



**Public Building Commission of Chicago**  
Richard J. Daley Center, Room 200  
50 W. Washington Street  
Chicago, Illinois 60602  
[www.pbcchicago.com](http://www.pbcchicago.com)

**PROFESSIONAL SERVICES AGREEMENT**  
**ENVIRONMENTAL ENGINEERING SERVICES**  
**(PS2060G)**

**PUBLIC BUILDING COMMISSION OF CHICAGO**

**AND**

**NATURAL RESOURCE TECHNOLOGY**

**FOR**

**ENVIRONMENTAL ENGINEERING SERVICES (PS2060G)**

**Public Building Commission of Chicago**  
Richard J. Daley Center, Room 200  
50 W. Washington Street  
Chicago, Illinois 60602  
[www.pbcchicago.com](http://www.pbcchicago.com)

<b>FIRM NAME:</b>	Natural Resource Technology, Inc.
<b>CONTACT NAME:</b>	John M. Nardozzi, PE
<b>CONTACT TELEPHONE:</b>	773.796.4601
<b>CONTACT EMAIL:</b>	<a href="mailto:jnardozzi@naturalrt.com">jnardozzi@naturalrt.com</a>
<b>ADDRESS:</b>	300 South Wacker Drive Suite 1300 Chicago, IL 60606

**Mayor Rahm Emanuel**  
**Chairman**

Felicia S. Davis  
Executive Director

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**EXECUTION PAGE**  
**ENVIRONMENTAL ENGINEERING SERVICES- PS2060G**

**THIS AGREEMENT** effective as of January 1, 2016, but actually executed on the date witnessed, is entered into by and between the **Public Building Commission of Chicago**, a municipal corporation of the State of Illinois, having its principal office at Room 200, Richard J. Daley Center, 50 West Washington Street, Chicago, Illinois 60602, (the "**Commission**"), and

Natural Resource Technology, Inc. with offices at \_\_\_\_\_

300 South Wacker Drive, Suite 1300, Chicago, IL 60606 (the "**Consultant**").

Address City State Zip

**Recitals:**

**Whereas**, the Commission intends to undertake from time to time the acquisition, demolition, renovation, development, construction and/or improvement of buildings, facilities and other improvements ("Project") located in the City of Chicago ("City") at the request of various governmental and public agencies ("User Agency").

**WHEREAS**, the Commission requires certain professional services as described in Schedule B the Agreement (the "Services") contained herein, in connection with the Projects undertaken by the Commission for the use and benefit of a User Agency.

**WHEREAS**, the Consultant desires to be retained by the Commission to perform the Services and has represented to the Commission that the Consultant is qualified and competent, by education and training, and has the knowledge, skill, experience and other resources necessary to perform the Services required by the Agreement in accordance with terms and conditions of the Agreement.

**WHEREAS**, in reliance upon the Consultant's representations and Key Personnel as identified in Schedule E of this Agreement, the Commission has selected the Consultant to perform the Services on the terms and conditions set forth in this Agreement as modified from time to time by Task Order.

**NOW, THEREFORE**, the parties have executed this Agreement on the terms and conditions that follow:

EXECUTION PAGE  
ENVIRONMENTAL ENGINEERING SERVICES - PS2060G

PUBLIC BUILDING COMMISSION OF CHICAGO

Rahm Emanuel

Date: \_\_\_\_\_

Mayor Rahm Emmanuel  
Chairman

ATTEST:

Lori Ann Lypson  
Secretary

Date: 2/19/16

CONSULTANT: Natural Resource Technology, Inc.

John M. Nardozi  
President or Approved Signatory

Date: 2/2/2016

AFFIX CORPORATE  
SEAL, IF ANY, HERE

County of: Cook

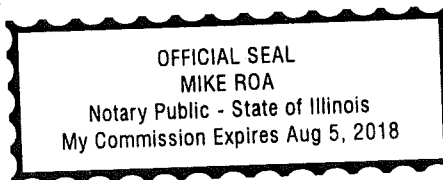
State of: Illinois

Subscribed and sworn to before me by John M. Nardozi and \_\_\_\_\_  
on behalf of Consultant this 2nd day of Feb, 2016.

Mike Roa  
Notary Public

My Commission expires: 8-5-2018

(SEAL OF NOTARY)



Approved as to form and legality:

Anne L. Fredel  
Neal & Leroy, LLC

Date: 2-5-16



## SCHEDULE A TERMS AND CONDITIONS

1. **Recitals.** The Recitals set forth on the Execution Page of this Agreement are hereby incorporated herein by reference.
2. **Definitions.** The herein words and phrases have the following meanings for purposes of this Agreement.
  - a. **Agreement** means this Professional Services Agreement for Specialty Consulting Services, including all schedules, exhibits or documents attached hereto and/or incorporated by reference herein, and all amendments, supplements or Task Orders made in accordance with the terms hereof.
  - b. **Commission** means the Public Building Commission of Chicago, a municipal corporation organized under the Public Building Commission Act of the State of Illinois, as amended, or its duly authorized officers or employees.
  - c. **Consultant** means the company or other entity identified in this Agreement, and such successors or assigns, if any, as may be authorized to perform the Services required by the terms and conditions of this Agreement.
  - d. **CW System** or **CW** means the on-line collaboration workspace and document management system established and maintained by the Commission for electronic submission and receipt of documents and reports.
  - e. **Deliverables** means the documents, in any format (electronic or hard copy) requested by the Commission, including without limitation drawings, plans, reports, forms, recommendations, and analyses, that the Consultant is required under this Agreement to provide to the Commission.
  - f. **Equipment** means the articles or physical resources, tangible or intangible, including but not limited to, hardware, firmware or software enabling the Commission to implement the Projects and Consultant to perform the Services under this Agreement.
  - g. **Executive Director** means the person employed by the Commission as its Executive Director or the duly authorized representative thereof.
  - h. **Key Personnel** means those job titles and persons as identified in such positions in the Request for Qualifications response.
  - i. **Services** means collectively, the duties, responsibilities and tasks that are necessary in order for the Consultant to provide the Scope of Services required by the Commission under Section IV of the Request for Qualifications response and the assigned Task Order.
  - j. **Sub-consultant or Subcontractor** means a partnership, firm, corporation or entity other than the Consultant that furnishes labor, materials and/or equipment to the Consultant related to the performance of the Services and/or improvement of the Project.
  - k. **Task Order** means a document issued by the Commission to the Consultant pursuant to this Agreement that authorizes in writing Services and/or Deliverables to be provided by the Consultant, together with any applicable exhibits or schedules, a timetable for any Deliverables and the applicable fees.
3. **Incorporation of Documents.** The Resolution passed by the Board of Commissioners of the Commission on October 1, 2009, concerning utilization of minority business enterprises ("MBE") and women business enterprises ("WBE"), as the same may be amended from time to time, is hereby incorporated in and made a part of this Agreement. By executing this Agreement, Consultant acknowledges and agrees that Consultant is familiar with the contents of such Resolution and will comply fully with all applicable portions thereof in performing the Services.
4. **Engagement and Standards for Performing Services.**
  - a. **Engagement.** The Commission hereby engages the Consultant, and the Consultant hereby accepts such engagement, to provide the Services described in this Agreement, as the same may be amended, in writing, from time to time by mutual agreement of the Commission and the Consultant.
  - b. **Performance Standard.** The Consultant represents and agrees that the Services performed under this Agreement will proceed with efficiency, promptness and diligence and will be executed in a competent and thorough manner, in accordance with reasonable professional standards in the field consistent with that degree of skill and care ordinarily exercised by practicing consulting professionals performing services of a scope, purpose, and magnitude comparable with the Services to be provided under this Agreement and the assigned Task Order. If in the course of performing the

Services, Consultant identifies any condition, situation, issue or problem that may impact the performance of the Services or the Project, Consultant shall promptly provide notice to the Commission.

- c. **Consultant's Personnel.** The Consultant agrees that it will assign at all times during the term of the Agreement the number of experienced, appropriately trained employees necessary for the Consultant to perform the Services under this Agreement and the assigned Task Order in the manner required by this Agreement. Consultant must not reassign or replace Key Personnel without the written consent of the Commission. Consultant must ensure that all Services and Deliverables that require the exercise of professional skills or judgment are accomplished by professionals qualified and competent in the applicable discipline and appropriately licensed, if required by law. Consultant must maintain current copies of any such licenses and provide such copies, upon request, to the Commission. Consultant remains responsible for the professional and technical accuracy of all Services and Deliverables furnished, whether by the Consultant or others on its behalf. Consultant must, at all times, use its best efforts on behalf of the Commission to assure timely and satisfactory rendering and completion of the Services. Consultant must perform all Services in accordance with the terms and conditions of this Agreement, to the reasonable satisfaction of the Commission. All Deliverables must be prepared in a format satisfactory to the Commission and delivered in a timely manner consistent with the requirements of this Agreement and the assigned Task Order.
- d. **Independent Contractor.** In performing the Services under this Agreement, Consultant shall at all times be an independent contractor, and does not and must not act or represent itself as an agent or employee of the Commission or the User Agency. As an independent contractor, Consultant is solely and wholly responsible for determining the means and methods for performing the Services. The Agreement will not be construed as an agreement of partnership, joint venture, or agency.
- e. **Limitations on Sub-Consultants and Subcontractors.** Consultant must not use any business or individual who is disqualified by the Commission or debarred under any other governmental agency's procedures to provide the Services under the Agreement.
- f. **Failure to Meet Performance Standard.** If the Consultant fails to comply with its obligations under the standards of the Agreement, the Consultant must perform again, at its own expense, all Services required to be re-performed as a direct or indirect result of that failure. Any review, approval, acceptance or payment for any of the Services by the Commission does not relieve Consultant of its responsibility to render the Services and Deliverables with the professional skill and care and technical accuracy required by the Agreement. This provision in no way limits the Commission's rights against the Consultant, either under the Agreement, at law or in equity.
- g. **Changes to the Services.** The Commission may from time to time, request changes to the terms of the Agreement, Task Order or the Services of the Consultant to be performed hereunder. Such changes, including any increase or decrease in the amount of compensation and revisions to the duration of the Services or timetable for Deliverables, which are mutually agreed upon by and between the Commission and Consultant, shall be incorporated in a written amendment to this Agreement or the Task Order. The Commission shall not be liable for any changes absent such written amendment.
- 5. **Representations and Warranties.** Consultant represents, warrants and covenants that (a) it will comply with all laws and regulations in performing the Services; (b) it will perform the Services in accordance with the terms and conditions of the Agreement in a professional and workmanlike manner consistent with best industry standards and practice; (c) it possesses all right, power and authority to enter into this Agreement; (d) all Deliverables shall be original works of Consultant or that Consultant shall have all rights necessary to provide such Deliverables; and (e) neither the Services, Deliverables or any other materials or any part thereof, provided to the Commission shall infringe any patent, copyright, trademark, trade secret or other proprietary right of a third party. If any Services performed by Consultant fail to meet the above warranties, then without limiting any other remedies at law or in equity, Consultant shall promptly correct or re-perform any such affected Services at no cost to the Commission. Further, Consultant acknowledges that the Commission has entered or will enter into agreements with third party vendors to provide a third party data hosting site and a disaster recovery site. Consultant agrees to abide by all rules, regulations and other requirements prescribed by such third party vendors in order to gain access to the Equipment and perform the Services required by this Agreement.
- 6. **Duties and Obligations of Consultant.**
  - a. **Nondiscrimination.** The Consultant agrees that in performing this Agreement it shall not discriminate against any worker, employee or applicant for employment, or any member of the public, because of race, creed, gender, color, national origin or disability, or otherwise commit an unfair labor practice. Attention is called to applicable provisions of the Civil Rights Act of 1964, 88-352, July 2, 1964, 78 Stat. 241 et. Seq. the Americans with Disabilities Act of 1990, 42

U.S.C. 12010 et. Seq., the Age Discrimination Act, 43 U.S.C. Sec. 6101-6106 (1981); Illinois Human Rights Act 775 ILCS 5/1-101 et. Seq. and the Public Works Employment Discrimination Act 775 ILCS 10/0.0 1 through 10/20, the Chicago Human Rights Ordinance, Chapter 2-160, Section 2-160-010 et seq. of the Municipal Code (1990), as amended, and a Resolution passed by the Board of Commissioners of the Public Building Commission of Chicago on October 1, 2009, concerning participation of Minority Business Enterprises and Women Business Enterprises on contracts awarded by the Commission. The Consultant will furnish such reports and information as requested by the Commission or the Illinois Department of Human Relations or any other administrative or governmental entity overseeing the enforcement, administration or compliance with the above referenced laws and regulations.

- b. **Employment Procedures, Preferences and Compliances.** Salaries of employees of Consultant performing work under this Agreement shall be paid unconditionally and not less often than once a month without deduction or rebate on any account except only such payroll deductions as are mandatory or permitted by the applicable law or regulations. Attention is called to [Illinois Compiled Statutes, 1992 relating to Wages and Hours including 820 ILCS 130/0.01 through 130/12 thereof (Prevailing Wage Act), 30 ILCS 570/1 through 570/7 (Employment of Illinois Workers on Public Works Act) and 30 ILCS 560/0.01 through 560/7 (Public Works Preference Act).] The Consultant shall comply with all applicable "Anti-Kickback" laws and regulations, including the "Anti-Kickback" Act of June 13, 1934 (48 Stat. 948; 62 Stat. 740; 63 Stat. 108; 18 U.S.C. § 874; 40 U.S.C. § 276c) and the Illinois Criminal Code of 1961 720 ILCS 5/33E-1 et. seq. If, in the performance of this Agreement, there is any direct or indirect kickback, the Commission shall withhold from the Consultant, out of payments due to it, an amount sufficient to pay employees underpaid the difference between the salaries required hereby to be paid and the salaries actually paid such employees for the total number of hours worked. The amounts withheld shall be disbursed by the Commission for and on account of the Consultant to the respective employees to whom they are due.
- c. **Ethics.** The Consultant has read and agrees to comply with all provisions of the Code of Ethics Resolution passed by the Commission on October 3, 2011, which is available on the Commission's website at [www.pbcchicago.com/pdf/RES\\_PBC\\_ecl\\_CodeofEthicsConsolApril%202013\\_20130405.pdf](http://www.pbcchicago.com/pdf/RES_PBC_ecl_CodeofEthicsConsolApril%202013_20130405.pdf) and is incorporated into this Agreement by reference. Any contract negotiated, entered into, or performed in violation of any of the provisions of this Section will be voidable by the Commission.
- d. **Inspector General.** The Consultant and its subconsultants, including all officers, directors, agents, partners and employees of such entities shall cooperate with the Inspector General of the Public Building Commission in any investigation or hearing undertaken pursuant to Public Building Commission Resolution 7576 adopted by the Board of Commissioners of the Public Building Commission of Chicago on October 1, 2010. On projects funded by the City of Chicago, the Consultant and its subconsultants, including all officers, directors, agents, partners and employees of any such entities, shall cooperate with the Inspector General of the City in any investigation or hearing undertaken pursuant to Chapter 2-56 of the Chicago Municipal Code. Each Consultant understands and will abide by all provisions of Chapter 2-56 of the Municipal Code of Chicago. All Consultants will inform their respective subconsultants of this provision and require compliance herewith. Consultant shall cooperate and comply with the Inspector General of the User Agency in any investigation or hearing undertaken pursuant to the enabling ordinance or resolution pertaining to the authority of such Inspector General that has been promulgated by such User Agency.
- e. **Delays.** The Consultant agrees that no charges for damages or claims for damages shall be asserted by it against the Commission for any delays or hindrances from any cause whatsoever during the progress of any portion of the Services. Such delays or hindrances, if any, shall be compensated for by an extension of time to complete the Services, for such reasonable period as may be mutually agreed upon between the parties, it being understood, however, that the agreement of the Commission to allow the Consultant to complete the Services or any part of them after the time provided for the completion thereof herein shall in no way operate as a waiver on the part of the Commission of any of its rights hereunder.
- f. **Records.** The Consultant shall maintain accurate and complete records of expenditures, costs and time incurred by Consultant in connection with the Project and the Services. Such records shall be maintained in accordance with recognized commercial accounting practices. The Commission may examine such records at Consultant's offices upon reasonable notice during normal business hours. Consultant shall retain all such records for a period of not less than five calendar years after the termination of this Agreement.
- g. **CW System.** The Commission may require the Consultant to use the Commission's electronic document management system in performing the Services and the assigned Task Order. At the direction of the Commission, the Consultant must follow the CW procedures and submit progress reports and other Deliverables through the CW System. The Consultant must attend courses and receive training on the CW System provided by or on behalf of the Commission.

Any costs incurred by Consultant as a result of the attendance of Consultant's personnel at CW System courses are not compensable by the Commission.

- h. **Time of Essence.** The Consultant acknowledges and agrees that time is of the essence in the performance of this Agreement and that timely completion of the Services is vital to the completion of the Project by the Commission. Consultant agrees to use its best efforts to expedite performance of the Services and the assigned Task Order and performance of all other obligations of the Consultant under this Agreement and any other agreement entered into by the Commission which are managed or administered by the Consultant as a result of the Consultant's engagement hereunder.
- i. **Compliance with Laws.** In performing its engagement under this Agreement, the Consultant shall comply with all applicable federal, state and local laws, rules and regulations including but not limited to, those referenced in subparagraphs (a) and (b) above.
- j. **Progress Meetings.** Meetings to discuss the progress of the Project and/or to review the performance of the Consultant may be scheduled upon the Commission's request, at mutually agreeable times and locations, and the Consultant agrees to cause such meetings to be attended by appropriate personnel of the Consultant engaged in performing or knowledgeable of the Services.

