of different areas and phases of bridge projects. Representative bridge projects include:

- Petersburg U.S. 220 Bridge, Petersburg, West Virginia
- Moorefield U.S. 220 Bridge, Moorefield, West Virginia
- Moorefield Railroad Bridge, Moorefield, West Virginia
- Paugh Town and Deep Run Emergency Replacement Bridges, Mineral County, West Virginia
- East Street Bridge, Parkersburg, West Virginia

Roadway Design – Project engineer for design of roadway improvement projects including storm sewer design, retaining walls, utility relocations, right-of-way plans and maintenance of traffic plans. Representative projects include:

- West Virginia Route 10, Rita to Dabney, West Virginia Department of Transportation, Logan County, West Virginia
- Star Plastics Industrial Access Road, Jackson County Development Authority, Millwood, West Virginia
- Scott Miller Hill Bypass on U.S. 33, West Virginia Department of Transportation, Roane County, West Virginia
- Petersburg Gap Curve Modification on U.S. 22, West Virginia Department of Transportation, Grant County, West Virginia
- Durgon Curve Modification on U.S. 220, West Virginia Department of Transportation, Hardy County, West Virginia
- Route Study, Ohio Valley College, Parkersburg, West Virginia
- Highland Scenic Highway Drainage and Slope Study, U.S. Forest Service, Pocahontas County, West Virginia
- Forest Road 112 Study and Design, U.S. Forest Service, Pendleton County, West Virginia

Bridge Renovation – Project engineer responsible for design of bridge renovations for West Virginia Department of Transportation. Representative projects include:

- Hi Carpenter Bridge over the Ohio River, St. Marys, West Virginia
- Clifton Mills Bridge, Preston County, West Virginia
- Lost Creek Bridge on U.S. 52, Wayne County, West Virginia
- Feasibility Study, City of Bluefield, West Virginia

Site Development – Project manager or engineer for the site design for building projects. Representative projects include:

- Tri-River Transit Authority, West Virginia Division of Public Transit, Hamlin, West Virginia
- Bluefield Area Transit Authority, West Virginia Division of Public Transit, Bluefield, West Virginia
- Here and There Transit Authority, West Virginia Division of Public Transit, Philippi, West Virginia
- Parkersburg Division of Motor Vehicles Regional Office, West Virginia Department of Transportation, Parkersburg, West Virginia
- Summersville Division of Motor Vehicles Regional Office, West Virginia Department of Transportation, Summersville, West Virginia
- MOVTA Bus Maintenance Garage, Mid-Ohio Valley Transit Authority, Parkersburg, West Virginia
- WVDOT District 3 Headquarters Site, West Virginia Department of Transportation, Parkersburg, West Virginia
- Wetzel County Headquarters, West Virginia Department of Transportation, New Martinsville, West Virginia

Education/Training

West Virginia University – MBA, 1989
West Virginia Institute of Technology – BS, Civil Engineering, 1985
Tunnel Safety Inspection, Course #130110 – FHWA/NHI, 2015
Level I Antiterrorism Awareness Training, Joint Chiefs of Staff, 2015
Adult First Aid/CPR/AED Training, American Red Cross, 2015
Fracture Critical Inspection Techniques for Steel Bridges, Course #130078 – FHWA/NHI, 2012
Bridge Inspection Refresher Training, Course #130053 – FHWA/NHI, 2011
National Bridge Inspection Certification, 2004
Confined Space Entry Training
Bridge Climbing Training – Burgess & Niple, Inc.

Registration

Professional Engineer – Kentucky, Michigan, Ohio, Virginia, West Virginia
Professional Surveyor – West Virginia

Michael E. Leone, CPG
Project Director

Mr. Leone joined Burgess & Niple in 1996 as a geologist in the Environmental Division. He has been a project director for solid waste landfill monitoring projects, UST investigations, and Phase II Environmental Site Assessments. Mr. Leone has been responsible for completing geostatistical groundwater analysis plans, including those dealing with mine spoil deposits associated with coal mining activities of eastern Ohio. He has worked on projects that were entered in the Ohio Voluntary Action Program. He has completed a Wellhead Protection Plan for a small community located in the Dayton area.

Relevant Background

Solid Waste Disposal Projects – Project director of regulatory monitoring at municipal, residual, industrial, and hazardous waste landfills. Prepared plans for groundwater detection monitoring, groundwater quality assessment monitoring, compliance monitoring, corrective measures programs, and explosive gas monitoring for numerous facilities. Effective in minimizing groundwater and surface water monitoring networks and analytical parameter lists through agency negotiations. Successfully completed groundwater quality assessment monitoring programs. Received approval from Ohio EPA for corrective measures programs. Prepared documentation for vertical and lateral expansions of existing landfills. Project geologist for a preliminary hydrogeologic investigation for a landfill expansion. Site operator of a cement kiln dust landfill leachate collection system, including analysis and reporting of groundwater and surface water quality results generated during sampling at the facility. Organized and initiated leachate batch treatments under Ohio EPA contingency plan. Performed surficial leachate outbreak investigations. Representative projects include:

- ArcelorMittal Cleveland LLC ISWDFs (formerly ISG Cleveland Inc./LTV Steel Company), Cleveland, Ohio
- Athens Hocking Reclamation Center, Nelsonville, Ohio
- BDM Warren Steel Operations, LLC (formerly Severstal Warren Inc./WCI Steel, Inc.) Landfill, Warren, Ohio
- Boyas Excavating, Inc., Nicky Boulevard Landfill, Cuyahoga Heights, Ohio
- Central Waste, Inc. Landfill, Alliance, Ohio
- Cherokee Run Landfill, Bellefontaine, Ohio
- Cherry Street Landfill, Delaware, Ohio
- Curve Road Landfill, Delaware, Ohio
- Fayette County Landfill No. 3, Washington Court House, Ohio
- Former Lockbourne AFB Landfill, Lockbourne, Ohio
- Hamilton Sludge Landfill, Hamilton, Ohio
- Oxford Township Landfill, Delaware, Ohio
- Pike Sanitation Landfill, Pike County, Ohio
- The Scotts Miracle-Gro Company, Marysville, Ohio
- Seiberling Street Landfill, The Goodyear Tire & Rubber Company, Akron, Ohio
- Solid Waste Authority of Central Ohio, Model Landfill, Franklin County, Ohio
- Southdown Landfills, Dayton, Ohio
- Stonewall Cemetery Road Landfill, Lancaster, Ohio
- Sunny Farms (formerly San-Lan) Landfill, Fostoria, Ohio
- Watson Road Landfill, Newark, Ohio
- Wayne Reclamation and Recycling Facility, City of Columbia City, Indiana

Geostatistical Analysis Plans – Responsible for completing geostatistical analyses including descriptive statistics, normality testing, interwell and intrawell analyses, and other relevant analyses to fully define the statistical significance of groundwater data analyzed under OAC 3745-27-10, OAC 3745-29-10, and OAC 3745-30-08 at municipal, industrial, and residual waste landfills and wastewater treatment facilities. Prepared false statistical positive demonstrations for Ohio EPA approval. Significant experience with agency negotiation. Thorough understanding of the regulations governing groundwater monitoring at solid waste disposal facilities. Prepared comment letter for Ohio EPA addressing ambiguities and deficiencies of the 2001 proposed regulatory revisions and included recommendations. Consultant for the Indiana Department of

Environmental Management (IDEM) responsible for reviewing statistical evaluation plans (StEPs) completed by Indiana solid waste facilities under 329 IAC 10-21. Representative projects include:

- ArcelorMittal Cleveland LLC ISWDFs (formerly ISG Cleveland Inc./LTV Steel Company), Cleveland, Ohio
- Athens-Hocking Reclamation Center, Nelsonville, Ohio
- BDM Warren Steel Operations, LLC (formerly Severstal Warren Inc./WCI Steel, Inc.) Landfill, Warren, Ohio
- Boyas Excavating, Inc., Nicky Boulevard Landfill, Cuyahoga Heights, Ohio
- Central Waste, Inc., Landfill, Alliance, Ohio
- Curve Road Landfill, Delaware, Ohio
- Fayette County Landfill No. 3, Washington Court House, Ohio
- Ford Motor Company, Sandusky, Ohio
- Former Lockbourne AFB Landfill, Lockbourne, Ohio
- General Mills WWTF, Wellston, Ohio
- Indiana Department of Environmental Management
- Jones Metal Products Company, West Lafayette, Ohio
- Kenworth Trucking Company, Chillicothe, Ohio
- McArthur WWTF, Village of McArthur, Ohio
- Miller Brewing Company, Trenton, Ohio
- Oxford Township Landfill, Delaware County, Ohio
- Pike Sanitation Landfill, Waverly, Ohio
- The Scotts Miracle-Gro Company, Marysville, Ohio
- Seiberling Street Landfill, The Goodyear Tire & Rubber Company, Akron, Ohio
- The Solid Waste Authority of Central Ohio, Franklin County, Ohio
- Stonewall Cemetery Road Landfill, Lancaster, Ohio
- Sunny Farms (formerly San-Lan) Landfill, Fostoria, Ohio
- Wayne Reclamation and Recycling Facility, City of Columbia City, Indiana

Groundwater Monitoring Programs – Responsible for design and installation of groundwater monitoring networks. Designed a wellhead protection program for a small town in western Ohio. Performed monitoring during pre- and post-closure of process waste lagoons to evaluate the effects of the closure. Project director of monitoring programs for several wastewater treatment facilities. Performed water quality monitoring for large distributing company. Experience with natural attenuation groundwater monitoring programs. Completed slug test analyses and pump tests to evaluate site hydrogeologic features. Representative projects include:

- Eveready Battery Company, Cleveland, Ohio
- Eveready Battery Company, Fremont, Ohio
- General Mills WWTF, Wellston, Ohio
- International Paper Company, Hamilton, Ohio
- Jones Metal Products, Inc., West Lafayette, Ohio
- Kenworth Trucking Company, Chillicothe, Ohio
- McArthur WWTF, Village of McArthur, Ohio
- Miller Brewing Company, Trenton, Ohio
- The Scotts Miracle-Gro Company, Marysville, Ohio
- Village of Anna, Ohio

Education/Training

Miami University – Bachelor of Arts, Geology, 1994
Wright State University, Dayton, Ohio – Graduate studies
OSHA 40-Hour Health and Safety Course for Hazardous Waste (yearly 8-hour refresher courses)
Training in the Performance, Use, and Application of ASTM Standards: Environmental Statistics

Registration

Certified Professional Geologist – AIPG

Curtis W. Gray, PE
Landfill Engineer

Mr. Gray joined Burgess & Niple in 1989 as an engineer in the Environmental Division. He has 23 years of experience with B&N and 7 years of experience with other firms in an engineering or geotechnical role. His responsibilities have included landfill design, closure of residual and municipal solid waste landfills, landfill siting studies, preparing site closure plans for hazardous waste (RCRA) sites, risk assessments, geophysical investigations, underground storage tank closures and site investigations, UST design, and other environmental or geotechnical engineering projects. Mr. Gray has also been responsible for remediation of several closed solid waste landfills, including the preparation of Rule 13 Applications.

Relevant Background

Solid Waste Management – Engineer responsible for preparation of Permit-to-Install applications for industrial and residual solid waste landfills and construction and demolition debris landfills. Also responsible for overseeing and coordinating the construction or closure of several solid waste landfills, preparation of technical specifications for the owner's use in bidding contractor services, and preparation of technical specifications for bidding landfill construction quality assurance services activities to consultants. Representative projects include:

- AEP Services Corp., Landfill Drainage Design and Landfill Siting Studies, Columbus, Ohio
- ArcelorMittal Cleveland LLC (formerly ISG Cleveland Inc./LTV Steel Company) Industrial Solid Waste Disposal Facility, Cleveland, Ohio
- BDM Warren Steel Operations, LLC (formerly Severstal Warren, Inc./WCI Steel, Inc.) Landfill, Warren, Ohio
- BFI of Ohio Inc., Rule 13 Application, Willow Creek Landfill, Atwater, Ohio
- Boyas Excavating, Inc., Nicky Boulevard Landfill Leachate Collection System, Cuyahoga Heights, Ohio
- Curve Road Landfill, Leachate Transfer Line, Delaware, Ohio
- EOLM C&DD Landfill, Lima, Ohio
- Fayette County C&DD Landfill, Washington Court House, Ohio
- The Goodyear Tire & Rubber Co., Rule 13 Application, Seiberling Street Landfill, Akron, Ohio
- City of Newark, Ohio, Watson Road Landfill, Rule 13 Application, Closed Landfill Remediation, and Phytoremediation, Newark, Ohio
- Solid Waste Authority of Central Ohio, General Engineering Services, Grove City, Ohio
- Stonewall Cemetery Road Landfill, Wetland Treatment Cells, Lancaster, Ohio

RCRA Closures – Engineer responsible for preparing site closure plans and specifications for closure of hazardous waste storage facilities. Conducted closure activities after approval of the closure plans. Closures have involved tank and container cleaning, facility inspections, soil and groundwater sampling, monitoring well installations, sample collection, and sample analysis. Projects have included drum storage pads; aboveground storage tanks; and containment areas at sites handling acids, organic solvents, and heavy metals. Representative projects include:

- ArcelorMittal Cleveland LLC, formerly LTV Steel, Hazardous Waste Area Closures, Cleveland, Ohio and East Chicago, Indiana
- City of Athens, Ohio RCRA Closure, City Service Garage, Athens, Ohio
- BDM Warren Steel Operations, LLC (formerly Severstal Warren, Inc./WCI Steel, Inc.) Residual Solid Waste Landfill, Part B Permit Application, Warren, Ohio
- Former Lockbourne AFB Landfill, Lockbourne, Ohio
- The Scotts Miracle-Gro Company, Solid Waste Management RCRA Landfill Closures, Marysville, Ohio
- Thomson Consumer Electronics, RCRA Remedial Action Plans, Circleville, Ohio

Soil and Groundwater Remediation – Engineer responsible for assessments, design of remedial systems, and closure of sites associated with soil and groundwater remediation. Sites have involved remediation of chlorinated solvents, metals, solvents, gasoline and other fuel compounds, and various organic chemicals. Representative projects include:

- Former American National Can Site Remediation, Mt. Vernon, Ohio
- ArcelorMittal Cleveland LLC (formerly ISG Cleveland Inc./LTV Steel Company), Various Hazardous Waste Storage Area Investigations, Cleveland, Ohio
- Barium and Chemicals, Inc,. Design-Build RCRA Landfill Corrective Measures Remedy, Steubenville, Ohio
- Chevron Refinery, Groundwater Assessment and Remediation Design, El Segundo, California
- Columbus Lace, Soil Vapor Excavation Remediation, Columbus, Ohio
- Honda, Oil Release Remediation, Marysville and Anna, Ohio

Geophysical Studies – Engineer responsible for conducting geophysical studies to locate buried tanks and pipes, identify soil and groundwater contamination, and access subsurface conditions. Electromagnetic methods and investigations include conductivity surveys and ground penetrating radar surveys. GPR surveys have been used to access the condition of concrete spillways on dams. Responsible for directing contractors in the acquisition of seismic data and supervising data processing. Responsible for interpretation of seismic reflection geophysical data to develop oil and gas prospects, as well as gravity data for an exploration program. Representative projects include:

- Whitewater State Park, GPR Survey, Indiana
- Ohio Department of Transportation, GPR Study, Akron, Ohio
- Electromagnetic Survey of Oil and Gas Field, Akron, Ohio
- Geophysical Exploration, Seismic Reflection, Denver, Colorado
- Ohio National Guard, Electromagnetic Survey, Chillicothe, Ohio

Risk Assessment – Engineer responsible for risk analysis and preparation of risk assessments for risk-based corrective actions and closures at various sites. Risk assessments have been completed under the following regulatory programs: Bureau of Underground Storage Tank Regulations, Ohio EPA, RCRA, Ohio EPA Voluntary Action, and Arizona Department of Environmental Quality. Representative projects include:

- Certified Oil, Various Sites, Ohio
- City of Columbus, Whittier Peninsula, Columbus, Ohio
- Eveready Battery Company, Cleveland and Fremont, Ohio
- Malouf Properties, Phoenix, Arizona
- Ohio National Guard, Various Sites, Ohio