## **7. Term.**

- a. The term of this Agreement is two (2) years with two (2) successive one (1)-year renewal options at the sole discretion of the Commission. This agreement may be terminated by the Commission, with cause, upon thirty (30) days notice to the Consultant and, provided further, that this agreement may be terminated at any time during the term by mutual agreement of the parties.
- b. The Commission shall have the right, at any time, to terminate the term of this Agreement, with or without cause, by written notice given to the Consultant at least thirty (30) days prior to the effective date of termination. In addition, the Commission shall have the right, at any time and from time to time, with or without cause, to suspend the performance of the Consultant hereunder with respect to all or any part of the Services, by written notice given to the Consultant at least five (5) days prior to the effective date of suspension. Termination or suspension of this Agreement shall not relieve the Consultant from liability for the performance of any obligation of the Consultant under this Agreement performed or to have been performed by the Consultant on or before the effective date of termination or suspension. Provided the Consultant is not in default under this Agreement at the time of termination or suspension, the Commission agrees to pay to the Consultant, in accordance with the terms of this Agreement, all compensation and reimbursements due to the Consultant for periods up to the effective date of termination or suspension. In no event shall the Commission be liable to the Consultant for any loss, cost or damage which the Consultant or any other party may sustain by reason of the Commission terminating or suspending this Agreement as provided herein; provided, however, that the Commission may, in its sole discretion, reimburse the Consultant for actual expenses approved by the Commission.
- c. If the Project, in whole or substantial part, is stopped for a period longer than thirty (30) days under an order of any court or other governmental authority having jurisdiction of the Project, or as a result of an act of government, such as a declaration of national emergency making materials unavailable, through no act or fault of the Consultant, or if the Commission fails to make any payment or perform any other obligation hereunder, the Consultant shall have the right to terminate this Agreement, by written notice given to the Commission at least seven (7) days prior to the effective date of termination, and shall have the right to recover from the Commission all compensation and reimbursements due to the Consultant for periods up to the effective date of termination.

- 8. **Compensation of Consultant; Submission of Invoices through CW.** The total amount of compensation to be paid by the Commission during the term of this Agreement shall not exceed the sum of \$1,500,000.00. The Commission shall compensate the Consultant for the Services in the manner set forth in Schedule A of this Agreement, or as modified by written authorization. The Consultant shall submit all invoices, no more frequently than once every thirty (30) days, in electronic format using the CW System. All submitted invoices shall include a cover page as provided by the Commission and the assigned Task Order number. Failure to submit invoices through CW will result in delayed or non-payment to the Consultant.

9. **Rights and Obligations of Commission.** In connection with the administration of the Project by the Commission and the performance of this Agreement by the Consultant, the Commission shall have the following rights and obligations, in addition to those provided elsewhere in this Agreement:
- a. **Information.** The Commission shall provide the Consultant all reasonably requested information concerning the Commission's requirements for the Project and the Services.
  - b. **Review of Documents.** Subject to the provisions of subparagraph 5(d) above, the Commission agrees to make a reasonable effort to examine documents submitted by the Consultant and render decisions pertaining thereto with reasonable promptness.
  - c. **Site Data.** To the extent the Commission determines to be necessary for the Consultant to perform the Services and the assigned Task Order, the Commission may furnish to the Consultant information concerning the nature of the Project, existing conditions and other data or reports pertaining to the site and the proposed development thereof.
  - d. **Tests and Reports.** The Commission may also furnish structural, civil, chemical, mechanical, soil mechanical and/or other tests and reports if determined by the Commission in its sole discretion to be necessary in order for the Consultant to perform the Services.
  - e. **Legal, Auditing and other Services.** The Commission shall arrange and pay for such legal, auditing, insurance counseling and other services as the Commission, in its sole discretion, may determine to be required for the Consultant to perform the Services. Such payments shall not include legal or auditing expenses arising out of or relating to any errors or omissions, or claimed errors or omissions, of Consultant.
  - f. **Designated Representatives.** The Commission may designate, at its sole discretion, one or more representatives authorized to act in its behalf.
  - g. **Ownership of Documents.** All documents, data, studies and reports prepared by the Consultant or any party engaged by the Consultant, pertaining to the Services shall be the property of the Commission, including copyrights.
  - h. **Audits.** The Commission shall have the right to audit the books and records of the Consultant on all subjects relating to the Services.
10. **Indemnification of Commission and Third Party Vendors.** The Consultant hereby agrees to indemnify, keep and save harmless the Commission and the User Agency and their respective commissioners, board members, officers, agents, officials and employees and any third party hosting site or disaster recovery site from and against all claims, demands, suits, losses, costs and expenses, including but not limited to, the fees and expenses of attorneys, that may arise out of or be based on any injury to persons or property that is or is claimed to be the result of an error, omission or act of the Consultant or any person employed by the Consultant to the maximum extent permitted by applicable law.
11. **Insurance to be Maintained by Consultant.** The Consultant shall purchase and maintain at all times during the performance of Services hereunder, for the benefit of the Commission, the User Agency and the Consultant, insurance coverage as set forth in ATTACHMENT E.
12. **Default.**
- a. **Events of Default.** Any one or more of the following occurrences shall constitute an Event of Default under this Agreement:
    - i. Failure or refusal on the part of the Consultant duly to observe or perform any obligation or Agreement on the part of the Consultant contained in this Agreement, which failure or refusal continues for a period of ten (10) days (or such longer period as the Commission, in its sole discretion, may determine if such failure is not capable of being cured within such ten (10) day period) after the date on which written notice thereof shall have been given to the Consultant by the Commission;
    - ii. Failure of Consultant to perform the Services to the standard of performance set forth in this Agreement;
    - iii. Any representation or warranty of the Consultant set forth herein or otherwise delivered pursuant to this Agreement shall have been false in any material respect when so made or furnished;
    - iv. The Consultant becomes insolvent or ceases doing business as a going concern, or makes an assignment for the benefit of creditors, or generally fails to pay, or admits in writing its inability to pay, its debts as they become due,

or files a voluntary petition in bankruptcy, or is adjudicated a bankrupt or an insolvent, or files a petition seeking for itself any reorganization, arrangement, composition, readjustment, liquidation, dissolution, or similar arrangement under any present or future statute, law or regulation relating to bankruptcy or insolvency, or files an answer admitting the material allegations of a petition filed against it in any such proceeding, or applies for, consents to or acquiesces in the appointment of a trustee, receiver, liquidator or other custodian of it or of all or any substantial part of its assets or properties, or if it or its principals shall take any action in furtherance of any of the foregoing; or

- v. There shall be commenced any proceeding against the Consultant seeking reorganization, arrangement, readjustment, liquidation, dissolution or similar relief under any present or future statute, law or regulation relating to bankruptcy which is not vacated, stayed, discharged, bonded or dismissed within sixty (60) days thereof, or there shall be appointed, without the Consultant's consent or acquiescence, any trustee, receiver, liquidator or other custodian of Custodian or of all or any substantial part of the Consultant's assets and properties, and such appointment shall not have been vacated, stayed, discharged, bonded or otherwise dismissed within sixty (60) days thereof.
  - b. **Remedies.** If an Event of Default shall occur and be continuing, then the Commission may exercise any right, power or remedy permitted to it by law or in equity and shall have, in particular, without limiting the generality of the foregoing, the right to terminate this Agreement upon written notice to the Consultant, in which event the Commission shall have no further obligations hereunder or liability to the Consultant except as to payment for Services actually received and accepted by the Commission through the effective date of termination. No course of dealing on the part of the Commission or delay or failure on the part of the Commission to exercise any right shall operate as a waiver of such right or otherwise prejudice the Commission's rights, powers or remedies.
  - c. **Remedies not Exclusive.** No right or remedy herein conferred upon or reserved to the Commission is exclusive of any right or remedy herein or by law or equity provided or permitted, but each shall be cumulative of every other right or remedy given hereunder or now or hereafter existing at law or in equity or by statute or otherwise, and may be enforced concurrently therewith or from time to time.
13. **Confidentiality.** All of the reports, information, or data prepared or assembled by the Consultant under this Agreement are confidential, and the Consultant agrees that such reports, information or data shall not be made available to any party without the prior written approval of the Commission. In addition, the Consultant shall not, without the prior written consent of the Commission, prepare or distribute any news releases, articles, brochures, advertisements or other materials concerning this Agreement, the Project, the Services or any assigned Task Order. Consultant acknowledges that it is entrusted with or has access to valuable and confidential information and records of the Commission and User Agency. Consultant must at all times act in the best interests of the Commission and User Agency consistent with the professional obligations assumed by Consultant in entering into this Agreement. Consultant promises to cooperate with the officials, employees and agents of the Commission and User Agency in furthering the Commission's and User Agency's interests.
14. **Assignment.** The Consultant acknowledges that the Commission is induced to enter into this Agreement by the personal qualifications of the principals, staff and employees of the Consultant and agrees, therefore, that neither this Agreement nor any right or obligation hereunder may be assigned by the Consultant, in whole or in part, without the prior written approval of the Commission. The Commission expressly reserves the right to assign or otherwise transfer all or any part of its interests hereunder without the consent or approval of the Consultant.
15. **Personnel.** The Consultant further acknowledges that the Consultant has represented to the Commission the availability of certain members of the Consultant's staff who will be assigned to the Project, and agrees, therefore, that in the event of the unavailability of such members, the Consultant shall so notify the Commission in writing, and, upon the approval of the Executive Director, shall assign other qualified members of the Consultant's staff, to the Project.]
16. **Relationship of Parties.** The relationship of the Consultant to the Commission hereunder is that of an independent contractor, and the Consultant, except to the extent expressly provided to the contrary in this Agreement, shall have no right or authority to make contracts or commitments for or on behalf of the Commission, to sign or endorse on behalf of the Commission any instruments of any nature or to enter into any obligation binding upon the Commission. This Agreement shall not be construed as an Agreement of partnership, joint venture, or agency.

**17. Miscellaneous.**

- a. **Counterparts.** This Agreement may be executed in any number of counterparts, any of which shall be deemed an original.
- b. **Entire Agreement.** This Agreement constitutes the entire understanding and Agreement between the parties hereto and supersedes any and all prior or contemporaneous oral or written representations or communications with respect to the subject matter hereof, all of which communications are merged herein. This Agreement shall not be modified, amended or in any way altered except by an instrument in writing signed by both of the parties hereto.
- c. **Force Majeure.** Neither of the parties shall be liable to the other for any delay or failure in performance hereunder due to causes which are beyond the control of the party unable to perform. If a force majeure occurs, the party delayed or unable to perform shall give prompt notice to the other party, and the Commission may, at any time during the continuation of the force majeure event, elect to suspend the performance of the Consultant under this Agreement for the duration of the force majeure. The Commission shall not be obligated to pay for Services to the extent and for the duration that performance thereof is delayed or prevented by force majeure, but, provided the Consultant is not in default of any obligation of the Consultant hereunder, the Commission shall pay to the Consultant, according to the terms hereof, all compensation and reimbursements due to the Consultant for periods up to the effective date of suspension.
- d. **Governing Law.** This Agreement has been negotiated and executed in the State of Illinois and shall be construed under and in accordance with the internal laws of the State of Illinois.
- e. **No Waiver.** The waiver by either party of any breach of this Agreement shall not constitute a waiver as to any succeeding breach.
- f. **Notices.** All notices required to be given hereunder shall be given in writing and shall be hand delivered or sent by United States certified or registered mail, postage prepaid, addressed to Commission and to the Consultant at their respective addresses set forth above. If given as herein provided, such notice shall be deemed to have been given on the date of delivery, if delivered by hand, and on the second business day after mailing, if given by mail. The Commission or the Consultant may, from time to time, change the address to which notices hereunder shall be sent by giving notice to the other party in the manner provided in this subparagraph.
- g. **Severability.** In the event that any provisions of this Agreement shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.
- h. **Successors and Assigns.** Except as otherwise provided herein, this Agreement shall be binding upon and inure to the benefit of each of the parties hereto and their respective successors and assigns.
- i. **Consultant's Authority.** Execution of this Agreement by the Consultant is authorized by a resolution of its Board of Directors, if a corporation, or similar governing document if a partnership or a joint venture, and the signatures(s) of each person signing on behalf of the Consultant have been made with complete and full authority to commit the Consultant to all terms and conditions of this Agreement, including each and every representation, certification and warranty contained or incorporated by reference in it.

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## **SCHEDULE B**

### **SCOPE OF SERVICES**

The Public Building Commission of Chicago requires the services of environmental consulting firms or teams to perform the following environmental work for the PBC – Categories A: Planning Phase Environmental Services, B: Design Phase Environmental Services, and C: Construction Phase Environmental services

- A. Planning Phase Environmental Services, including but not limited to:
  - 1. Phase I Environmental Site Assessments (ESAs)
  - 2. Phase II ESAs:
  - 3. Geophysical Surveys
    - a. Electromagnetic Surveys
    - b. Ground Penetrating Radar Surveys
  - 4. Test Pit Excavation and Site Restoration
  - 5. Environmental Grant Applications
  - 6. Environmental Remediation Budget Preparation
- B. Environmental Design Phase Services, including but not limited to:
  - 1. Phase II Environmental Assessments and Report Preparation
    - a. Soil Borings and analytical
    - b. Soil Sampling (Grab sampling and hand auger)
    - c. Additional Geophysical Surveys or Test Pitting Activities
  - 2. IEPA Site Remediation Program Enrollment, Site Investigations and Reporting
  - 3. Environmental Project Management during Project Design
  - 4. Bid Package Generation
    - a. Preparation of Drawings and Specifications
    - b. Design Meeting Participation
    - c. Bid Meeting Participation
    - d. Meeting Minutes
    - e. Bid Package Coordination
  - 5. Environmental Grant Administration
- C. Construction Phase Oversight Services, including but not limited to:
  - 1. Contract Administration
  - 2. Environmental Submittal Approvals
  - 3. Remediation and Soil Management Oversight
  - 4. Underground Storage Tank Management
  - 5. Field Meetings Related to Environmental Matters
  - 6. Soil Management and Remediation Report Generation
  - 7. IEPA Site Remediation Program Management
  - 8. Environmental Engineering and Remediation Tasks as requested by the PBC

#### *General Detailed Scope of Services – Environmental Consulting Services*

The Environmental Consultant (the "Consultant") will provide, on a Task Order basis, all Services required to complete Planning, Design and Construction Phase Environmental Services. The Consultant would enter into a Task Order with the PBC for services requested in a Request for Proposal issued by the PBC. The Consultant's Task Order would be executed in a Not to Exceed format, on a project by project basis. These services would be in connection with various public / capital projects the PBC manages. The Consultant must demonstrate the experience and capacity to conduct the following Scope of Services.

#### *Category A. Planning Phase Environmental Services*

- 1. Phase I Environmental Site Assessments (ESAs): Conduct Phase I Environmental Site



Assessments in accordance with the ASTM E 1527-13 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The federal rule recognizes the ASTM E 1527-13 standard as an acceptable guidance document for satisfying the "All Appropriate Inquires" (AAI).

2. Geophysical Surveys: Conduct geophysical survey using electromagnetic and/or ground penetrating radar and reports to explore and evaluate sites for the possible presence of former underground storage tanks, foundations or other subsurface structures.

3. Test Pit Excavation and Site Restoration: Conduct test-pit excavations using excavation equipment in locations of unexplained anomalies based on the results of the geophysical survey that may indicate the presence of underground storage tanks, foundations or other subsurface structures. Site Restoration services would include the backfilling test pit with moderate compaction effort and the restoration of sod, asphalt, concrete or other surface required to be repaired by the PBC.

4. Environmental Grant Applications: Prepare local, state or federal grant applications on behalf of the PBC for environmental funding to support PBC projects.

5. Environmental Budgets Preparation: Use information from Phase I ESA, Phase II ESA, and geophysical survey, and test pits as well as schematic designs to prepare preliminary budgets for environmental remediation.

#### *Category B. Environmental Design Phase Environmental Services*

1.a. and 1.b. Phase II Environmental Site Assessments: Conduct Phase II Environmental Site Assessments in accordance with ASTM E1903-11 *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process* to assess if soil and/or groundwater conditions have been adversely impacted. The data would be compared to 35 Ill. Adm. Code 742 Tiered Approach to Corrective Action Objectives (TACO).

1.c. See A.2. and A.3.

2. IEPA Site Remediation Program (SRP) Investigations and Reporting: Enrollment of PBC sites into the IEPA SRP on an as needed basis. The Consultant must be able to conduct the necessary work to secure a No Further Remediation (NFR) letter, which could include, but not limited to the following scope:

- a. Completion and submittal of the SRP DRM-1 and DRM-2 Forms to the IEPA on behalf of the PBC.
- b. Under the supervision of an Illinois Licensed Professional Engineer, preparation of a Focused or Comprehensive Site Investigation Report (F/CSIR) in accordance with 35 Ill. Adm. Code 740 that include creating environmental sampling work plans and conducting site investigations inclusive of sampling, analyses and field screening measurements to characterize the nature, concentration and extent of contaminants of concern based on Recognized Environmental Conditions (RECs) identified in the Phase I Environmental Site Assessment.
- c. Provide senior level technical review of reports for technical accuracy and completeness.
- d. Under the supervision of an Illinois licensed Professional Engineer, preparation of Remediation Objectives Report/Remedial Action Plan (ROR/RAP) in accordance with 35 Ill. Adm. Code 740 and 742. The RO

Report would detail the proposed remediation objectives for the remediation site. The RAP would describe the proposed remediation strategy and evaluate its ability and effectiveness to achieve the remediation objectives proposed for the remediation site.