Geotechnical Engineering – Engineer responsible for study and evaluation of various geotechnical engineering issues. Representative projects include:

- Cincinnati Gas and Electric, Clay Borrow Study, Cincinnati, Ohio
- Honda of America, Hydraulic Evaluation, Marysville, Ohio
- International Technologies Corporation, Engineering Study for Pond Improvements, Dayton, Ohio
- Metropolitan Sewer District of Cincinnati, Ash Lagoon Rehabilitation, Cincinnati, Ohio
- Rumpke Corporation, Sedimentation Pond Design, Cincinnati, Ohio
- Stormwater Pollution Prevention Plans, Various Sites, Ohio

Education

Colorado School of Mines – BS, Geophysical Engineering, 1982

Registration

Professional Engineer – Colorado, Ohio

Memberships, Affiliations and Honors

Ohio Society of Professional Engineers
National Society of Professional Engineers
Society of Exploration Geophysicists

Brian W. Tornes, PE
Environmental Engineer

Mr. Tornes joined Burgess & Niple in 1990 and is Director of the Environmental Services Group. He has experience in design of stormwater and wastewater treatment facilities for both industrial and municipal clients. Treatment systems have included the use of biological and chemical reduction and precipitation, dissolved air flotation, ion exchange, membrane and mixed media filtration, solids screening, activated carbon, phytoremediation, and the use of constructed wetlands for a variety of waste streams. Mr. Tornes also has been responsible for the site development and the remediation of impacted soils.

Relevant Background

Solid Waste Landfills – Project engineer responsible for design of landfill leachate collection and transfer systems for operating and closing solid waste landfills. Representative projects include:
- BDM Warren Steel Operations, LLC (formerly Severstal Warren, Inc./WCI Steel, Inc.) Residual Solid Waste Leachate Transfer System, Warren, Ohio
- Boyas Excavating, Inc., Nicky Boulevard Landfill Leachate Collection System, Cuyahoga Heights, Ohio
- Curve Road Landfill, Leachate Transfer Line, Delaware, Ohio
- Watson Road Landfill Remediation, Phytoremediation, and Natural Channel Restoration, Newark, Ohio

Small Capacity Sanitary Wastewater Treatment Systems – Project engineer responsible for evaluations and design of small capacity (3,000 to 50,000 gallons per day) sanitary wastewater treatment systems. Systems consist of an extended aeration activated sludge process with either surface sand filters or constructed wetlands for tertiary treatment before discharge under a National Pollutant Discharge Elimination System (NPDES) permit. Representative projects include:
- AEP Ohio Coal, Cadiz, Ohio
- Austin Powder Company, McArthur, Ohio
- Camp Otterbein, United Methodist Church, Logan, Ohio
- General Electric Lighting, Inc., Circleville, Ohio
- Geneva Hills, Presbytery of Southern Ohio, Lancaster, Ohio
- HCR ManorCare, Jackson, Ohio
- South Wastewater Treatment Plant, Battelle Memorial Institute, West Jefferson, Ohio
- United Mobile Homes, Multiple locations in Pennsylvania and Ohio

On-Site Wastewater Disposal Systems – Project engineer responsible for sizing and design of on-site septic systems with subsurface discharge for small capacity (less than 2,000 gallons per day) sanitary wastewater flows. Representative projects include:
- Austin Powder Company, McArthur, Ohio
- Deer Creek Recreational Area, U.S. Army Corps of Engineers, Mt. Sterling, Ohio
- St. John Neumann Church, Sunbury, Ohio
- U.S. Forest Service Ranger Station, Camp Verde, Arizona
- U.S. Forest Service Ranger Station, Lost Lodge, New Mexico

Small Capacity Water Treatment Systems – Project engineer responsible for evaluation, sizing, design, and permitting of small capacity water treatment systems to provide potable water to commercial, industrial, and recreational facilities. Systems have primarily been designed for the removal of arsenic, iron, manganese, hardness, and solids through chemical precipitation and filtration. Representative projects include:
- J.D. Equipment Company, London, Ohio
- Ohio Willow Wood, Mt. Sterling, Ohio
- Triad Elementary School, Logan County, Ohio
- U.S. Army Corps of Engineers, East Lynn Lake Campground, West Virginia

Industrial Wastewater Conservation/Reuse – Process and project engineer for evaluation and design of industrial wastewater conservation and reuse. Projects have included facility water and material balances for determination of areas of potential waste reduction, process wastewater treatment evaluation for reuse in the manufacturing operations. Representative projects include:

- Water Conservation Study, Thomson Consumer Electronics, Circleville, Ohio – Project manager for facility wide evaluation of water use and discharge, including development of concepts for reuse and reduction.
- Group 6 Wastewater Treatment Plants, Techneglas, Inc., Columbus, Ohio – Design engineer for detailed design of two 170,000-gpd metals treatment systems for reuse of up to 90 percent of the effluent in the manufacturing process.
- Pollution Prevention Evaluation, Tomasco Mulciber, Inc., Columbus, Ohio – Project manager responsible for evaluation and design of wastewater treatment plant improvements, including an ultrafiltration system on the degreasing operations for reductions in rinse flows and extension of bath life.
- Best Management Practices Plan, Techneglas, Inc., Columbus, Ohio – Project manager for an evaluation of current stormwater and wastewater handling practices with recommendations for modifications to reduce water use while also improving NPDES permit compliance.
- General Mills Grease Recovery System Improvements, Wellston, Ohio – Design engineer for improvements to the existing dissolved air flotation clarifiers for improved grease recovery from the influent wastewater. The captured grease is then processed on-site for reuse within the cosmetics industry.
- General Electric Cooling Water Reuse Evaluation, Mahoning, Ohio – Responsible for system evaluation to reduce plant water use by approximately 300,000 gallons per day.

Constructed Wetlands – Civil engineer responsible for layout and hydraulic design of constructed wetlands for mitigation and/or treatment. Wetlands installed for treatment have been utilized to achieve compliance with discharges under a National Pollutant Discharge Elimination System Permit. Wastewater streams treated through constructed wetlands have included stormwater runoff, acid mine drainage, landfill leachate, and sanitary sewage. Representative constructed wetlands projects include:

- Sanitary Wastewater Treatment, Geneva Hills Camp, Lancaster, Ohio
- Sanitary Wastewater Treatment, Camp Otterbein, Logan, Ohio
- Stormwater Treatment, Honda of America, Marysville, Ohio
- Leachate Treatment System, Coventry Road Landfill, Lancaster, Ohio
- Acid Mine Seep Treatment, Saginaw Mining Company, St. Clairsville, Ohio
- HRA Wetlands, Honda of America, Marysville, Ohio

Additional wetlands have been designed for the wildlife habitat restoration, parkland creation, or mitigation. Representative projects for these wetlands include:

- Darby Dam Farms Wetland Restoration, Franklin County Metro Parks, Battelle-Darby Creek Metro Parks, Franklin County, Ohio
- Grange Insurance Audubon Center, Demonstration Wetland, Columbus, Ohio
- Ohio River Boat Access Facility, Ohio Department of Natural Resources, Racine, Ohio
- Vint Hill Mitigation Wetland Improvements, Vint Hill Farms Stations, Fauquier County, Ohio

Acid Mine Drainage/Coal Pile Leachate – Project engineer responsible for process development, detailed design, and permitting of various systems for the treatment and discharge of either acid mine drainage or coal pile runoff. Systems have incorporated both active treatment through chemical or mechanical oxidation of the iron and manganese contaminated water and passive treatment through constructed wetlands. Representative projects include:

- Acid Mine Seep Treatment, Saginaw Mining Company, St. Clairsville, Ohio
- Nelms Preparation Plant Treatment Improvements, AEP Ohio Coal, Cadiz, Ohio
- Mine Water Treatment System Improvements, CBM Ohio LLC, Cadiz, Ohio
- Coal Pile Runoff Treatment, Orrville Power Plant, Orrville, Ohio

Education

The Ohio State University – BS, Civil Engineering, 1990

Registration

Professional Engineer – Indiana, Ohio, West Virginia

Memberships, Affiliations and Honors

Water Environment Federation

Training

Colorado State University – Activated Sludge Process Control Short Course, 1997

Jennifer L. Walker, PWS
Environmental Scientist/Biologist

Ms. Walker joined Burgess & Niple in 1997 as an Environmental Scientist in the Environmental Division. Her experience includes conducting Phase I Environmental Site Assessments, wetland delineations and Clean Water Act permitting and mitigation, aquatic surveys, ecological investigations, NEPA coordination, and preparation of industrial response plans.

Relevant Background

Wetland Delineations – Environmental scientist involved in conducting wetland delineations according to the U.S. Army Corps of Engineers *Wetlands Delineation Manual* (1987) utilizing hydric soil characterization, hydrophytic vegetation, and evidence of wetland hydrology. Representative projects include:

- Cherokee Run Landfill Expansion Site, Bellefontaine, Ohio
- Crescent Resources, Inc., Westfields Corporate Center, Chantilly, Virginia
- Eagle Industrial Park, Geneva, Ohio
- Home Depot, various locations in Ohio, Kentucky, Indiana, West Virginia, and Illinois
- Honda of America Mfg., Marysville, Ohio
- Huntington Business Park, Huntington, West Virginia
- Former Lockbourne AFB Landfill, Lockbourne, Ohio
- Mahoning County (MAH-193-0.28) Bridge Replacement, ODOT District 4, Mahoning County, Ohio

Wetland Permitting and Mitigation – Environmental scientist responsible for obtaining appropriate Clean Water Act (CWA) Section 404/401 permits for a variety of clients, including preparation of conceptual mitigation plans.

- BDM Warren Steel Operations, LLC (formerly Severstal Warren Inc./WCI Steel, Inc.) Landfill, Warren, Ohio
- Cherokee Run Landfill, Bellefontaine, Ohio
- Columbiana County Engineer, CR 403 Relocation, Chambersburg, Ohio
- FRA-62D, Town Street Bridge Demolition & Rich Street Bridge Construction, ODOT District 6, Columbus, Ohio
- Former Lockbourne AFB Landfill, Lockbourne, Ohio
- Low Dam Safety & Recreational Modifications, Miami Conservancy District
- Sawmill Parkway Transportation Corridor, Delaware County Engineer, Delaware, Ohio
- Seneca County Engineer, SEN-CR33-3.66 Bridge Replacement, Tiffin, Ohio
- WAR-123-16.65, Culvert Reconstruction/Channel Realignment, ODOT District 8, Warren County, Ohio

Aquatic Surveys and Ecological Investigations – Environmental scientist involved in conducting a variety of ecological investigations including vegetation surveys, Qualitative Habitat Evaluation Index (QHEI) Assessments, Headwater Habitat Evaluation Index (HHEI) Assessments, and aquatic surveys of fish and macroinvertebrate communities, and endangered species habitat surveys. Representative projects include:

- Environmental Report, U.S. Department of Agriculture, Erie County Water District B Water Main Extension, Erie County, Ohio
- Level I Ecological Survey, Westlake Park-n-Ride Expansion, Greater Cleveland Regional Transit Authority and ODOT, Cuyahoga County, Ohio
- Level I Ecological Survey Report, Austin Pike Roadway Improvements, ODOT District 7 and Montgomery County Engineer, Montgomery County, Ohio
- U.S. Army Corps of Engineers, Greenup Locks and Dam, Greenup, Kentucky
- U.S. Army Corps of Engineers, Bluestone Dam Aquatic Habitat Survey, Hinton, West Virginia
- HHEI Stream Assessments, Port Columbus International Airport, Columbus, Ohio
- Owl Creek Farms, Biocriteria Assessment, Knox County, Ohio
- U.S. Army Corps of Engineers and Nature Conservancy, Ohio Chapter, Upper Big Darby Creek Habitat Survey, East Liberty, Ohio

- Amity Pike Bridge Replacement, Level 1 Ecological Survey Report for ODOT and Madison County Engineer, Madison County, Ohio
- Fish & Macroinvertebrate Assessment, Brandywine Creek, City of Hudson, Ohio
- Low-Head Dam Removal, Alum Creek, Franklin County, Ohio

Education

Ohio University – MS, Environmental Science, 1997
Ohio Northern University – BS, Biology, 1995

Registration

Professional Wetland Scientist (No. 1644)
Wetland Delineation – U.S. Army Corps

Training

River Morphology and Applications, Wildland Hydrology, Inc., Bridgeport, West Virginia, 2006
NEPA and the Indiana Transportation Decision Making Process, INDOT & Federal Highway Administration, Indianapolis, Indiana, 2006
Watershed Management Training, U.S. EPA, 2006
Applied Fluvial Geomorphology, Wildland Hydrology, Inc., Pagosa Springs, Colorado, 2005
Endangered Species Consultation in Ohio, U.S. Fish & Wildlife Service, Columbus, Ohio, 2005
Endangered Species Act: Section 7-Interagency Cooperation, U.S. Department of Transportation, Federal Highway Administration, Indianapolis, Indiana
Developing Environmentally Sensitive Sites, American Society of Civil Engineers, Columbus, Ohio, 2005
River Restoration, The Ohio State University, 2004
Habitat Evaluation Procedures, Virginia Tech, College of Natural Resources, Department of Fisheries and Wildlife Sciences, Falls Church, Virginia, 2002
Voluntary Action Program Biocriteria Training Course – Ohio Environmental Protection Agency, 1997, 1998
40-hour Health and Safety Training Course for Hazardous Waste Operations
Basic Wetland Delineation – Wetland Training Institute, Memphis, Tennessee

Memberships, Affiliations and Honors

Society of Wetland Scientists
Nature Conservancy

Certifications

Ecological Survey Prequalification, INDOT, 2006
Ecological and Waterway Permits Prequalification, ODOT, 2005
Biocriteria Assessment Certification for Fish and QHEI Evaluation – Voluntary Action Program, Ohio Environmental Protection Agency, 1997-2001
40-hour Health and Safety Certification
Wetland Delineation Certification – Wetland Training Institute
Certification based on U.S. Army Corps of Engineers *Wetlands Delineation Manual*, 1987

Publications

"Salinity Fluctuations in the Chesapeake Bay as a Major Factor Influencing the Distributional Patterns of Gastrotricha," Master's Thesis, Ohio University, Athens, Ohio, 1997.

Ryan L. VanZandt
Landfill Designer

Mr. VanZandt joined Burgess & Niple in 1990 as an Designer in the Environmental Division. He is skilled in working with AutoCAD Civil 3D, MicroStation, and Inroads software packages in the design and preparation of permit and construction drawings. Mr. VanZandt has been involved in the design and preparation of many landfill projects in his 20 years with the firm.

Relevant Background

Industrial and Residual Solid Waste Landfills – Designer responsible for preparation of Permit-to-Install drawings. Also responsible for volume estimates, processing aerial survey data, preparation of landfill phasing drawings, and landfill PTI alteration drawings. Representative projects include:

- Stonewall Cemetery Road Landfill, Lancaster, Ohio
- BFI of Ohio Inc., Rule 13 Application, Willow Creek Landfill, Atwater, Ohio
- ArcelorMittal Cleveland Inc., formerly LTV Steel Solid Waste Disposal Facility, Cleveland, Ohio
- WCI Steel, Inc. Residual Solid Waste Landfill, Warren, Ohio
- EOLM C&DD Landfill, Lima, Ohio
- AEP Services Corp., Landfill Drainage Design and Landfill Siting Studies, Columbus, Ohio
- The Goodyear Tire and Rubber Co., Rule 13 Application, Seiberling Street Landfill, Akron, Ohio
- Watson Road Landfill Remediation, Newark, Ohio
- Willow Creek Sanitary Landfill, Leachate Collection System, Atwater, Ohio

Education

Northeast Career Center – Certificate, 1990

Brent R. Smith, LPG, CPG
Project Geologist

Mr. Smith joined Burgess & Niple in 1999 as a geologist in the Environmental Division. He has completed tasks for Phase II Environmental Site Assessments, groundwater monitoring, statistical evaluations of municipal and industrial waste landfill groundwater data, hydrogeologic investigations at solid waste sites, investigations and groundwater monitoring programs for RCRA hazardous waste sites, and vapor sampling and analyses. He currently manages groundwater monitoring projects and/or statistical projects for various clients under applicable RCRA, landfill, and VAP regulations.