- e. Provide senior level technical review of the ROR/RAP for technical accuracy and completeness.
- f. Generate detailed remediation plans for required IEPA submittals and as construction documents.
- g. Respond to IEPA comments to submitted documents as appropriate.
- h. Pay IEPA SRP Fees on behalf of PBC. These costs are reimbursed through subsequent Consultants invoices to PBC.
- i. Prepare the Remedial Action Completion Report (RACR). The RAC Report would document the completed remedial action and would demonstrate compliance with IEPA approved remediation objectives.
- j. Provide senior level technical review of the RACR for technical accuracy and completeness.
- k. Coordinate with IEPA to obtain a final No Further Remediation letter on behalf of the PBC. Assist the PBC in appropriately recording the No Further Remediation Letter.

3. Environmental Project Management during Project Design: The Consultant would work with the PBC PM and assigned consultants throughout the design of the proposed building and site to ensure that all design documents provide scope in accordance with applicable local, state and federal regulations.

The Consultant would provide a key point of contact to coordinate all environmental design work for each PBC project. The Consultant's point of contact would review and comprehend existing Phase I and Phase II Environmental Site Assessments, surveys and previous work performed, and would be able to provide a detailed understanding of current environmental site conditions to PBC PMs and PBC assigned consultants (i.e. Architectural Firm and project team.) This individual would also provide detailed summaries of existing environmental conditions of PBC or client owned properties. These properties undergo transformation from their existing site conditions to newly constructed public facilities with adjoining features, including parking lots, green space, fountains, plazas, sidewalks, playgrounds, etc.

#### 4. Bid Package Generation

- a. Preparation of Drawings and Specifications: The Consultant would work closely with PBC Design PM's and assigned consultants to identify environmental site conditions, incorporate cost effective site remediation strategies as part of the design (if necessary), develop soil management, and/or disposal strategies that comply with current regulations. The Consultant would need to be able to ensure that the earthwork/soil management plans and specifications provide a clear line of

responsibility and work procedures for both the Site Preparation and Building Construction Phases. The Consultant would also prepare or modify existing project specifications related to soil and water management that clearly identify the future site preparation and construction contractor obligations. These specifications should also ensure that the Contractor's environmental scope of work complies with the local, state and federal regulations and that their performances of such activities are a measure for payment.

The Consultant would ensure that the earthwork and soil management specifications and plans anticipate potential challenges such as discovery of footings, foundations, slabs, concrete, mixed fill, underground storage tanks, hydraulic lifts, etc., in order to minimize delays during construction. Using this information and the future design elements on the site, prepare complete earthwork/soil management documents/drawings for the work including Site Preparation and the Building Construction. These drawings would be generated using the PBC's Environmental Design Guidelines. Typically the Consultant creates five total drafts of the environmental drawings for the purposes of this proposal (Site Preparation - 100%; Construction Documents – Design Deliverables, 60%, 90% and Bid Set).

For projects in the IEPA SRP, the Consultant would provide cost effective and green remediation options for site remediation and the installation of engineered barriers that are realistic and incorporate designs concurrent with IEPA cleanup objectives. These services would be performed in accordance with Title 35 Ill. Adm. Code 740 and 742.

The Consultant would use PBC template specifications to modify for each project which include the management of uncontaminated material or contaminated soil on and off the site, controlling and managing storm and groundwater, dust control, underground storage tank removal, ect.

b. Design Meeting Participation: The Consultant would attend meetings as directed by the PBC and discuss environmental matters relative to the project. These meetings typically include but are not limited to:

- i. Environmental Design Kick-Off Meeting
- ii. Bi-Weekly Design Meetings
- iii. Design Phase Utility Coordination Site Visit
- iv. Design Milestone Meetings (60%, 90% and 100% set)
- v. Design to Construction Meeting

c. Bid Meeting Participation: The Consultant would attend meetings relative to providing environmental design information throughout the bidding process including:

- i. Pre-Bid
- ii. Technical Review

iii. Construction Pre-Installation Meeting

d. Meeting Minutes: The Consultant would prepare meeting minutes for all environmental related meetings and provide the meeting minutes in a draft copy for PBC review and comment.

e. Bid Package Coordination: The Consultant would coordinate the development of all environmental bid documents with the Architect of Record and their project team including but not limited to the landscape, geotechnical, structural and civil engineering professionals (the PBC has template specifications that can be modified for this task.) The Consultant reviews all specifications generated by the AOR team related to backfill, earthwork, utilities, and landscaping for language continuity among all specification sets especially where the language relates to dealing with areas having environmental conditions or special soil management requirements).

5. Environmental Grant Administration: The Consultant would provide grant administration services, at the direction of the PBC, including, but not limited to:

- a. Preparing grant applications
- b. Generating environmental estimates as requested
- c. Preparing grant reporting as required by the specific grant type
- d. Meeting preparation and presentations to grant administrators
- e. Preparing presentations for public meetings as well as community relations plans
- f. Seeking out information requested and filling forms required by the grant

*Category C. Construction Phase Environmental Oversight Services*

- 1. Contract Administration: The Consultant would provide contract administration activities to ensure all environmental site work is performed in accordance with the project design and specifications as well as in accordance with local, state and federal environmental regulations.
- 2. Environmental Submittal Approvals: The Consultant would provide review, comment and approval on Contractor submittals related to environmental remediation work. The Consultant would be expected to review submittals related to the management of soil, storm and groundwater on and off site; soil stockpiling; dust suppression, ect. The Consultant would review and collect copies all trucking manifests concerning disposal of all materials and imported material documentation for compliance with project specifications.
- 3. Remediation and Soil Management Oversight: The Consultant would provide daily, weekly or as required environmental oversight throughout environmental remediation and soil management activities including, but not limited to the excavation of contaminated soil and backfilling of materials (i.e. clay, topsoil, clean stone, etc.). Compile all load tickets, gate receipts, waste manifests, disposal records, analytical data, permits, field logs, photographs, and survey information from Contractor for inclusion in the final reporting and for PBC and client as directed.

4. Underground Storage Tank Management: The Consultant would provide Underground Storage Tank Management Services to assist the Contractors to remove underground storage tanks from PBC sites. The Consultant would assist with permitting, generating correspondence, providing analytical and reporting as required by the IEPA and Office of the State Fire Marshall.
5. Field Meetings Related to Environmental Matters: The Consultant would attend project coordination and weekly meetings at PBC or on the project site as required.
6. Soil Management and Environmental Remediation Report Generation: The Consultant would prepare weekly and bi-weekly environmental reports as well as a final soil management and remediation report as required by the PBC. The Consultant would provide a written summary of field activities, summary of any survey or other field measurements as well as photo-documentation of all soil related activities. Soil related activities include but are not limited to: uncontaminated soil reuse, uncontaminated soil disposal, contaminated soil disposal, imported fill material backfill and landscape installation, and engineered barrier placement.
7. IEPA Site Remediation Program Management: The Consultant would also provide the appropriate reports if the site is enrolled in the IEPA SRP. Reports should document daily, weekly or as required, trucks importing and exporting soil/fill materials to/from the site as well as installation of all engineered barriers. The Consultant would provide a written summary of field activities, summary of any survey or other field measurements as well as photo-documentation of all related activities for remediation and installation of engineered barriers.
8. Environmental Engineering and Remediation Tasks as requested by the PBC: The Consultant would perform environmental engineering tasks as requested by the PBC including but not limited to: environmental technical review; soil remediation; underground storage tank removal; public speaking; etc.

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**SCHEDULE C**  
**COMPENSATION OF THE CONSULTANT**

**C.1 CONSULTANT'S FEE**

- C.1.1 The Commission shall pay the Consultant for the satisfactory performance of the Services for all work included in each duly executed Task Order assigned by the Commission on in the amount specified in each Task Order (Fee). The hourly rates attached herein represent the basis for each fee proposal from Consultant.
- C.1.2. Consultant's Fee will include profit, overhead, general conditions, materials, equipment, computers, vehicles, office labor, field labor, insurance, deliverables, and any other costs incurred in preparation and submittal of deliverables including travel to and from Commission's job sites/meetings, cell phone, computer usage, vehicles, mileage, taxi fares, parking, tolls insurance, and any other costs incurred.
- C.1.3. Should the Commission require additional services above and beyond those described in Schedule B, the Consultant will be required to submit a proposal, where the Commission reserves the right to negotiate, and the Commission must authorize approval of Consultant's agreement, in writing.
- C.1.4. The Commission shall compensate the Consultant for Reimbursable Expenses that are approved by the Commission prior to being incurred. Reimbursable Expenses shall include actual expenditures for subcontractors, laboratory costs, and leased or rented equipment, as well as those expenditures as identified and approved by the Commission on a Task Order basis.
- C.1.5. The Consultant's mark-up rates for the administration and oversight of subcontractors shall not exceed five percent of the subcontractor's invoice.

**C.2. HOURLY RATES FOR CONSULTANT AND SUBCONSULTANT PERSONNEL**

- C.2.1 All Consultant and Subconsultant personnel along with the billable hourly rate are subject to the prior approval of the Commission. The hourly rates shall not include compensation for overtime pay or holiday pay.
- C.2.2. Rates contained herein shall be enforceable for the term (and any subsequent option years exercised) of the agreement. Consultant may request, in writing to the Contract Officer, a request for a rate revision not less than 60 days at the end of each Calendar year. The request must be accompanied by justification by the Consultant. Revision or modifications of hourly rates shall be made at the sole discretion of the Commission.

**C.3 METHOD OF PAYMENT**

- C.3.1. **Invoices.** The Consultant will submit invoices, via CW, to the Commission for Services performed that will be paid in one lump sum after all Services required by each Task Order have been completed to the reasonable satisfaction of the Commission.

Each invoice must reference the contract number, task order number, project name and include reasonable detail to sufficiently describe the services performed. At its discretion, the Commission may require detail and data relating to Subconsultant costs. In accordance with the terms of the Agreement, the Consultant must maintain complete documentation of all costs incurred for review and audit by the Commission or its designated audit representative(s). Each invoice must be submitted in the format directed by the

Commission. Invoices must be accompanied by a progress report in a format acceptable to the Commission. Such progress reports must identify any variances from budget or schedule and explain reasons for any such variance(s).

- C.3.2. **Payment.** Payment will be processed within thirty (30) days after Commission receives an acceptable invoice from the Consultant.

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**LOADED HOURLY RATES - ENVIRONMENTAL CONSULTING SERVICES  
ENVIRONMENTAL ENGINEERING SERVICES - PS2060G**

Complete the following Hourly Rate table and provide various hourly rates for the staff who will work on Category A, B and C type projects. The hourly rate shall include typical overhead (except the Reimbursable Expenses) for each staff member such as driving to and from PBC job sites or meetings, cell phone and computer usage, vehicles, mileage, taxi cab fares, parking, tolls, insurance, marketing and any other costs incurred.

Job Title		Unit	Hourly Rates
<b>Phase I and II Environmental Assessments/Design and Construction Management</b>			
A	Principal	Per hour	\$ 170.00
B	Environmental Engineer P.E.	Per hour	\$ 140.00
C	Environmental Engineer	Per hour	\$ 112.00
D	Geologist/Hydrologist	Per hour	\$ 116.00
E	Certified Industrial Hygienist	Per hour	\$ 145.00
F	Environmental Scientist	Per hour	\$ 91.00
G	Building Inspector (Hazardous Waste)	Per hour	\$ 91.00
H	Chemist	Per hour	\$ 105.00
I	Environmental Communications Specialist	Per hour	\$ 110.00
J	Project Manager	Per hour	\$ 118.00
K	Senior Project Manager	Per hour	\$ 145.00
L	Environmental Technician	Per hour	\$ 76.00
M	Clerical/Administrative Staff	Per hour	\$ 68.00
N	Drafting Technician	Per hour	\$ 82.00
O	Civil Engineer	Per hour	\$ 115.00
P	<b>Senior Environmental Scientist</b>	Per hour	\$ 135.00
Q	<b>Data Management</b>	Per hour	\$ 85.00
<b>Environmental Design Services</b>			
A	Environmental Engineer P.E.	Per hour	\$ 140.00
B	CAD Specialist	Per hour	\$ 89.00
C	Drafting Technician	Per hour	\$ 82.00
D	Clerical/Administrative Staff	Per hour	\$ 68.00
E	Engineer	Per hour	\$ 92.00
F	Project Manager	Per hour	\$ 118.00
G	Sr. Project Manager	Per hour	\$ 145.00



## **SCHEDULE D**

### **INSURANCE REQUIREMENTS**

The Consultant must provide and maintain at Consultant's own expense, until expiration or termination of the Agreement and during the time period following expiration if Consultant is required to return and perform any additional work, the minimum insurance coverage and requirements specified below, insuring all operations related to the Agreement.

#### **D.1. INSURANCE TO BE PROVIDED**

##### **D.1.1. Workers' Compensation and Employers Liability**

Workers' Compensation Insurance, as prescribed by applicable law covering all employees who are to provide a service under the Agreement and Employers Liability coverage with limits of not less than \$1,000,000 each accident, illness or disease.

##### **D.1.2. Commercial General Liability (Primary and Umbrella)**

Commercial General Liability Insurance or equivalent with limits of not less than \$5,000,000 per occurrence for bodily injury, personal injury, and property damage liability. Coverage must include the following: All premises and operations, products/completed operations, separation of insureds, defense, and contractual liability. The Public Building Commission of Chicago, the City of Chicago and the User Agency and Owners must be named as Additional Insured on a primary, non-contributory basis for any liability arising directly or indirectly from the work.

If tank removal or excavation is to be performed, the contractor must include the following additional coverage: All premises and operations, products/completed operations (for minimum of two (2) years following project completion), explosion, collapse, underground, separation of insureds, defense, and contractual liability.

Subcontractors performing work for Consultant must maintain limits of not less than \$1,000,000 per occurrence with the same terms herein

##### **D.1.3. Automobile Liability (Primary and Umbrella)**

When any motor vehicles (owned, non-owned and hired) are used in connection with work to be performed, the Consultant must provide Automobile Liability Insurance, with limits of not less than \$2,000,000 per occurrence for bodily injury and property damage. The Public Building Commission of Chicago, the City of Chicago and the User Agency and Owners must be named as Additional Insured on a primary, non-contributory basis.

Subcontractors performing work for Consultant must maintain limits of not less than \$1,000,000 per occurrence with the same terms herein

##### **D.1.4. Professional Liability**

When any professional consultants perform work in connection with this Contract, Professional Liability Insurance covering acts, errors, or omissions must be maintained with limits of not less than \$5,000,000. The policy will include coverage for wrongful acts, including but not limited to errors, acts or omissions, in the rendering or failure to render professional services resulting in a pollution incident. When policies are renewed or replaced, the policy retroactive date must coincide with, or precede, start of work on the Contract. A claims-made policy, which is not renewed or replaced, must have an extended reporting period of two (2) years.

Subcontractors performing work for Contractor must maintain limits of not less than \$1,000,000 per occurrence with the same terms herein.

##### **D.1.5 Property**

The Consultant is responsible for all loss or damage to personal property (including but not limited to materials, equipment, tools, and supplies) owned, rented, or used by Consultant.

#### **D.1.6 Valuable Papers**

When any plans, designs, drawings, data, media, or other documents are produced or used under this Agreement, Valuable Papers Insurance shall be maintained in an amount to insure against any loss whatsoever, and shall have limits sufficient to pay for the re-creation and reconstruction of such records.

#### **D.1.7 Contractors Pollution Liability**

Contractors Pollution coverage is required with limits of not less than \$2,000,000 per occurrence for any portion of the services, which may entail, exposure to any pollutants, whether in the course of sampling, remedial work or any other activity under this contract. The contractor pollution liability policy will provide coverage for sums that the insured become legally obligated to pay as loss as a result of claims for bodily injury, property damage and/or clean-up costs caused by any pollution incident arising out of the Work including remediation operations, transportation of pollutants, owned and non-owned disposal sites and any and all other activities of Contractor and its subcontractors. Pollution incidents will include, but not be limited to, the discharge, dispersal, release or escape of any solid, liquid, gaseous or thermal irritant or contaminant, including but not limited smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, medical waste, waste materials, lead, asbestos, silica, hydrocarbons and microbial matter, including fungi, bacterial or viral matter which reproduces through release of spores or the splitting of cells or other means, including but not limited to, mold, mildew and viruses, whether or not such microbial matter is living.

The policy will be maintained for a period of three years after final completion and include completed operations coverage. The policy will include the Public Building Commission of Chicago, the City of Chicago and the User Agency and Owners, and others as may be required by PBC, as Additional Insured on a primary and non-contributory basis for on going and completed operations.

Subcontractors performing work for Contractor must maintain limits of not less than \$1,000,000 per occurrence with the same terms herein.

#### **D.1.8 Railroad Protective Liability**

When any work is to be done adjacent to or on railroad or transit property, Consultant must provide or cause to be provided, with respect to the operations that Consultant or subcontractors perform, Railroad Protective Liability Insurance when required by the railroad or transit entity, in the name of railroad or transit entity. The policy must have limits of not less than the requirement of the operating railroad/transit entity for losses arising out of injuries to or death of all persons, and for damage to or destruction of property, including the loss of use thereof.

In all instances when work is to be performed within fifty (50) feet of a right-of-way, Consultant and subconsultants performing work in the area are required to endorse their liability policies with form CG 24 17 to eliminate the exclusion for work within fifty (50) feet of the rail right-of-way. Evidence of this endorsement must be submitted with the Certificate of Insurance required below.

#### **D.2. ADDITIONAL REQUIREMENTS**

The Consultant must furnish the Public Building Commission Procurement Department, Richard J. Daley Center, Room 200, Chicago, IL 60602, original Certificates of Insurance, or such similar evidence, to be in force on the date of this Agreement, and Renewal Certificates of Insurance, or such similar evidence, if any insurance coverage has an expiration or renewal date occurring during the term of this Agreement. The Consultant must submit evidence of insurance to the Commission before award of Agreement. The receipt of any certificate does not constitute agreement by the Commission that the insurance requirements in the Agreement have been fully met or that the insurance policies indicated on the certificate are in compliance with all Agreement requirements. The failure of the Commission to obtain certificates or other insurance evidence from Consultant is not a waiver by the Commission of any requirements for the Consultant to obtain and maintain the specified coverage. The Consultant will advise all insurers of the Agreement provisions regarding insurance. Non-conforming insurance does not relieve Consultant of the obligation to provide insurance as specified in this Agreement. Non-fulfillment of the insurance conditions may constitute a breach of the Agreement, and the Commission retains the right to stop work until proper evidence of insurance is provided, or the Agreement may be terminated.

The Commission reserves the right to obtain copies of insurance policies and records from the Consultant and/or its subcontractors at any time upon written request.

The insurance must provide for 30 days prior written notice to be given to the Commission if any policies are canceled, substantially changed, or non-renewed.

Any deductibles or self-insured retentions on referenced insurance must be borne by Consultant.

The Consultant hereby waives and agrees to require their insurers to waive their rights of subrogation against the Public Building Commission of Chicago, the City of Chicago and the User Agency and Owner, their respective Board members, employees, elected and appointed officials, and representatives and the property owner.

The insurance coverage and limits furnished by Consultant in no way limit the Consultant's liabilities and responsibilities specified within the Agreement or by law.

Any insurance or self-insurance programs maintained by the Public Building Commission of Chicago, the City of Chicago and the User Agency and Owners do not contribute with insurance provided by the Consultant under the Agreement.

The required insurance to be carried is not limited by any limitations expressed in the indemnification language in this Agreement or any limitation placed on the indemnity in the Agreement given as a matter of law.

If Consultant is a joint venture or limited liability company, the insurance policies must name the joint venture or limited liability company as a named insured

The Consultant must require all its subcontractors to provide the insurance required in this Agreement, or Consultant may provide the coverage for its subcontractors. All subcontractors are subject to the same insurance requirements of Consultant unless otherwise specified in this Agreement.

If Consultant or its subcontractors desire additional coverage, the party desiring the additional coverage is responsible for the acquisition and cost.

Consultant must submit the following:

1. Standard ACORD form Certificate of Insurance issued to the Public Building Commission of Chicago as Certificate Holder including:
  - a. All required entities as Additional Insured
  - b. Evidence of waivers of subrogation
  - c. Evidence of primary and non-contributory status
2. All required endorsements including the CG2010 1001 or similar

The Commission's Risk Management Department maintains the rights to modify, delete, alter or change these requirements.



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
12/30/2015

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Ansay & Associates, LLC. PW 101 East Grand Ave. Suite #11 Port Washington WI 53074	<b>CONTACT NAME:</b>		
	<b>PHONE (A/C, No, Ext):</b> 262-284-7174 <b>E-MAIL ADDRESS:</b> info@ansay.com	<b>FAX (A/C, No):</b> 262-377-3784	
<b>INSURED</b> NATURAR-01 Natural Resource Technology, Inc. 234 W Florida Street Milwaukee WI 53204	<b>INSURER(S) AFFORDING COVERAGE</b>		<b>NAIC #</b>
	<b>INSURER A :</b> CNA Insurance Companies		35289
	<b>INSURER B :</b> Colony National Insurance Co		34118
	<b>INSURER C :</b>		
	<b>INSURER D :</b>		
	<b>INSURER E :</b>		
<b>INSURER F :</b>			

## COVERAGES

CERTIFICATE NUMBER: 630533120

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
B	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:	Y	Y	PACE302933	1/1/2016	1/1/2017	EACH OCCURRENCE \$1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$300,000 MED EXP (Any one person) \$10,000 PERSONAL & ADV INJURY \$1,000,000 GENERAL AGGREGATE \$2,000,000 PRODUCTS - COMP/OP AGG \$2,000,000 \$
A	<b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO <input checked="" type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS	Y	Y	C6016286021	1/1/2016	1/1/2017	COMBINED SINGLE LIMIT (Ea accident) \$1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
B	<b>UMBRELLA LIAB</b> <input checked="" type="checkbox"/> OCCUR <b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$	Y	Y	EXC302934	1/1/2016	1/1/2017	EACH OCCURRENCE \$9,000,000 AGGREGATE \$9,000,000 \$
A	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below Y/N <input type="checkbox"/> N/A	Y	N/A	6016285998	1/1/2016	1/1/2017	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$1,000,000 E.L. DISEASE - EA EMPLOYEE \$1,000,000 E.L. DISEASE - POLICY LIMIT \$1,000,000
B	Professional Liability Pollution Liability			PACE302933	1/1/2016	1/1/2017	Each Wrongful Act 1,000,000 Ea PollutionCondition 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

-SAMPLE FOR PROPOSAL PURPOSES --RE: PUBLIC BUILDING COMMISSION OF CHICAGO/ENVIRONMENTAL ENGINEERING SERVICES PS2060 ~ The Public Building Commission of Chicago and others, as required by written contract, are recognized as Additional Insured regarding General Liability, Primary & Noncontributory, including Ongoing & Completed Operations, Auto Liability and Pollution Liability. WC, Auto, General Liability and Umbrella Liability Waivers of Subrogation apply in favor of the Additional Insured. 30-Day Notice of Cancellation applies.

## CERTIFICATE HOLDER

## CANCELLATION

Public Building Commission of Chicago Procurement Department Richard J Daley Center/Room 200 Chicago IL 60602	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE <i>Sandra Huebner</i>

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**SCHEDULE E**  
**KEY PERSONNEL**

**(ATTACHED HERETO AND INCORPORATED HEREIN)**

## **2.B-F Key Personnel Resumes & Licenses**

NRT has 10 Professional Engineers licensed in Illinois (list available upon request). Mr. Nardozzi and Ms. Hofmann have been identified as the Illinois Licensed Professional Engineers with over fifteen years' experience in conducting environmental planning, design and construction oversight services. Three additional NRT Illinois Professional Engineers have been identified as other Key Personnel for this PBC project. Key personnel resumes and licenses are included in the following pages.

## Areas of Expertise

- Feasibility Studies
- Design, operation, maintenance and optimization of remediation systems
- Remedial and maintenance dredging design, permitting, and field implementation
- Construction planning, scheduling, and cost estimating
- Procurement and contracting for construction activities
- Field engineering, oversight, and management of remedial construction

## Education

- BS, Civil and Environmental Engineering, Calvin College, 2007

## Professional Registrations

- Professional Engineer, State of Illinois, #062.065563
- U.S. Green Building Council - LEED Accredited Professional

## Other Training

- OSHA 40-Hour Hazardous Waste Site Operations (HAZWOPER) Training
- OSHA 30-Hour Construction Supervisor Training
- OSHA 8-Hour Emergency Response Management/ Supervisor Training
- OSHA Hazard Communication Training
- Standard First Aid/CPR

## Summary of Qualifications

Eight years of experience in environmental consulting, design engineering, construction management, quality control, and project management of remediation projects to support site redevelopment. Experience includes: environmental site assessment, feasibility studies, remediation treatability studies and bench tests, remedial design, project management; construction planning, scheduling, cost estimating, and procurement; and operation, maintenance, and optimization of remediation systems.

## Representative Project Experience

### *Manufactured Gas Plant (MGP) Site Investigation and Remediation*

Project Engineer responsible for development of a feasibility study a former MGP site in Northeastern Illinois. Primary responsibilities included review, recommendation, and preliminary design of treatment alternatives for soil, groundwater, soil vapor impacted by MGP non-aqueous phase liquid (NAPL) contamination. Other responsibilities included in the development of the feasibility study report and the development of alternatives and costs to adequately address the MGP-impacts according to screening criteria and remedial action objectives.

Project Engineer responsible for remedial design for a former MGP site in Wisconsin. Primary responsibilities included developing an implementable dredge prism along the river bank, sampling strategies, and dredge strategies. Other responsibilities included completion of Record of Decision required reports consisting of design report, quality control plans, operations and maintenance plans, and institutional control plans.

Project Engineer on behalf of EPA for the former Ashland MGP Lakefront site. Responsibilities included supplying technical comments work plans for soil removal, barriers, groundwater extraction/treatment, and sediment dredging. Additional responsibilities included participating in meetings with EPA, WDNR, and the PRP, providing constructability and sequencing recommendations to EPA, and conceptualizing more constructible alternative remedial approaches that would be similarly protective of EPA's Remedial Action Objectives.

### *Sediment Management and Waterway Engineering*

Project Engineer, Site Manager, and Safety Officer for a \$10 Million, two-year, 100,000 cubic yard dredging project at the Naval Station Great Lakes Harbor. Project engineering responsibilities included development of USACE/EPA permit applications, and developing necessary work plans to guide dredging activities. Site Manager responsibilities included managing production, unexploded ordnance inspection, and health and safety. Close coordination with state regulators resulted in the diversion of more than 76,000 cubic yards of clean outer harbor material from landfills to support local Brownfield redevelopment and remediation projects.

Field Engineer on behalf of the EPA for a remedial dredging and sand cover project located in Muskegon Lake. Responsibilities involved coordination with the EPA dredging contractor, review of bathymetric survey, review of project submittals, and collection of confirmation samples. Additional responsibilities included providing technical support for developing a re-dredge strategy based on the results of confirmation sample collection.

## **Professional History**

- Natural Resource Technology, Inc. (2014 to Present), Environmental Engineer
- WESTON Solutions, Inc., (2008 to 2014), Project Engineer
- URS Corporation (2006 to 2008), ITS and Traffic Engineer

## **Representative Project Experience (continued)**

Project Engineer and Quality Control Manager for a \$50 million Emergency Task Order to repair damaged levees along the Missouri River. The 8-month project involved construction of 7 miles of setback levees, and movement of over 3 million cubic yards of material. Project Engineer responsibilities included delineation of clay and fill borrow areas, generation of grading plans, preparation of submittals. Quality Control Management responsibilities included establishing quality control procedures for 11 inspectors at 9 different worksites, scheduling 3-phase inspection meetings, and troubleshooting material compaction, surveying, and borrow material issues.

### ***Remediation and Redevelopment***

Project Engineer responsible for design and implementation of a groundwater extraction and treatment system as part of a \$10 million environmental remediation project at a former industrial site. Design engineering consisted of conducting a bench scale test, design documents, and preparing plans/specifications for subcontracts. Final system consisted of filtration, iron removal, air stripping, organoclay, carbon, alumina, associated backwash, and flocculation systems. Field engineering involved troubleshooting startup operations, optimizing chemical usage, and developing O&M and sampling procedures.

Project Engineer responsible for CERCLA document preparation, design engineering, and field implementation of a permanganate in-situ chemical oxidation system at a former Air Force Missile Silo. Document preparation involved completing work plans, a Proposed Plan, and a Decision Document in accordance with the CERCLA process. Engineering responsibilities included developing bench and pilot studies, and design of the injection, recirculation, and extraction system. Field implementation responsibilities included installation of pumps, dosing system, and associated controls, as well as troubleshooting startup operations.

Project Engineer responsible for development of a feasibility study for the former Velsicol Chemical Company Superfund site. Primary responsibilities included the review, recommendation, and preliminary design of treatment alternatives for non-aqueous phase liquid (NAPL) contamination. Other responsibilities included assisting in the development of the feasibility study report and the development of alternatives and costs to adequately remediate the contamination according to screening criteria and remedial action objectives.

Project Engineer responsible for design of a 2,000 cubic yards hot spot in-situ stabilization project followed by 5,000-foot soil-bentonite slurry wall project at a former industrial facility. Primary responsibilities included performing a geotechnical investigation along the proposed alignment, developing a bench-scale mix design and compatibility test program, and developing the subsequent design and request for proposal package.

Project Engineer responsible for submitting proper design documentation, process information, and required permit applications to obtain an Illinois EPA Air Permit for the construction and operation of an Electric Resistance Heating System. The system was installed to remediate VOC-contaminated soil and groundwater at a former industrial facility. Field responsibilities included third party oversight of the ERH contractor and collection of vapor samples to document compliance with the site Air Permit.



## Licenses and Credentials



M. Castro no longer employed by NRT as of 2/1/16.

## Mark Castro

### Project Manager/Scientist

#### Summary of Qualifications

Over 17 years of combined technical or managerial experience in the environmental consulting and remediation industry. Technical experience includes geologic and hydrogeologic investigations, remediation, and site closure of various industrial and commercial properties. He has successfully obtained regulatory closure for sites in Illinois, Wisconsin and Indiana. In doing so, he has established key relationships with state regulators and continues to strive for continual improvement from client feedback. Managerial experience includes proposal preparation, coordination of field activities, subcontractor oversight and preparation of all report materials. Extensive knowledge of soil and groundwater assessment and remediation technologies has allowed Mr. Castro to provide consulting services for all phases of environmental projects.

#### Representative Project Experience

##### *Site Remediation Program and Fate and Transport Risk Assessments*

Project manager for a former synthetic natural gas (SNG) plant site enrolled in the Illinois Environmental Protection Agency (IEPA) Site Remediation Program (SRP), in February 2008 with the goal of receiving a Comprehensive NFR letter. The site had formerly contained multiple above-ground storage tanks (ASTs) with previous releases of BTEX and PNAs. Mr. Castro prepared the initial work plan and performed oversight during the site-wide soil and groundwater investigation. Remedial actions included the removal of over 1,500 lateral feet of underground piping and approximately 2,500 cubic yards of impacted soil. Additional exposure routes were addressed by preparing IEPA Tier 2 Risk Based Corrective Action (RBCA) groundwater modeling evaluations, establishing an Environmental Land Use Control (ELUC) and calculating Tier 2 Johnson & Ettinger vapor intrusion soil remediation objectives. A combined Comprehensive Site Investigation/Remediation Objectives Report/Remedial Action Completion Report (CSI/ROR/RACR) was submitted in November 2009. Within nine months of entry into the IEPA SRP, a Comprehensive NFR Letter was issued for the site in August 2010.

Responsible for development of a site work plan to investigate impacts within a former fueling area of a Class I rail yard in Chicago, Illinois. Based on the nature of the previous releases, a significant volume of LNAPL was present in the subsurface. To further delineate the impacts, Mr. Castro performed oversight during a laser-induced fluorescence (LIF) investigation to determine the LNAPL saturation profile within the subsurface. Mr. Castro developed the scope of work for the on-site investigation activities, which included a soil and groundwater investigation, petrophysical soil testing, and soil gas sampling. The site was enrolled into the IEPA SRP and the data was included in a Site Investigation Report that was approved by the IEPA SRP.

##### *Due Diligence*

In 2012, Mr. Castro was retained by a client prior to acquisition of a commercial property located in downtown Chicago, Illinois. As a part of the due diligence, a Phase I Environmental Site Assessment (ESA) was prepared followed by a Phase II Subsurface Investigation Report. The site was enrolled into the IEPA SRP and a contractual agreement was completed to secure acquisition of the property.

#### Areas of Expertise

- Site Remediation Program Remediation/Closure
- Multi-media site investigations for evaluating human health and environmental risks
- Due Diligence
- Project management
- Vapor intrusion assessments and modeling
- Environmental emergency response and mitigation
- Light, Non-Aqueous Phase Liquid (LNAPL) investigations and remediation
- Client service

#### Education

- M.S.P.H., Environmental Health Sciences, University of South Carolina at Columbia, 1997
- B.S., Biology, University of Dayton, 1995

#### Professional Affiliations

- Air & Waste Management Association – Great Lakes States Section
- Illinois Association of Environmental Professionals (IAEP)
- Philippine Engineers & Scientists Organization (PESO) of Chicago

### **Professional History**

- Natural Resource Technology, Inc., (2013-Present), Scientist/Project Manager
- TRC Environmental Corporation, (2011-2013), Project Manager
- Carlson Environmental Inc., (1998-2011), Project Manager

### **Special Training /Certification**

- 40-Hour OSHA HAZWOPER Training for Hazardous Waste Operations (29 CFR 1910.120) and updated 8-Hour Refresher Courses
- 2012 ITRC LNAPL Classroom Training
- 2010 WDNR Vapor Intrusion Seminar
- Illinois Boater Safety
- AHERA Asbestos Building Inspector
- BNSF/Canadian National/Union Pacific E-Rail Safety Training
- Unexploded Ordinance Training

### **Representative Project Experience (continued)**

From 1998 through 2011, Mr. Castro prepared over 50 Phase I ESAs for a wide array of clients, including banks, real estate investment trusts, attorneys, investors and property owners. Mr. Castro assists clients with determinations of site-specific remedy costs through his knowledge of IEPA TACO regulations.

#### ***Vapor Intrusion***

On behalf of a potential buyer, performed a due diligence review of a commercial site located in LaGrange, Illinois, that had received a Focused NFR Letter from the IEPA in 2002. Since vapor intrusion was not previously evaluated, Mr. Castro developed a work plan consisting of subsurface soil, soil gas and groundwater sampling to further characterize the site and to evaluate the indoor inhalation exposure route associated with vapor intrusion.

Mr. Castro prepared and reviewed Vapor Intrusion Investigations and Indoor Inhalation Risk Exposure Evaluations for sites in Illinois, Wisconsin, Michigan and Oklahoma. He has successfully achieved regulatory closure for multiple sites enrolled into the IEPA SRP with vapor intrusion concerns. His previous work includes calculating site-specific Tier 2 remediation objectives, incorporating the Johnson & Ettinger model.

#### ***Environmental Liability Estimations***

On behalf of a public utility client, Mr. Castro performs quarterly and annual environmental liability cost estimating for legacy sites within Illinois, Michigan and Wisconsin. Estimates were calculated by relying on probability-based models, with knowledge of current environmental regulations and regulatory closure processes. Mr. Castro reviewed project status, goals and timelines with the client to accurately predict future costs. Conceptual site models were re-evaluated quarterly based on new data or updated regulations.