Relevant Background

Statistical Evaluations of Groundwater Quality Data at Industrial and Municipal Solid Waste Disposal Facilities – Staff geologist responsible for statistical evaluations of groundwater quality data, report production, and some project management. Representative projects include:

- ArcelorMittal Cleveland LLC ISWDFs (formerly ISG Cleveland Inc./LTV Steel Company), Cleveland, Ohio
- Athens Hocking Reclamation Center, Nelsonville, Ohio
- BDM Warren Steel Operations, LLC (formerly Severstal Warren Inc./WCI Steel, Inc.) Landfill, Warren, Ohio
- Boyas Excavating, Inc. Nicky Boulevard Landfill, Cleveland, Ohio
- Central Waste, Inc., Alliance, Ohio
- Curve Road Landfill, Delaware, Ohio
- Fayette County Landfill No. 3, Fayette County, Ohio
- General Mills Wastewater Treatment Facility, Wellston, Ohio.
- Oxford Township Landfill, Delaware County, Ohio
- Pike Sanitation, Waverly, Ohio
- Sunny Farms (formerly San-Lan) Landfill, Seneca County, Ohio
- Village of McArthur Wastewater Treatment Facility, McArthur, Ohio

Industrial and Solid Waste Disposal Facility Groundwater Monitoring – Staff geologist responsible for groundwater monitoring projects for detection and assessment monitoring. Field directed the installation of monitoring wells, collected soil and groundwater samples for laboratory analysis, conducted slug tests, reviewed analytical data, and prepared monitoring reports and plans. Representative projects include:

- ArcelorMittal Cleveland LLC ISWDFs (formerly ISG Cleveland Inc./LTV Steel Company), Cleveland, Ohio
- BDM Warren Steel Operations, LLC (formerly Severstal Warren Inc./WCI Steel, Inc.) Landfill, Warren, Ohio
- Boyas Excavating, Inc. Nicky Boulevard Landfill, Cleveland, Ohio
- Central Waste, Inc., Alliance, Ohio
- Cherokee Run Landfill, Bellefontaine, Ohio
- EOLM C&DD Landfill, Lima, Ohio
- Pike Sanitation, Waverly, Ohio
- Summit & McCoy C&DD Landfill, Barberton, Ohio
- Sunny Farms (formerly San-Lan) Landfill, Seneca County, Ohio

Resource Conservation and Recovery Act (RCRA) Closure Projects – Staff geologist responsible for field investigations, report generation, project planning, and remedial design for RCRA regulated sites. Field directed installation of monitoring wells and soils borings, collected soil and groundwater samples, reviewed analytical data, prepared monitoring reports and annual reports, and prepared groundwater monitoring and closure plans.

- Service Garage, City of Athens, Ohio
- ArcelorMittal Cleveland West Properties, Inc., Former Cadence Product Unit Closure, Cleveland, Ohio
- ArcelorMittal Cleveland LLC, Former Degreaser Sludge Unit Closure and Post-Closure, Cleveland, Ohio

Hydrogeologic Investigations – Staff geologist responsible for conducting hydrogeologic investigations for various sites. Field directed the installation of monitoring wells, collected soil samples for geotechnical analysis, and prepared associated reports. Representative projects include:

- Cherokee Run Landfill, Bellefontaine, Ohio
- EOLM C&DD Landfill, Lima, Ohio
- Martinsville/Midland Sewer Committee, Clinton County, Ohio

Vapor Monitoring – Staff geologist responsible for field sampling for mercury and organic vapors, project coordination, data analysis, and report preparation. Representative projects include:

- Columbus Lace, Columbus, Ohio
- Eveready Battery Company, Cleveland, Ohio
- Eveready Battery Company, Fremont, Ohio

Education

The Ohio State University – BS, Geology, 1998

Registration

Licensed Professional Geologist – Indiana
Certified Professional Geologist – American Institute of Professional Geologists (AIPG)

Training

SafeX, 8-hour Supervisor Training Course for Hazardous Waste Operations, Annually
Princeton Groundwater, Remediation Course, October 2005
Colorado School of Mines, Applied Environmental Statistics Course, August 2002
Princeton Groundwater, Groundwater Pollution and Hydrology Course, March 2000
Emilcott Associates, Health and Safety 40-hour Training Course for Hazardous Waste Operations, March 1999

Memberships and Affiliations

American Institute of Professional Geologists (AIPG)

John C. Moore
Construction Services

Mr. Moore joined Burgess & Niple in 1991 as a construction resident project representative and has significant experience in construction related industries. He is responsible for construction observations and other construction related services. In addition, Mr. Moore provides environmental support to complement Burgess & Niple's environmental consulting division.

Relevant Background

Water Storage, Distribution, and Treatment – Resident project representative on numerous projects involving installation of water main pipe, vaults, booster stations and additional facilities. Also provides services such as observance of construction, adjustments of water main location, extension layout and compliance with plans and specifications. Representative water storage and distribution projects include:

- City of Belpre, Ohio
- Little Hocking Water Association, Inc., Washington County, Ohio
- Lubeck Public Service District, Washington, West Virginia
- Maysville Regional Water District, Zanesville, Ohio
- Morgan-Meigsville Rural Water District and Morgan County Commission, Morgan County, Ohio
- Newport Water & Sewer District, Washington County, Ohio
- Parkersburg Utility Board, Parkersburg, West Virginia
- Tuppers Plains-Chester Water District, Meigs County, Ohio
- Vinton County Water Company, Vinton County, Ohio
- City of Wheeling, West Virginia