#### ***Environmental Emergency Response and Mitigation***

On behalf of a Class I Railroad Client, Mr. Castro performed emergency response and mitigation activities for incidents occurring within Illinois. He provided oversight for all on-site remedial activities regarding the incident and acted as the regulatory liaison to the IEPA response team. Mr. Castro prepared all technical reports and agreements that were submitted to the IEPA. Mr. Castro met with IEPA project managers and legal counsel to successfully negotiate remedial benchmarks and end-points for site closure.

#### ***Manufactured Gas Plant (MGP) Sites***

Project manager for upland investigations of four former MGP sites in the USEPA Superfund Alternative Sites program. Characterized the extent of contamination in upland media related to MGP impacts. Coordinated and managed field sampling efforts, data analysis, reporting, and agency negotiations.

## Areas of Expertise

- Site assessment, property acquisition due diligence, and environmental risk management
- Soil and groundwater investigation and remediation
- Multi-site project administration and budgeting
- Environmental regulatory compliance
- Sustainable storm water management

## Education

- MS, UW-Milwaukee Freshwater Sciences, May 2013
- BS, University of Idaho, Environmental Science, December 2007

## Professional History

- Natural Resource Technology, Inc., (2014-Present)
- Terracon Consultants, Due Diligence Group Manager (2013-2014)
- Terracon Consultants, Staff Scientist (2009-2013)

## Additional Training

- 40-Hour OSHA Health & Safety Training for Hazardous Waste Operations w/ Annual Refreshers
- Wisconsin Certified Asbestos Inspector
- American Red Cross CPR and First Aid Training
- Wisconsin Department of Natural Resources Boating Safety Training
- IATA Dangerous Goods and Shipping Batteries (IATA and DOT)

## Summary of Qualifications

Mr. Cawrse has over five years of environmental consulting experience as an environmental scientist. His consulting activities include: Phase I and Phase II Environmental Site Assessments, soil and groundwater sample collection, soil gas sampling, project management, report preparation and technical review, preparation of scope of services including budget estimations and managing subcontractors, and preparation of case closure requests and GIS registry forms for submittal to the Wisconsin Department of Natural Resources (WDNR).

## Representative Project Experience

### *Phase I Environmental Site Investigations*

Managed and completed over 150 Phase I Environmental Site Assessments throughout Wisconsin and Illinois for private and public sector clients. Properties included vacant land, commercial/residential developments, and light and heavy industrial manufacturing facilities. Duties include project management, proposal and report writing, site reconnaissance and review of WDNR case files, regulatory databases, and historical sources.

### *Site Investigation and Remediation*

Completed site investigations consisting of soil borings and groundwater sampling and assisted with annual groundwater sampling events for multiple long-term remediation projects for multiple sites located throughout the Midwest. In addition, installed and sampled soil gas and sub-slab vapor probes during site remediation.

### *Agricultural Land Assessments*

Coordinated and completed over 100 agricultural land site assessments for agricultural properties enrolling in the Natural Resources Conservation Service Wetlands Reserve Program for sites throughout Wisconsin, Iowa, and Missouri. Duties include project management, site reconnaissance, report writing, and review of regulatory databases and historical sources.

### *Storm Water Pollution Prevention Plan (SWPPP) Preparation*

Development and implementation of SWPPPs for industrial clients. Preparation included assessing the condition of best management practices already in place, site reconnaissance, reporting, and client communication.

### *Asbestos Inspection and Sampling*

Conducted asbestos inspections and sample collection for multiple sites throughout Wisconsin including residences, commercial/retail businesses and industrial facilities. Responsibilities included project management, inspection/sampling, report preparation, and client communication.

### *AutoCAD Drafting*

Provided CAD support for multiple short-term and large-scale, long-term investigation and remediation projects. Performed graphical analysis of soil and groundwater data and mapped contaminants in soil, soil vapor, groundwater, and indoor air.

## **Areas of Expertise**

- Characterization and permitting of coal combustion product management sites
- Management, investigation and remediation of Manufactured Gas Plant sites
- Hydrogeologic and geochemical investigations at ash ponds, landfills and industrial sites
- Landfill development, regulatory permitting, and reporting
- Soil and groundwater contaminant investigations
- Groundwater monitoring program development and management
- Data management, data interpretation/presentation, and statistical analysis of groundwater monitoring data

## **Education**

- MS, Geology/Hydrogeology, University of Toledo, 1985
- BS, Geological Sciences, SUNY Albany, 1981

## **Professional Registrations**

- Professional Geologist - IL
- Certified Groundwater Professional (AGWSE)

## **Professional Affiliations**

- Illinois Ground Water Association
- National Ground Water Association

## **Summary of Qualifications**

Mr. Cravens has more than thirty years of professional experience conducting geologic, hydrologic, geochemical, contaminant, and remedial investigations at sites ranging in size from less than ½ acre to over 100 square miles. Extensive experience managing investigation, modeling, and development of closure plans for coal combustion product (CCP) ponds. Manage groundwater investigations, monitoring and regulatory reporting for CCP ponds and landfills. Since 2001 he has investigated and prepared reports on more than 16 CCP ponds and landfills.

In the last 20 years has conducted investigations at over 25 Manufactured Gas Plant (MGP) sites in Illinois and Missouri, for both Ameren and the former Illinois Power Company, under voluntary cleanup programs. Involved in remedial activities at over one dozen MGP sites in Illinois and Missouri. From 2007 to 2012, five MGP sites in Illinois and Missouri were closed under Mr. Cravens' supervision. Responsibilities included the preparation of investigation work plans and reports, execution of investigation projects, and development of risk-based closure strategies.

Areas of expertise include soil and groundwater investigations and closure of contaminated sites using risk-based closure protocols, including advanced statistical analysis of soil and groundwater data. Specializations include hydrogeologic investigations, permitting, reporting, and statistical analysis at chemical waste landfills, CCP landfills, CCP ponds, and industrial sites.

## **Representative Project Experience**

### ***Site Remediation Program***

Site Remediation Program. Project manager for investigation, development of remedial objectives, and remedial action plan for legacy municipal waste landfill site in Riverwoods, IL.

Former MGP Sites in Paris, Pana, Granite City, and Charleston, IL. Project manager for four sites that received "No Further Remediation" (NFR) letters from Illinois EPA in 2008, 2009, 2010, and 2010, respectively.

Former MGP Site in Mattoon, IL. Managed all investigation, statistical analyses, and project submittals from 2006 through 2011. Site received NFR letter from Illinois EPA in 2013.

Former MGP Sites in Champaign and Hillsboro, IL. Managed groundwater network, databases, modeling, and statistical analyses at each site for over 10 years.

Provided testimony for regulatory hearings into proposed new Illinois regulations on disposal of clean construction waste and demolition debris.

### **Representative Project Experience (continued)**

Limited Scope Phase IC Environmental Assessments and Subsurface Investigations at 16 Former MGP Sites in Illinois. Project manager and leading field investigator for MGP sites at Carlinville, Centralia, Danville, Decatur, East St. Louis, Galesburg, Galva, Greenville, Hillsboro, Jacksonville, Kewanee, LaSalle, Litchfield, Monmouth, Mount Vernon, and Peru from 1994 to 1996.

## Professional History

- Natural Resource Technology, Inc. (2014 to Present), Senior Hydrogeologist
- Kelron Environmental (1994 to 1998; 2000 to 2014), Senior Hydrogeologist / President
- Illinois Power / Dynegy, Inc. (1998 to 2000), Senior Environmental Professional
- Burlington Environmental (1992 to 1994), Senior Hydrogeologist
- Illinois State Water Survey (1984 to 1991), Professional Scientist
- South Dakota Geological Survey (1983 to 1984), Geologist's Aide

## Publications/Presentations

Authored or co-authored more than 150 technical reports for state and federal regulatory agencies, including those appearing in refereed journals and state/national conference proceedings. He has presented work relating to delineation of DNAPL at MGP sites and was a lead investigator on an Electric Power Research Institute (EPRI) project. He also was the lead investigator on a national ash pond summary report prepared for the Utilities Solid Waste Activities Group.

## Notable Accomplishments

- Former reviewer for the Journal of Groundwater and Water Resources Bulletin
- Developed environmental protection procedures, training program, and emergency response for transmission line through karst area in Illinois
- Research and testimony on proposed environmental regulations in Illinois
- Expert witness on hydrogeology of fractured bedrock

## Water Resource Management and Protection

Provided expert witness testimony on behalf of Waste Management regarding potential groundwater impacts of a proposed landfill in Kankakee County, Illinois.

Developed construction management practices, spill control and emergency response program for AmerenIP and Ameren Transco for transmission line route through karst area of southern Illinois.

Lead investigator and author for groundwater resource studies in southern Cook, Will, Kankakee, and Iroquois counties, Illinois.

## Manufactured Gas Plants

Former MGP Site, Excelsior Springs, MO. Managed investigation, risk-based studies, and all report submittals. Received USEPA and MDNR-approved completion letter in 2009.

EPRI Report – Delineation of Coal Tar Dense Non-aqueous Phase Liquid and Groundwater Plumes at a Former MGP Site. Principal investigator.

## Chemical and Municipal Waste Landfills

Groundwater Network Development and Management, 3 Sites / 10 Landfills in Illinois and Missouri. Project manager for groundwater data collection, data management, statistical analysis, and report submittals to regulatory agencies (IEPA and MDNR) on behalf of City of Decatur, IL; Equistar Chemicals in Tuscola and Morris, IL; and municipal waste landfill in MO.

## CCP Sites

Ash Pond Studies at 5 Power Plants, Illinois. Performed hydrogeologic investigations, ash pond studies, modeling and developed corrective actions.

Landfill Siting Studies at 2 Power Plants, Illinois. Project manager for development of landfill siting applications for disposal of CCPs.

Statistical Analyses and Regulatory Reporting at 4 Power Plants, Illinois. Project manager for statistical analysis and regulatory reporting of monitoring well network for over 15 years.

Hydrogeologic Investigation Reporting at 5 Power Plants, Illinois. Developed reports for initial characterization and assessment at CCP ponds.

Evaluation of 70 Alleged CCR Damage Cases – Nationwide Ash Pond Data Evaluations. Authored and managed all research for submittal to USEPA on behalf of the Utility Solid Waste Activities Group in 2011.

## Statistical Analyses of Groundwater Data

Managed and performed statistical analyses of groundwater quality data for clients at sites in Illinois, Indiana, Michigan, Missouri, and Texas.

## Licenses and Credentials

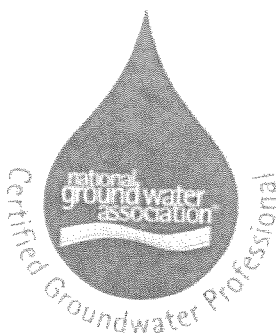


Certified by NGWA



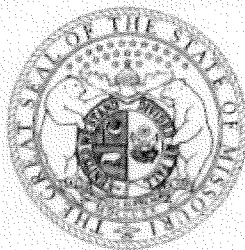
Stuart Cravens

Certified Groundwater Professional



Certification no. **112877** Expires **12/31/2017**

# State of Missouri



Department of Insurance, Financial Institutions and Professional Registration

Division of Professional Registration

Board of Geologist Registration

hereby certifies that

**Stuart J Cravens**

Having complied with all provisions of law and the rules of this Board is hereby  
granted a license as a

**Registered Geologist**

under the authority and by the virtue of an Act of the General Assembly of  
Missouri pursuant to Section 256.450-256.483.

In Witness Whereof, the Missouri Board of Geologist Registration has  
issued this Certificate Number 2015000714 and affixed the Seal of the Board  
this 6th day of January in the year A.D. 2015

Handwritten signature of the Chairman.

Chairman

Handwritten signature of the Secretary.

Handwritten signature of the Vice Chairman.

Vice Chairman

Handwritten signature of a Public Member.

Secretary



Handwritten signature of a Public Member.

Public Member

Member



## Areas of Expertise

- Field Engineering and Oversight
- Site Investigation and Sampling
- Phase I and Phase II Reporting
- Environmental Regulatory Compliance
- Environmental Permitting

## Education

- BS, Civil Engineering, University of Illinois, Urbana-Champaign, 2011
- BS, Physics, Illinois State University, 2011  
(Earned Jointly 2006-2011)

## Additional Training

- OSHA 40-Hour Hazardous Waste Site Operations (HAZWOPER) Training w/ Annual 8-Hour Refreshers
- IATA Dangerous Goods, IATA and DOT Shipping Batteries

## Professional Registrations

- State of Illinois, EIT

## Professional History

- Natural Resource Technology, Inc. (February 2014 to Present), Environmental Engineer
- Terracon Consultants, Inc. (June 2011 to February 2014), Staff Environmental Engineer
- City of Naperville, Transportation Engineering Department (2009 through 2010), summer intern.

## Summary of Qualifications

Mr. Daly has three years of experience in field engineering/oversight, environmental site investigations, and associated reporting. Experience includes: excavation and backfill oversight, soil, soil gas and groundwater sampling, asphalt paving and removal oversight, concrete pouring and removal oversight, surveying, environmental site investigation and planning, compliance, environmental reporting (Phase I and Phase II Environmental Site Assessments [ESAs]), and budgeting.

## Representative Project Experience

### *Environmental Reporting – Public Building Commission (PBC)*

Mr. Daly contributed to the reporting and environmental oversight effort at a project for the PBC's Whitney Young Library remediation project in Chicago, Illinois. The project involved in-situ chemical oxidation (ISCO) treatment of solvents entrained in soil in conjunction with excavation of contaminated soil. Responsibilities included examination of field work documentation, laboratory analytical data management, CAD drawing generation, review of plan drawings and specifications, and associated reporting.

### *City of Chicago Department of Fleet and Facilities Management*

Mr. Daly served as the lead writer for Phase I ESAs and as the Environmental Engineer on resulting soil and groundwater sampling conducted on several projects located in the City of Chicago. Properties ranged from approximately 0.5 to 9 acres, some of which were formerly occupied by heavy-industrial operations.

### *Remedial Construction Oversight*

Mr. Daly served as a field engineer for time critical removal operations at a former manufactured gas plant (MGP) site in northern Illinois. Responsibilities included field documentation of site work, post excavation soil sampling, perimeter air monitoring, and waste water sampling. Air monitoring activities included calibration of portable gas chromatograph units collecting live volatile organic compound (VOC) concentration data in addition to layout of SUMMA canisters for collection of 24-hour time-weighted VOC data.

### *Electrical Resistance Heating System Monitoring*

Mr. Daly served as a Field Engineer for monitoring the performance and progress of an electrical resistance heating (ERH) system at a site contaminated with a chlorinated hydrocarbon plume. Mr. Daly's field work duties included: air stream monitoring for temperature, pressure, velocity and VOC concentrations. Additionally, Mr. Daly collected air and water samples for laboratory analysis from locations before and at the point of discharge from the system. Based on the results of field and laboratory data, and communication with the remote project manager, Mr. Daly made appropriate adjustments to the air flow through the carbon filtration system so as to maintain acceptable discharges to ambient air and the municipal sewer. Oversight of spent carbon removal and replacement was also under Mr. Daly's purview.

## **Representative Project Experience (continued)**

### ***Indiana Brownfields Program***

Mr. Daly conducted a Phase I ESA in accordance with ASTM 1527-05 and USEPA All Appropriate Inquiry requirements on a parcel of land adjacent to a former gasoline station. A subsequent limited site investigation was conducted at the site during which Mr. Daly's duties included: utility locating oversight, electromagnetic survey oversight, direct-push drilling oversight, monitoring well installation and development, soil screening and groundwater sampling. Mr. Daly's project responsibilities included development of the site-specific sampling plan, CAD drawing generation, soil boring log generation, site activity scheduling, regulatory reporting and agency communication. The site was granted a Comfort Letter through the Indiana Brownfields Program which exempted the client from potential liability stemming from pre-existing contamination on the site.

### ***Indiana Office Building and Parking Lot Investigation***

Mr. Daly served as the Environmental Engineer for a limited site investigation at corporate office facility for a fortune 50 company in West Lafayette, Indiana. The site was impacted with chlorinated hydrocarbons formerly stored in USTs at the site. Mr. Daly's field work duties included: direct-push drilling oversight, monitoring well installation and development, elevation surveying, soil screening and soil, and groundwater sampling. Project responsibilities included development of site-specific work plans, proposal budgets, CAD drawing generation, soil boring log generation and site investigation reporting. Based on results from the initial investigation, additional groundwater monitoring wells were installed using a hollow-stem auger and sampled according to the Micro-Purge Sampling Option protocol revised by the Indiana Department of Environmental Management November 2009.

### ***Phase I Environmental Site Investigation Work***

Mr. Daly completed over 80 Phase I ESAs (ASTM 1527-05) for clients of various sizes and functions on properties in Illinois, Indiana, Wisconsin and Minnesota. Properties included small commercial/residential developments, farmland, gas stations, light-industrial manufacturing facilities and vacant property impacted by historic heavy-industrial activities. Duties include report and proposal writing, prior report review, regulatory database review, city directory review, site reconnaissance and client interaction.

### ***Storm Water Pollution Prevention Plan (SWPPP) – Illinois and Indiana***

Mr. Daly conducted SWPPP implementation inspections for travel stop locations in Dwight, and Kankakee, Illinois and DeMotte, Indiana in addition to the Dixie Square Mall demolition project in Harvey, Illinois. Mr. Daly assessed the condition of best management practices already in place and provided recommendations on needed changes. Mr. Daly also wrote a SWPPP for a scrap metal and electronics recycling facility in Naperville, Illinois under the General NPDES Permit No. ILR00. Project responsibilities included proposal writing, site reconnaissance, reporting and client and agency communication as well as an annual report update. Mr. Daly's field work duties included: utility locating oversight, direct-push drilling oversight, monitoring well installation and development, elevation surveying, soil screening and soil, soil gas and groundwater sampling. Project responsibilities included site-specific work plan development, CAD drawing generation, soil boring log generation and site investigation reporting.

V. Guilianni no longer employed by NRT as of 2/1/16.

### **Areas of Expertise**

- Remedial Design
- Construction management, oversight, and implementation
- Construction planning, scheduling, and cost estimating
- Air monitoring
- Environmental regulatory compliance and permitting
- Data management, interpretation and presentation
- Procurement for construction activities
- Multimedia environmental sampling

### **Education**

- B.S., Civil Engineering; Emphasis in Water Resources, Pennsylvania State University, 2010
- Environmental Engineering Minor

### **Additional Training**

- OSHA 40-Hour Hazardous Waste Site Operations (HAZWOPER)
- OSHA 10-Hour Construction Safety
- OSHA 8-Hour Excavation Competent Person
- MSHA Part 48 Surface Mining
- EPA Method 9 Visible Emissions Reader
- IDNR Boater Education Certification
- DOT Hazardous Materials Shipping
- American Heart Association First Aid/CPR/AED Certification

### **Professional Registrations**

- State of Pennsylvania, EIT

### **Professional Affiliations**

- American Society of Civil Engineers (ASCE), Illinois Chapter
- Penn State Alumni Association, Chicago and Pittsburgh Chapter

### **Summary of Qualifications**

Four years of environmental consulting experience as an environmental engineer for various industries specializing in design, compliance, permitting, construction management, and field engineering. Experience includes: remedial design, environmental reporting, construction planning and documentation, cost estimating, procurement, and design and operation for real-time air monitoring systems.

### **Representative Project Experience**

#### *Site Investigation*

Field Engineer to evaluate risk and liability associated with approximately 30 clean fill sites throughout the state of Wisconsin as potential dump sites for a large utility company. These sites were used for disposal or recycling of uncontaminated spoil including soil, asphalt, and concrete.

Recommendations were sent to the client regarding whether or not these sites should be considered for future management of clean fill and were based on site safety, underlying soil conditions, existing environmental issues on site or within close proximities, and other important factors.

Project/Field Engineer performing a series of environmental investigations inside and around a confirmed cancer cluster in northeastern PA in conjunction with the Center for Disease Control and Prevention. On-site field work included air sampling, citizen interviews, and historical data gathering from suspected heavy polluters in the area. Historical air emissions data over a four decade timeframe was manipulated and analyzed for highly toxic areas. A "hot-list" was created of all facilities that emitted heavy HAPs and VOCs and was cross referenced with confirmed cancer cases in the same area. As a result, it was proven without reasonable doubt that several chemical and manufacturing facilities once operating and emitting heavy toxins in low lying areas could have been the cause of many confirmed cancer cases. Citizen lawsuits and several new industrial regulations in northeastern PA are planned on being implemented based on the results of this investigation.

#### *Manufactured Gas Plant (MGP) Site Remediation*

Project Engineer for remedial design and construction activities at a former MGP site in Michigan. Duties included: remedial design, preparation of plans and specifications, bidding support, documentation of construction activities, field engineering, design and implementation of a real-time air monitoring program, invoice tracking, and construction quality assurance. Project included: deep excavation and backfill placement in areas with limited access and space, implementation of an augercast pile wall earth retention system, and extensive air monitoring.

Field Manager/Project Engineer for remedial design and environmental management program implementation at a former MGP site located in Chicago, IL. Duties included: design of excavation extents, design and operation of an extensive real-time air monitoring program, environmental data evaluation, training and oversight of field staff, construction oversight, construction manager and contractor coordination, and construction documentation.

## Professional History

- Natural Resource Technology, Inc., (2012 to Present), Environmental Engineer
- Air/Compliance Consultants, Inc. (2010-2012), Civil/Environmental Engineer
- Pennsylvania State University, Civil Engineering Teachers Assistant, (2010)

## Representative Project Experience (continued)

### *Environmental Liability*

Project Engineer for liability estimation of former MGP sites located in Illinois, Michigan, and Wisconsin. Duties included: annual environmental liability estimation based on historic data, current site status, future use plans, and knowledge of current environmental regulations and closure procedures.

### *Coal Combustion*

Field Engineer/On-Site Environmental Liaison between a major coke-production facility in Pittsburgh, PA and the Pennsylvania Department of Environmental Protection (PADEP). Duties included performing on-site environmental emissions readings (EPA Method 9) while comparing findings to the results of an on-site PADEP representative. It was determined the PADEP representative's readings were consistently 15-20% higher than a certified in-house employee, certified contractor, and personal readings. Further research was conducted to ensure PADEP was following the Method 9 procedure correctly. It was found that the PADEP representative was taking emission readings from an incorrect viewing angle, which deemed the majority of their readings invalid, in turn saving the client an estimated \$250,000 in emission limitation overage fines.

Project/Field Engineer for on-site environmental inspections at one of the country's largest steel manufacturers in Pittsburgh, PA. Duties included: inspection and testing of wastewater outflows, benzene/creosote pumping stations, air quality, and hazardous waste management measures. Increased measures of hazardous waste management, such as ensuring all hazardous wastes were consistently enclosed in a fenced area under lock and key were implemented based on the initial inspection.

Project Engineer for air permitting and compliance services to a variety of industrial clients throughout the United States and Canada. Industries included: petroleum and natural gas facilities, and steel, chemical, coke, concrete, and electrical contact manufacturers. Duties included: Title V renewal applications, major and minor source permit applications, RICE investigations, and AEI, TRI, Tier II, NPDES, and MACT reporting.

## Areas of Expertise

- Soil and sediment logging, bedrock coring
- Geologic and hydrogeological interpretation
- Groundwater flow and transport numerical modeling
- Geographic Information Systems (GIS)

## Education

- M.S., Hydrogeology  
Illinois State University, 2013
- B.A., Geology & Spanish  
Augustana College, 2011

## Professional History

- Natural Resource Technology, Inc. (May 2013 – Present)

## Other Training

- Geographic Information Systems (GIS) Certificate  
Illinois State University, 2013
- 40-Hour OSHA Health & Safety Training for Hazardous Waste Operations
- 8-Hour OSHA Refresher
- Wisconsin Department of Natural Resources Boating Safety Training
- Missouri DNR Well Installers Permit

## Publications

- Hoefle, Patrick, "Spatial and Temporal Variations of Surface Water Geochemistry Downstream the Pierina Gold Mine, Ancash, Peru" M.S. Thesis at Illinois State University
- Hoefle, Patrick, "Chemistry of Drinking Water of Northern Thailand" 2011, Geological Society of America Abstracts with Programs, Vol. 43, No.1, p. 89

## Summary of Qualifications

Mr. Hoefle has 4 years of research experience and field work in the environmental sciences, assessing heavy metal contamination (with an emphasis on arsenic) and its effect on the local water bodies. His consulting experience includes; soil boring and logging, bedrock coring and logging, well installation and development, report preparation and writing, packer testing (or Lugeon Test), slug testing, quality assurance/quality control for river dredging activities, post dredging cap placement confirmation, groundwater sampling, work-plan writing, soil sampling, and project oversight. He is experienced with oversight and logging samples collected from Rotary, Mud Rotary, Geoprobe, Sonic, and Vibracore styles of drilling.

## Representative Project Experience

### *Investigations*

Hydrogeologist for a coal ash landfill detailed site investigation in Missouri where field work activities included; packer testing, bedrock coring, soil boring and logging, well installation, slug testing, driller oversight, and water level measurements. Project supporting tasks have included preparing digital logs in gINT, developing and working with cross sections, and creating groundwater flow maps. Mr. Hoefle logged soil and rock using a variety of drilling methods.

Hydrogeologist for contaminated sediments investigation. Mr. Hoefle logged vibracore samples, determined areas to be sent in for analysis, sample collection and preparation, and assisted with collection of sediment cores.

Hydrogeologist for an investigation of creosote coal tar contamination at a former metals foundry and fabrication facility in Wisconsin. Field activities included soil logging of geoprobe samples, groundwater sampling, well development, and driller oversight.

Primary author for annual report for an MGP site in Wisconsin. Interpretation of the new data was transcribed and updated into the report annually. Spreadsheets and appendices were updated or created. Completed and submitted service requests and assisted in the selection and procurement of subcontractors. Ensured the subcontractors agreements, certificates of insurance, and health and safety plans were up to date. Mr. Hoefle worked in the field to oversee the abandonment and installation of a new well.

Hydrogeologist for investigation of subsurface geology at a municipal landfill in Michigan. Assisted with the development and completion of the health and safety plan as well as field activities, which included soil logging, well installation and development, water levels, and driller oversight.

Hydrogeologist for investigation of MGP contaminated river sediments in Illinois. Assisted with daily sample preparation, sediment logging, and driller oversight.

## Academic Research Experience

Researched the spatial and temporal variations of heavy metal concentrations downstream of a gold mine in Peru. Surface water samples were collected from many streams and tributaries to determine spatial variations within the stream environment. Samples were also collected during different seasons to determine the temporal variations.

Examined water geochemistry of a variety of surface water locations in Northern Thailand. These results were compared to other areas of high arsenic contamination in Southeast Asia in an effort to better understand the elevated arsenic concentrations of this region.

## Areas of Expertise

- Site Remediation Program Remediation/ Closure
- Leaking Underground Storage Tanks Remediation/Closure
- Site specific soil cleanup standard development
- Regulatory agency liaison support and regulatory compliance
- Soil and groundwater investigation and remediation involving a wide variety of contaminant types
- Vapor intrusion sampling, data evaluation using modeling and mitigation system design and installation
- Design and construction of remedial measures for redevelopment
- Alternate technologies; soil vapor extraction, bioremediation, air-sparging.
- Feasibility studies for conventional and innovative technologies/approaches
- Regulatory negotiation and permitting
- Stormwater permitting and SPCC Plan development
- NEPA studies
- Energy and Compliance Auditing

## Education

- B.S., Chemical Engineering, University of Illinois-Chicago, 1991

## Professional Registrations

- Professional Engineer, #062-051713 - IL
- Certified Energy Auditor – In Training
- LEED AP

## Summary of Qualifications

Twenty-three years of experience in environmental consulting engineering involving the remedial planning, design, construction, and operation and monitoring of various environmental management sites. Experience includes oversight for construction of buildings and roads, risk-based remediation, energy and compliance audits, designing in-situ and bioremediation systems, environmental engineering design, and Phase I and II Environmental Site Assessments. Ms. Hofmann has successfully negotiated with enforcement agencies such as the Illinois Environmental Protection Agency and other states (Michigan, Utah, New York, etc.) for site closure on complex sites to reduce cost through the application and development of risk-based remediation objectives, evaluation of remedial alternatives and estimation of remedial costs. She has provided expert witness testimony related to site investigation and remediation projects for a major pipeline company and the City of Chicago. She also has experience assisting with contractual negotiations through documentation and demonstration of human health and environmental risk to clients as prospective buyers and sellers (developers and their finance institutions) during property transfers.

## Representative Project Experience

### ***Design, Construction & Operation of Remediation Systems***

For various road and construction projects in Illinois, provided environmental investigation, developed environmental management strategies to minimize environmental remediation efforts and cost for the construction of roads, buildings and other structures. Incorporated the strategies into AOR/EOR plans and specifications for bidding and construction, and provided environmental engineering oversight and project management during construction. As the Design/ Build Project Manager for remediation treatment systems, responsible for contracting, preparing specifications, procuring equipment, providing construction management and technical support during startup and operation and maintenance.

### ***Voluntary Cleanup and Risk-Based Programs/Leaking USTs***

Project Manager for voluntary state cleanups throughout the United States under programs such as Illinois' Site Remediation Program, Michigan's Environmental Remediation (Part 201), Utah's Voluntary Cleanup Program and various other state programs including Illinois Leaking Underground Storage Tank Program for private and federal sites. Conducted evaluations under risk-based programs such as Illinois' Tiered Approach to Corrective Action Objectives (TACO). Worked as both Project Manager and field engineer for site investigations, prepared and implemented corrective action plans and closure reports. Provided technical support for state and federal Remedial Investigation/ Feasibility Studies.

### ***Environmental Site Assessment/NEPA***

Conducted Phase I Environmental Site Assessments for industrial and commercial properties. Conducted NEPA studies for the CDOT for new road alignments and expansion of road and foot bridges. Prepared Phase II Environmental Site Assessment reports for sites that included storage tanks, an auto service station, metal finishing shop, dry cleaners, former manufactured gas plants, CERCLA sites, RCRA sites, and various crude oil

## Professional History

- Natural Resource Technology, Inc. (2014 to Present), Senior Engineer
- GaiaTech, Inc. (2011 to 2014), Senior Engineer
- Kowalenko Consulting Group, Inc. (2007 to 2011), Senior Engineer
- Greenwood Environmental Consulting, Inc. (2000 to 2007), Senior Environmental Engineer
- Montgomery Watson-Harza Engineering, Inc. (1997 to 2000), Senior Environmental Engineer
- Rust Environment & Infrastructure, Inc. (1992-1997), Environmental Engineer.
- Chemical Waste Management, Inc. (1991-1992), Environmental Engineer

## Representative Project Experience (continued)

and gasoline pipeline releases. Prepared new work plans consistent with ROD requirements that incorporated past site assessments, feasibility and pilot studies, concerns that instituted change in remedial action, in order to implement a new remedial action plan. Developed public fact sheet outlining sites conditions, past feasibility studies and pilot studies, current recommendations and action plan.

### ***In-Situ and Bioremediation Technologies***

As Project Manager, designed and performed assessments and pilot studies for soil vapor extraction, bioventing, air sparging and natural attenuation at petroleum impacted sites for a major pipeline and oil company. Conducted and coordinated designs, provided engineering supervision during construction of *in situ* systems, and operated several soil vapor extraction, bioventing, air sparge and chemical oxidation systems.

### ***Litigation Support***

Provided environmental oversight during redevelopment of a school at an industrial property to assess subsurface soil and groundwater conditions. The investigation indicated the release of metals from past site operations. Prepared Remedial Action Plan under Illinois Site Remediation Program (SRP) requirements and provided testimony on behalf of the Public Building Commission of Chicago (PBC) in a an insurance recovery action against the former tenant. Directed remediation efforts for an enforcement action of a crude oil pipeline release and provided testimony on behalf of Amoco Pipeline Company during an insurance recovery effort,

### ***MGP Sites***

Project manager for upland investigations of former MGP sites in the USEPA Superfund Alternative Sites program. In addition, conducted Phase I on former MGP site for private developer and represented developer as Owner on Technical Committee of RI/FS Group. Develop site-specific QAPPs and work plans, including QA/QC, for multiple sites within the City of Chicago and Milwaukee. Coordinated and managed field sampling efforts, data analysis, reporting, and agency negotiations.

### ***Environmental Permitting/Pollution Prevention***

Prepared Environmental Protection Plan for the Tunnel and Reservoir Plan (TARP - Deep Tunnel Project) which included mining NPDES permits ILG84 (including 3510 forms and pertinent schedules), prepared Storm Water Pollution Prevention Plans (SWPPP) and/or Spill Prevention Control and Countermeasures (SPCC) Plans, air permits (non-Title V for environmental remediation systems), solid waste and waste water discharge plans. Designed and permitted wastewater pretreatment for discharge to the local wastewater treatment plant such as the Metropolitan Water Reclamation District of Greater Chicago. Completed significant industrial user pretreatment and supporting documents.

### ***Energy Auditing***

Assisted in energy audit following ASHRAE's Level III audit procedures of several commercial facilities evaluating HVAC system, compressors, motors, lifts, and lighting through site assessment. Energy modeling was completed using DOE's EnergyPlus Model for purpose of evaluating Engineer Efficiency Measures, under ComEd's Customer Incentive Program. Also provided technical review of several audits completed as a service provider under Texas Oncor energy incentive program.

## Licenses and Credentials





## Areas of Expertise

- Environmental Due Diligence
- Soil and Groundwater Investigation
- Environmental and Remediation Oversight
- Superfund Alternative Sites
- NEPA / Cultural Resources
- Asbestos / Lead-Based Paint Inspections
- SWPPP Inspections
- Data Management, Interpretation, and Presentation

## Education

- BS in Geology and Environmental Geosciences, Northern Illinois University
- Masters in Business Administration, Keller Graduate School (in progress)

## Professional Registrations

- State of Wisconsin, Asbestos Inspector, #AII-182520
- State of Illinois, Asbestos Inspector, #100-18553
- State of Michigan, Asbestos Inspector, #A39630
- Professional Geologist, #196001339

## Summary of Qualifications

Over five years of experience in various aspects of environmental consulting with primary responsibilities including performing site investigations, providing environmental oversight, and preparing technical reports. Mr. Horan has gained a practical knowledge of a variety of governmental regulations (including State of Illinois and City of Chicago), as well as ASTM standards for a variety of field techniques and reporting best practices.

## Representative Project Experience

### *Environmental Oversight – Wisconsin and Illinois*

Provided environmental oversight during construction activities. Notable experience includes providing waste characterization, manifest recording, and sampling during the construction of the Southwest Area High School for the Public Building Commission of Chicago. Additionally, monitored air emissions and conducting sampling activities during remediation activity at a former industrial facility in East Dundee, Illinois.

### *Site Investigations – Throughout the Great Lakes Region*

Performed a variety of soil and groundwater field investigation techniques. Investigations included soil sampling and logging, well installation and sampling, river sediment sampling, and vapor port installation and sampling. Investigations include post-processing of boring logs, data interpretations, and technical report writing. Technical reports and tables have been prepared to evaluate contamination levels in comparison to applicable screening levels. Site investigation work has also included GPR surveys, which consists of identifying subsurface features, including USTs, through the use of radar. Coordinated with CCDD facilities to obtain certifications of clean material removal in the State of Illinois. Many of these investigations were conducted during risk-based investigations (IEPA SRP) and during subsurface feature removal (tanks, lifts, etc.)