Wastewater Collection – Resident project representative for installation of sanitary sewer pipe, force main, wye branches, manholes, pump stations, CIPP sewer lining, and manhole rehabilitation. Services also include observance of construction, grade adjustments, and compliance with plan specifications. Representative projects include:

- City of Belpre, Ohio
- City of Benwood, West Virginia
- Village of Beverly, Ohio
- Lubeck Public Service District, Washington, West Virginia
- Village of Matamoras, New Matamoras, Ohio
- McConnelsville Sanitary Sewer, McConnelsville, Ohio
- Parkersburg Utility Board, Parkersburg, West Virginia
- Parkview, West Virginia
- City of Philippi, West Virginia
- Town of Reedy, West Virginia
- The Sanitary Board of the City of Charleston, West Virginia

Transportation – Resident project representative during construction for several projects involving roadway construction, track and drainage repairs, retaining walls, under drainage systems, and underground electrical and ramp lighting; Logging core borings. Representative projects include:

- Cass Scenic Railroad, Pocahontas County, West Virginia
- Robin Hood Road Bridge, Wood County, West Virginia
- Wood County Airport Authority, West Virginia

Environmental – Mr. Moore has served as the staff geologist on several leaking underground storage tank and brownfield sites. Mr. Moore's diverse project coordination and field investigative skills have been essential to working with constrained budgets and schedules. Project services completed consist of on-site collection and logging of samples, monitoring pH of samples, completed chain of custody forms, intrusive contaminant investigations using hollow-stem auger and rotosonic drilling methods, installation of soil vapor and

groundwater monitor wells, soil and groundwater sampling, lithology interpretation, waste profiling, and disposal. Mr. Moore's investigative field skills are further defined with the preparation of exploratory boring and monitor well completion logs, data tabulation and interpretation, and CADD services. Representative projects include:

- CEMEX USA, Avondale, Arizona
- CEMEX USA, Surprise, Arizona
- DJM Construction, Inc.; Phoenix, Arizona
- Fairmont Box Factory, Fairmont, West Virginia
- Giant Industries, Inc., Safford and Phoenix, Arizona
- Triad Trucking, Inc., Phoenix, Arizona
- WV Army National Guard Toxicity Reduction Evaluation, Ohio & Wood Counties, West Virginia

Education

Mount Union College – BS, Geology, 1987

Certification

Transportation Engineering Technologist No. 2299, Fairmont State Transportation Technician/Transportation Board of Advisors, June 2008
NICET Certification No. 116654, National Institute for Certification in Engineering Technologies, June 2006

5.0 CLIENT TESTIMONIALS

Burgess & Niple requested feedback from a couple of our existing clients to provide us with their view of the relationship we have established over time. The following presents their replies.

Mr. Steve Luebbe, PE, PS
Fayette County Engineer
Project – Fayette County Landfill No. 3, Washington Court House, Ohio
1999-Present

> "Hey Mike, this is Steve Luebbe, Fayette County Engineer, calling in regards to your guys' past work at our landfill. You know you've been working there since 1999 when we terminated our agreement with [previous consultant] and the relationship with them to operate the landfill. When I took over in '99, and before B&N was hired, we had some significant problems over there with groundwater/leachate, well groundwater for one, some problems with it, and some leachate outbreaks. When we brought you guys in, we hired you over some other consultants, we put some bids out…some requests, and we liked the qualifications you guys had and went to work with you guys. I know you reviewed our program, or the program that [previous consultant] had started, and we made a lot of meetings with the (Ohio) EPA, determined that, to correct our problems, when [previous consultant] proposed, I guess a pump and treat system, you guys came back in and said, "No, we can reevaluate things on paper. We can redo some of the programs, the groundwater monitoring, the assessment. We can redo those and we can make some changes to the cap. We can do basically maintenance to correct the problem." And the same with the groundwater/ leachate problem, that we came in, and you suggested we just fix that with a clay cap and doing some work to the embankment. Everything you guys have done so far has worked. We couldn't be happier. We got away from the big up-front costs, the ongoing maintenance and operation of a pump and treat system. And basically, we do maintenance now, as you know, and so far, it's worked. We saved all that money, and also I know that our groundwater elevations have dropped in the past years. All-in-all, we're happy. We think we went the right direction with you guys and with the landfill, that we're still going with the right direction, and I think the (Ohio) EPA would agree. So, I appreciate your efforts and your work thus far and I'm sure we'll be continuing that on in the future. Thanks Mike."

Mr. Tim Browning
Former Public Works Director (Retired)
City of Delaware, Ohio
Projects – Curve Road Landfill & Cherry Street Landfill
1991 to Present

"Yes Michael, this is Tim Browning with the City of Delaware, I'm the Public Works Director. I would like to make a few statements about our experience with your firm. As you know, our City has two closed municipal solid waste landfills, which B&N has provided consulting services for the City a majority of the time during my 25 years of employment here. B&N currently conducts our groundwater, explosive gas monitoring, our leachate monitoring for these landfills. The monitoring has had a positive impact to the surrounding groundwater and the environmental areas to prevent off-property threats. Currently, B&N is assisting us with some offsite placement of some groundwater monitoring wells. B&N also, in the past, did a preliminary design work for our leachate collection system at the Curve Road Landfill. The leachate collection system currently in place has eliminated a lot of the (Ohio) EPA concerns with the leachate at that facility. They have also just been very helpful in negotiating with the EPA in the past and trying to find some happy median between both the City as well as the EPA with the standards. From my personal experience, I've had very successful endeavors with B&N on landfill management and landfill compliance to EPA standards. Thank you."

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