### *Environmental Due Diligence – Nationwide*

Performed hundreds of environmental due diligence reports for properties nationwide. Duties included site assessment, regulatory records review, physical setting review, interviews, historical information review, and any additional services requested. Properties have included agricultural, retail, residential, gas stations, dry cleaners, industrial, and warehouse properties. Reports have been prepared for, but not limited to, the following clients: Public Building Commission of Chicago (Canty Elementary), City of Chicago, O'Reilly Automotive, Inc., Ozinga Concrete, Bridgestone-Firestone, Microsoft Corporation, USDA, JPMorgan Chase, Bank of America, Chevrolet, CB Richard Ellis, Inland, Sears, Love's Travel Centers, Nissan, Wal-Mart, Autozone, Sears, HUD (and IHPA), Northern Trust Company, Wells Fargo, FDIC, Habitat for Humanity, Aldi, and several municipalities.

### **Professional Affiliations**

- National Association of Environmental Professionals (NAEP), 2011 to present
- American Institute of Professional Geologists (AIPG), 2013 to present

### **Professional History**

- Natural Resource Technology (2011 to Present), Geologist
- Terracon Consultants, (2007 to 2011), Environmental Scientist

### **Additional Training**

- 40-Hour OSHA HAZWOPER, 10-Hour OSHA Construction Safety, 8-Hour OSHA Excavation Competent Person
- American Heart Association CPR/First Aid/AED Certification

## **Representative Project Experience (continued)**

### *NEPA Environmental Assessment – Throughout the Great Lakes Region*

NEPA reporting included Indian tribe consultation using the FCC's TCNS, SHPO consultation, USFWS Section 7 consultation, historic district consultation, and Certified Local Government consultation, as well as technical file review of wetlands, floodplains, Coastal Management Zones, mining data, historic preservation documents, archaeological resource documents, noise sources, threatened and endangered species, aquifers, Environmental Justice, and physical setting information. Highlight NEPA-related work has been performed for the Veterans Administration (VA) HUD/IHDA, Cricket Communications, and FEMA.

### *Industrial Hygiene – Nationwide*

Performed, managed, and authored indoor air quality (IAQ) assessments, mold assessments, asbestos surveys, lead-based paint surveys, noise assessments, and radon surveys throughout the country. Responsibilities have included asbestos bulk sample collection, deployment of air quality equipment, mold tape and air sampling, lead-paint XRF testing, completion of HUD Noise Assessment calculations, and radon kit deployment.

### *Superfund Alternative Sites – Wisconsin/Illinois*

Authored several Site-Specific Work Plans (for Remedial Investigations), Completion Reports, Construction Documentation Reports, Remedial Investigation Reports, and Removal Action Work Plans (time-critical) for several properties under the USEPA Superfund Alternative Sites program. Project Geologist for remedial design and environmental management program implementation at a former MGP site located in Chicago, Illinois. Duties included: design of excavation extents, operation of an extensive real-time air monitoring program, environmental data evaluation, training and oversight of field staff, construction oversight, post-excavation soil sampling, geospatially locating site features, and construction documentation.

## Licenses and Credentials



### *Milwaukee Lead/Asbestos Information Center, Inc.*

A Division of Midwest Certified Training, Inc.  
3495 North 124th Street, Brookfield, WI 53005 Phone: 414-481-9070



### *Ronald J. Horan III*

*Has successfully completed a course and passed the examination on February 10, 2015 with a minimum score of 70 percent, that meets all criteria for the State of Illinois and the State of Wisconsin Recertification as an*

### *Asbestos Inspector Refresher Course - English*

**Date of Course:** February 10, 2015  
**Date Issued:** February 10, 2015  
**Date of Expiration:** February 10, 2016  
**Certification Number:** AIR15021051022  
**Location:** Milwaukee Lead/Asbestos Information Center, 3495 North 124th Street,

*Eric Feldmeyer, Director of Milwaukee Lead/Asbestos Information Center, Inc.*  
3495 North 124th Street  
Brookfield, WI 53005  
414-481-9070

This training course complies with the requirements of TSCA Title II and is accredited by the State of Illinois Department of Health and is accredited by the State of Wisconsin Department of Health Services under ch. DHS 159, Wis. Admin. Code.

### **Areas of Expertise**

- Site Investigation and Sampling
- Phase I Investigations
- Ecological Research and Monitoring
- Watershed Science
- Asbestos Inspections

### **Education**

- BS, Biology; Ecology Emphasis, Loyola University Chicago, 2007
- MS, Biology, Murray State University, 2012

### **Additional Training**

- OSHA 40-Hour Hazardous Waste Site Operations (HAZWOPER) Training
- 3-day Asbestos Building Inspector Initial
- Illinois DNR Boater Education Certification
- IATA Dangerous Goods, IATA and DOT Shipping Batteries
- First Aid / CPR Certification
- Fire Safety

### **Professional History**

- Natural Resource Technology, Inc. (2014 to Present), Environmental Scientist
- Martin Environmental Solutions, Inc. (2012-2014), Field Scientist
- Murray State University (2010-2012), Graduate Research Assistant
- Loyola University Chicago (2007-2009), Research Technician and Lab Manager

### **Summary of Qualifications**

Over two years of experience in environmental consulting, specializing in site investigations and reporting. Project experience has focused Phase I and NEPA investigations on telecommunications facilities across the continental United States. Experience includes: environmental site investigation, air monitoring, soil and groundwater sampling, asbestos inspections, environmental reporting and bird monitoring surveys.

Additionally, Mr. Kampman possesses over four years prior experience performing academic-based ecological research. Project experience has focused on biological indicators of freshwater systems, and monitoring various chemical, physical, and biological interactions within systems.

### **Representative Project Experience**

#### ***Investigation Work***

Environmental Scientist for remedial investigation of superfund site located on former gas manufacturing plant. Field activities include hand held air-monitoring, maintenance and oversight of installed air stations, soil sampling, sample documentation, and coordination with construction personnel.

#### ***Phase I Environmental Investigations***

Completed numerous monthly Phase I ESAs (ASTM 1527-05) for clients of various sizes and functions on properties across the continental United States. Representative properties included telecommunications facilities, small commercial/residential developments, farmland, and former gas stations. Duties include report writing, prior report review, regulatory database review, city directory review, site reconnaissance, preliminary asbestos inspections, and soil sampling.

#### ***Avian monitoring***

Mr. Kampman conducted various avian behavioral monitoring surveys and habitat assessments on telecommunications facilities across the state of Florida. He assessed the potential use of habitat by species of immediate concern and recommended best management practices for removing nests from tower sites. Project responsibilities included site reconnaissance, biological observations, reporting, and client communication.

#### ***Biological Research Experience***

Mr. Kampman served as a graduate research assistant on a multi-national collaborative research project investigating the impacts of climate change on aquatic systems within the Alaskan Arctic. His project responsibilities included development of a site-specific sampling plan, site activity scheduling, report and proposal writing, field reconnaissance, sediment sampling and biological and chemical monitoring of various surface waters. Results from Mr. Kampman's research were included in reports and presentations at a number of international conferences.

Mr. Kampman also managed an academic research lab and provided oversight for various biological research projects undertaken by a multitude of undergraduate and graduate students. Notable projects included: stream and wetland habitat surveys, assessments of environmental quality including Index of Biotic Integrity studies, benthic investigations and identification of biological inhabitants, exotoxicological studies of common pharmaceuticals on aquatic biota, and response of stream biological and chemical parameters to water flow variations.

## **Todd A. Lewis**

### **Senior Construction Manager**

#### **Areas of Expertise**

- Management and oversight of large-scale remediation projects
- Scope and Schedule development
- Project risk analysis and mitigation
- Claim mitigation
- SCADA and instrumentation methodologies
- Safety management and compliance
- Large and small scale pilot testing of environmental processes
- Value engineering
- Start up and commission of active remediation systems and waste water treatment systems

#### **Education**

- University of Illinois

#### **Special Training /Certification**

- HAZWOPER 40 hour and supervisor
- US Army Corps of Engineers Construction Quality Management (CQM)
- Radiation Worker Training (CFR 19.12)
- Class K Illinois waste water treatment certified operator (Operator ID 246329999)
- Operation of Cass 7 rough terrain forklifts.

#### **Professional Affiliations**

- The Construction Institute
- American Society of Civil Engineers

#### **Summary of Qualifications**

Twenty-nine years of construction and environmental services experience specializing in Design/Build project delivery and design optimization. Projects and service sectors include environmental remediation, sediment management, wastewater treatment, oil and gas and bio-gas industries. Mr. Lewis has managed complex multiple year environmental construction projects including for the City of Chicago Public Building Commission (PBC), USEPA and State directed projects exceeding \$30 million. Construction management experience includes achieving Remedy-in-Place status for two USEPA superfund projects. He is a construction professional able to identify, analyze and resolve complex problems, with strong and efficient abilities to lead staff, direct project planning, design, scheduling, procurement, cost control, and client coordination.

#### **Representative Project Experience**

##### ***Environmental Remediation***

Project Manager for the PBC Whitney Young Library remediation project. The project required site remediation and preparation for future library redevelopment. This lump sum contract included submission of multiple Work Plans, site maintenance & security, demolition of subsurface structures, removal of VOC impacted soils, in-situ chemical oxidation of impacted soil, excavation water management, construction of an engineered barrier, construction of storm water collection systems and site restoration. The project was conducted between March 2013 and November 2013 in accordance with IEPA requirements and grant reimbursement documentation. Excavation limits to the property boundaries required approval of soil retention systems and specialized construction methods. The project was conducted without utility interruption and comprehensive survey control to protect surrounding buildings, sidewalks and streets. Contract goals for MBE/WBE and local community participation were met or exceeded and the work was completed safely without any recorded injury.

Construction Manager for design and conducting site remediation utilizing in situ stabilization/solidification (ISS) of 240,000 cubic yards of coal tar impacted soil at a former manufactured gas plant (MGP) site in northern Illinois. This project was identified as time-critical by USEPA Region 5 to address impacts created from gas manufacturing that began in 1912. By incorporating ISS into the project design, NRT significantly reduced the project cost and schedule compared to other remediation alternatives. The ISS operation covers 13 acres and is located near Lake Michigan and urbanized municipalities. Remediation began in 2013 and is anticipated to be completed in 2014. Preconstruction work tasks included obtaining local and state permits, measures to minimize potential impacts to the community during remedial construction, and hydraulic modeling to evaluate the potential for flooding. Site activities include vegetative clearing of more than 30 years of growth, fence construction, demolition of former foundations, excavation & removal of shallow soils, treatment and discharge of excavation water, ISS of impacted soil and site restoration. Quality control activities include continuous on site surveys, material documentation & management, treated soil sample collection & analysis and collection real-time electronic process monitoring.

## Professional History

- Natural Resource Technology, Inc. (2012 to Present), Senior Construction Manager
- Science Applications International Corp. (SAIC) (2010 -2012), Project Manager
- MWH Constructors, Regional Manager and Business Unit Leader (1994-2009),

## Representative Project Experience (continued)

Construction Manager for the remedial design and action of buried waste, containment and groundwater treatment of a Superfund site in Indiana. Contract value of over \$30M for executing fast-track remediation activities and water treatment facility construction through design/build construction contracts. The first design-build project conducted under Superfund Region 5 included construction of 5,500 feet of subsurface barrier wall using insitu soil mixing, soil/membrane caps, groundwater extraction systems, groundwater treatment system, wetland remediation through excavation of impacted material, buried drum removal, ISVE systems and vapor treatment units. Between 2004 and 2009, completed in-situ chemical oxidation treatment of upper aquifer groundwater in public roadway. While completing hazardous waste management activities, a complex water treatment system was constructed, utilizing phase separation, chemical separation, oxidation, air stripping, pH precipitation, flocculation, clarification, biological digestion, multimedia filtration, activated carbon filtration, nano filtration and UV oxidation. Responsible for on-going operation and maintenance of the site and the water treatment facility for 11 years. The site achieved US EPA closure status and recorded more than 4,000 days without a lost time injury.

Construction manager for a petroleum client, to address process facilities and UST leaks. Sites located in Iowa, South Boston Massachusetts, and New York. Role in project included design oversight, procurement and execution of site work. Environmental remedies included contaminated soil removal and vapor extraction systems and operating locations with limited access. In-situ and ex-situ bio-remediation at former terminal locations. Work included surveys, excavation, material management, paving, vapor management systems and excavation dewatering.

Project Manager for landfill remediation, in Northern Illinois. Responsible for all aspects of the project including remedial design and regulatory closure. The project was at an un-licensed landfill site and achieved residential closure standards after completion of the site remedial actions. The work scope required installing a hydraulic cutoff wall than was constructed in-situ through mixing of site soil with amendments, waste characterization for disposal, dewatering as needed with off-site disposal of collected water, excavation of the landfill. Approximately 65,000 tons of solid waste was excavated, transported and disposed of off-site. During the project, over 1 million gallons of groundwater was collected and transported off site for disposal at the local POTW. Conducted sidewall and bottom soil sampling to demonstrate residential clean closure of the site.

Project Manager for remedial construction at the Monitored Devices Superfund Site, Farmingdale NJ for USACE Kansas City. Provided remedial design optimization of in-situ treatment system to address a large TCE plume at municipal airport. Project achieved remedy in place status.

Executive and project management of the engineering, construction and startup of multiple produced water treatment facilities in remote Utah oil and gas fields for a petroleum client. Work included excavation and placement of over 100,000 tons of rock and soil and installation of 30 acres of HDPE flexible membrane liner. The water treatment facilities recycle over 50 million gallons per year for industrial re-use.

# Sarah L. Meyer

## Senior Scientist

### Areas of Expertise

- Contaminated sediment and soil removal investigation
- Multi-media site investigations for evaluating human health and environmental risks
- Project management
- Vapor intrusion assessment at MGP sites
- Environmental emergency response and time-critical removal
- Design and implementation of Sampling and Quality Assurance/ Quality Control Plans
- Client service

### Education

- MS, Marine Sciences, University of North Carolina at Chapel Hill, 1998
- BA, Chemistry, Boston University, 1993

### Professional Affiliations

- Western Dredging Association (WEDA)
- Federation of Environmental Technologists (FET)

### Summary of Qualifications

Fifteen years of professional experience in consulting and environmental research throughout the Great Lakes Region. Key member of Natural Resource Technology's sediment practice focusing on sediment issues associated with large sediment sites, including the Fox River in Wisconsin, the Ottawa River in Ohio, and former manufactured gas plant (MGP) sites on the Chicago River. Ms. Meyer has worked with USEPA's Great Lakes National Program Office (GLNPO) in design and implementation of investigation and quality control programs at sediment sites on the Ottawa River, Menekaunee Harbor, Tannery Bay, and Ruddiman Creek and is the Quality Assurance (QA) Officer for NRT's current contract with GLNPO. As a project manager for the Region 5 USEPA Superfund Technical Assessment and Response Team (START) contractor, her work included contaminant removal and risk mitigation at abandoned industrial facilities and illegal drum and waste dumps, and large-scale contaminated soil and sediment removal projects in the Great Lakes Region. Currently, Ms. Meyer is chair of NRT's QA Committee.

### Representative Project Experience

#### *Sediment Characterization Sites*

Construction Quality Control Operations Manager for dredging operations at the USEPA GLNPO Ottawa River Sediment Remediation Site. Developed Construction Quality Assurance Plan (CQAP) for dredging operations in river contaminated with polycyclic aromatic hydrocarbons (PAH) and metals. Guided field team in field quality control (QC) and QA for dredge completion and turbidity control. Worked with dredging contractor to ensure quality execution of contract specifications.

Quality Assurance Manager for dredging operations at the USEPA GLNPO East Branch of the Grand Calumet River Site, Reaches 4a4b. Developed QAPP and Field Sampling Plan for pre-dredge sampling and characterization operations for sediment, soil, and pore water contaminated with PAHs and metals.

Project manager for intensive field and data management effort for high-profile, short-term USEPA site on the Tittabawassee River, MI. Investigated, documented, and evaluated the extent of high-concentration dioxin and furan contamination in a residential floodplain. Developed high-density surface and sub-surface soil sampling plan. Managed and coordinated seven field personnel, ten quality- and data-management personnel, and two contract laboratories to collect, process, and report sampling results. Prepared and presented results to client and local stakeholders, and responded to information requests for immediate decision-making needs of headquarters-level client representatives.

Used  $^{210}\text{Pb}$  as a tracer, along with a decay model, to describe sediment accumulation and mixing in Lake Michigan sediments for lake-wide database developed at the Great Lakes WATER Institute. Collected over 100 sediment cores as part of a comprehensive sediment survey of Lake Michigan.

## Professional History

- Natural Resource Technology, Inc., (2008-Present), Senior Scientist
- Weston Solutions, Inc., (2000 to 2008), Project Manager
- National Maritime Museum Association (1999-2000), Instructor
- Great Lakes WATER Institute (1996-1999), Analytical Specialist

## Other Certifications

- Optimizing Decision-Making and Remediation at Complex Sediment Sites, 20-hour development, Hazardous Substance Research Center/S&SW (2008)
- Professional Certificate in Watershed Management, Michigan State University (2006)
- American Chemical Society Certificate of Professional Education (1993)
- Federal Emergency Management Agency Incident Command System Training, Levels 100, 200, and 300 (2004 through 2006)

## Representative Project Experience (continued)

Developed field sampling plan and Quality Assurance Project Plan (QAPP) for pre-dredge characterization of the Waukegan Outer Harbor, IL, and led a field team in collecting sediment and surface water from the harbor for the USACE Chicago District. Directed team in safe sample collection using a barge-mounted Geoprobe. Sediments collected up to eight feet below the mudline for use in laboratory elutriate studies.

### *MGP Sites*

Project manager for upland and river investigations of former MGP sites in the USEPA Superfund Alternative Sites program. Used a multi-site framework to develop site-specific QAPPs and work plans, including QA/QC, for multiple sites on the Chicago River owned by the same client. Characterized the extent of contamination in upland and river media related to MGP impacts. Coordinated and managed field sampling efforts, data analysis, reporting, and agency negotiations.

Quality Assurance Manager for In-Situ Stabilization (ISS) operations at the Sanford MGP Site, FL. Developed CQAP to define objectives and limits for construction. Monitored field QC, performed QA audit and implemented corrective actions in data storage methods. Provided QA support for development of follow-up groundwater monitoring plan.

### *Dredging Oversight Sites*

Oversight team member for the Fox River PCB sediment remediation project with Wisconsin Department of Natural Resources (WDNR). Provided data and document review of sampling and long-term monitoring plans, QAPP. Construction QAPP, work plans and other technical documents to ensure use of state of the art procedures during remediation and collection of field data that can provide evidence that remediation results comply with the Record of Decision (ROD). Performed construction oversight of dredging, capping and sampling efforts on behalf of USEPA and WDNR.

Project manager for field team that provided oversight of dredging and removal of PCB-contaminated sediment and floodplain soil of the Kalamazoo River, MI. Team collected samples for residual monitoring, and documented and produced data reports. Provided technical expertise to client and additional regulatory stakeholders for assessment of removal effectiveness for first two years of long-term removal project.

### *USEPA START Emergency Response and Time-critical Removal Sites*

In support of USEPA, managed small-and large-team support at emergency response and time-critical removal sites. Provided immediate response to USEPA needs for evaluating and implementing methods for controlling sources and maintaining protection of human health and the environment at environmental disasters such as the I-35W Bridge Collapse (MN, 2007), the Rouge River Mystery Oil Spill (MI, 2003), and mercury, petroleum product, hazardous waste, and unknown releases (2000-2008). Developed and implemented air, soil, water, and sediment sampling and monitoring plans, health and safety plans, QAPPs, and removal cost estimates; identified waste streams; and provided oversight of removal contractors for implementation of USEPA-approved actions.



## **John M. Nardozzi, PE**

### **Vice President/Principal Engineer**

#### **Areas of Expertise**

- Environmental engineering for site restoration and Brownfield redevelopment
- Management and oversight of large-scale remediation projects
- Regulatory negotiation and permitting
- Stormwater permitting and SPCC Plan development
- Remedial design and implementation to address soil and groundwater impacts
- Environmental due diligence
- Cost estimating for evaluation of remedial alternatives and project planning and budgeting
- Vapor intrusion assessment; ASTM vapor encroachment training
- Site closure strategy development and implementation
- Litigation Support
- Identification of grant opportunities and funding sources

#### **Education**

- Graduate Studies, Environmental Engineering, Illinois Institute of Technology
- B.S., Civil Engineering, Lafayette College, 1979

#### **Professional Registrations**

- Professional Engineer, #062-041698 - IL
- Professional Engineer, #PE10910582 - IN

#### **Summary of Qualifications**

Thirty-six years of professional experience in the environmental consulting and engineering fields with leadership positions that involve business development, staff management, and technical guidance to secure and successfully execute a wide range of environmental projects. He has managed large-scale site remediation projects including the investigation, remedial design and remediation construction phases to obtain site closure. Mr. Nardozzi has significant experience in the development of site closure strategies for environmentally impaired sites. He is well-versed on the application and development of risk-based remediation objectives, evaluation of remedial alternatives and estimation of remedial costs. He has provided expert witness testimony related to site investigation and remediation projects.

Mr. Nardozzi has assisted several clients secure Illinois Brownfield Grant Funding for redevelopment sites and has directly interfaced with IEPA regarding preparation of progress reports, grant reimbursement requests, and grant close-out documentation. He has also worked on USEPA grant funded programs and the Illinois River Edge Redevelopment Program.

#### **Representative Project Experience**

##### *PBC and Local Agency Environmental Services*

**Project Principal, Whitney Young Library Site, Chicago, IL** – Provided PE oversight and management for remedial contracting services related to the Whitney Young Library Site. Completed in November 2013, the project included on-site soil treatment to address PCE contamination from former dry cleaning operations. Oversaw the cost estimating during the proposal stage for in-situ chemical oxidation, soil excavation and disposal, and site civil work. Conducted QA/QC review of project deliverables; supported documentation efforts to secure Brownfield grant funding.

**Project Principal, Environmental Services, Cauty Elementary School, Chicago, IL**– Provided support to project including initial coordination of site assessment tasks including Phase I ESA, electromagnetic /GPR survey and limited soil assessment. Provided final QA review of environmental project specifications and interfaced with PBC's managing environmental consultant.

**Principal/Environmental Manager, Environmental Services, Various PBC Projects (2007 to 2010).** Project role included review of project scopes and work plans, development of site closure strategies and QA/QC review of project deliverables. Selected projects included Brighton Park I Elementary School, Valley Forge Park and Fieldhouse, and Taylor Lauridsen Fieldhouse. Oversaw compliance with MBE/WBE participation requirements.

**Principal in Charge, Environmental Assessment and Engineering Contract, City of Chicago, Department of Environment (1993 – 2010).** Performed a wide variety of environmental assignments including UST removal and closure, design and installation oversight for new tank facilities, Phase I and Phase II environmental site assessments, and site investigation/closure projects under the Illinois SRP program. Attained NFR letters to document successful site closure. Projects performed under Mr. Nardozzi's direction included Dominick Street Phase II ESA, Phase I and II ESA for 1801 N. Milwaukee Avenue, Phase II ESA for 4759 N. Laramie Avenue, and Phase II for 6800 West Irving Park Road, Chicago.

## Professional Affiliations

- Air & Waste Management Association – LM (A&WMA- LM)
- Illinois Association of Environmental Professionals (IAEP)

## Professional History

- Natural Resource Technology, Inc. (2010 to Present), Vice President/Principal Engineer
- Terracon Consultants, Inc. (2002 - 2010), Principal/Environmental Department Manager
- ENSR (2000-2002), Department Manager/Senior Program Manager
- Environmental Science & Engineering (1990-2000), Associate Vice President / Senior Project Manager
- RJN Environmental (1987 to 1990), Business Development Manager
- Chicago Bridge & Iron Co. / Walker Process Corporation (1979 to 1987), Field/Contract Engineer

## Publications - Presentations

Authored or coauthored a number of publications and presentations on the subjects of Brownfield redevelopment, industrial stormwater regulations and Illinois environmental regulatory programs.

## Brownfields

Selected to participate as a Brownfields Technical Advisor for the Brownfields 2015 Conference in Chicago, IL, September, 2015

## Representative Project Experience (continued)

### *SRP Site Investigation and Remediation*

**Senior Project Manager, Lucent Technologies, Montgomery Works, IL**  
Provided technical direction for the subsurface groundwater and soil investigation of a 45-acre electronics manufacturing facility in Montgomery, IL that was undergoing decommissioning. Project objective was to determine the extent of VOC and other contamination that resulted from an 80-year history of manufacturing. Investigation included installation of nested monitoring wells, soil-gas survey, groundwater and soil sampling, geophysical survey, and background data collection. Supplemental actions included installation of over 30 monitoring wells to profile contamination in fractured bedrock and identify source areas. Assisted client with enrollment into Illinois EPA SRP and provided interface with Agency personnel. Managed the preparation of a remedial action plan and remedial objectives report for source areas impacted by TCE and TCA contamination. Coordinated report review through Illinois SRP. Provided oversight for the implementation of low temperature thermal desorption treatment of 32,000 tons of solvent-impacted soil and groundwater dewatering system. Activities included obtaining air and wastewater discharge permits, subcontractor selection and management, negotiations with IEPA, community relations and construction management. Obtained IEPA approval of Remedial Action Completion Report. Contract value was \$4.2 million.

**LaQuinta Hotel Redevelopment, Chicago, IL – Senior Project Manager**  
for the due diligence and remediation of a new hotel redevelopment in downtown Chicago. Provided senior technical oversight and client liaison for Phase I ESA, Phase II ESA, investigation and closure of USTs underneath the basement of the building, and SRP investigation and remediation of impacted soils. Also provided oversight related to a comprehensive asbestos inspection and abatement program. Successfully secured a NFR letter.

**Waubensee Community College – Downtown Aurora Campus – Senior Project Manager** through all phases of work from Phase I due diligence through receipt of No Further Remediation (NFR) letter. Initial scopes of Phase I and Phase II ESAs identified several key environmental issues associated with the historical industrial uses of the property. Implemented a site-wide investigation and remediation program under the SRP. Supervised the design and preparation of bid specifications for remediation and interfaced with the Construction Manager to dovetail remediation with building construction. Comprehensive NFR letter issued in March, 2010.

**G&A Construction & Development Sites, Chicago, IL - Senior Project Manager** for the site investigation of two redevelopment parcels prior to construction of new residential (senior housing) buildings for G&A Construction and Development. At 1818 West Peterson, directed the investigation of the site and enrollment in the Illinois SRP. Facilitated issuance of a draft NFR letter on a fast track basis to allow construction financing to be secured. Obtained final NFR letter and satisfied lender requirements for environmental compliance. At 1750 N. Spaulding designed a geosynthetic clay liner to serve as an engineered barrier. Achieved NFR closure for the site.

## **Representative Project Experience (continued)**

### *Brownfields and Site Redevelopment*

**City of Elgin Environmental Services** - Principal in Charge for the City of Elgin's Brownfield Redevelopment Program and related environmental services 1993 to present. Prepared successful application for the Illinois Municipal Brownfields Redevelopment Grant Program to secure funding. Conducted site investigation and prepared reports for review by IEPA. Developed integrated site closure strategy to combine multiple industrial sites into a useable 22-acre redevelopment parcel for future residential development. Existing sites included scrap metal salvage yards, lumber yards and a former public works garage. The site investigation process assessed soil and groundwater pursuant to the Illinois SRP and TACO regulations. Contaminants included petroleum, PCBs, metals and dioxin/furans. Prepared bid specifications for remediation and managed \$2.2 million of site clean-up work. The remediation program is aimed at future reuse as a residential redevelopment. One No Further Remediation letter has been issued; other NFR letters are pending completion of additional work.

Senior Project Manager for a multi-discipline environmental and geotechnical assessment of a 90-acre site intended for redevelopment as a new warehouse/corporate headquarters facility in Elgin, Illinois. Directed due diligence services including preparation of a Phase I environmental site assessment (ESA), preliminary Phase II site investigation, geotechnical exploration and asbestos survey. Developed a comprehensive \$3.5 million cost estimate for proposed remediation and abatement of the site which was used as a basis for negotiation of the property transaction between the City of Elgin and the State of Illinois.

### *Underground Storage Tank Closure*

**Principal Engineer, Prairie Creek UST Remediation, Marion, IL** – Provide PE oversight for remediation of former UST site at Crab Orchard Wildlife Refuge on behalf of the USFWS. Performed QA review of project deliverables including work plans and Corrective Action Completion Report. Assisted client in developing appropriate site closure strategies based on Illinois LUST regulations.

### *Former Manufactured Gas Plant Sites*

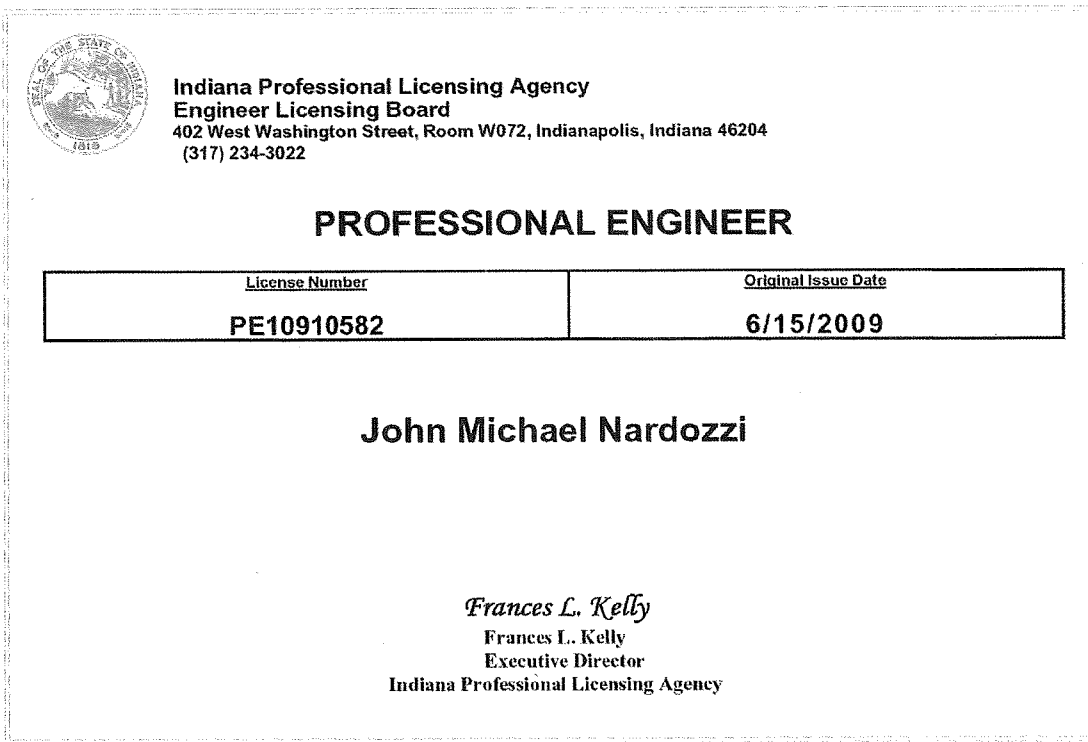
**Principal Engineer, Crawford Station MGP Site, Chicago, IL** – Principal in Charge and Project Manager for the planning and oversight of remediation work at the Crawford Station MGP site in Chicago, IL. Supervised development of a Removal Action Work Plan, preparation of plans and specifications, interfaced with client and regulatory authorities, and coordinated the work with the Construction Manager. Provided management oversight of the environmental aspects of the remedial work, including confirmation sampling, wastewater discharge, and waste disposal issues. Crawford site is one of the largest former MGP sites in Chicago (260 acres) and represents a >\$100 million remediation program.

### *Litigation Support*

#### **Crivello-Carlson, SC, Litigation Support, Milwaukee, WI** –

Mr. Nardozzi is providing expert services related to a UST issue that resulted in damages to a fleet of buses. Mr. Nardozzi reviewed file information related to the incident, conducted a detailed site inspection and developed a technical report to assist counsel in the defense of a contractor that was involved at the site.

## Licenses and Credentials



## Areas of Expertise

- Site Remediation Program Remediation/Closure
- Hydrogeologic investigations at industrial sites including both organic and inorganic wastes using a wide variety of sampling techniques
- Soil Vapor Collection
- Hydrogeologic characterization of wetlands
- Groundwater flow and transport modeling
- Aquifer testing and data analysis
- Treatment system O&M
- Remediation Project Management
- Geophysical data interpretation
- Data management, data interpretation/presentation

## Education

- B.A., Geology, Augustana College, 1999

## Professional Registrations

- Professional Geologist – #196-001230 – IL

## Professional Affiliations

- Association of Environmental & Engineering Geologists
- American Institute of Professional Geologists

## Summary of Qualifications

Thirteen years of environmental consulting experience with a background in geology and soil science. Performed over 20 site remediation projects, 50 underground storage tank removal projects, over 100 soil boring investigations, and over 20 Phase I environmental site assessments along with numerous other groundwater and remediation projects. Contaminants of concern included petroleum products, chlorinated organics, coal gasification byproducts, solid waste fill material, metals, and PCBs. Project sites have covered municipal facilities, agricultural land, forest preserves, schools, and commercial and industrial facilities located throughout Illinois, Indiana, Wisconsin, and Michigan. Modeling experience includes applications using analytical and numerical groundwater flow and transport models developed by the U.S. Geological Survey and Illinois Environmental Protection Agency. Developed advection dispersion models for multiple contaminants using site specific and chemical specific retardation factors. Consulting activities include; project management, project proposals, budgeting, scheduling, data analysis, report preparation, well installation, soil vapor readings, aquifer testing and sample collection of rock, soil, and groundwater.

## Representative Project Experience

Managed and conducted various investigation and remediation work as the Managing Environmental Consultant for the Public Building Commission of Chicago. Activities include in-situ/ex-situ remediation, large scale soil/solid waste removal, and soil and groundwater sampling for a wide range of contaminants. Worked in close association with various local, state, and federal authorities to facilitate the remediation/closure of multiple project sites in accordance with the IEPA Site Remediation Program (SRP) and Office of Brownfields Assistance. Sources included underground storage tanks, dry cleaners, PNA, halogenated solvents, and metal impacted soils. Site investigation activities also included ground-penetrating radar, test trenching, and asbestos containing material surveys. Responsibilities included designing remediation strategies and technologies, forecasting and managing budgets, cost benefit analysis for remediation strategies, modeling of observed impact, oversight of building demolition, oversight of soil removal, soil core logging, soil boring layout, boring log development, backfill clearance, technical review meetings, and regular status meetings.

Team Leader and Project Manager for the planning/design, reporting and oversight of the Time Critical Removal Action to address near- and sub-surface MGP source material. Developed a comprehensive Removal Action Work Plan (RAWP) based on historical site investigation data and supplemented with additional site data obtained through soil borings, groundwater monitoring, test pits, and further historical research. Coordinated multiple staffing and project requirements, as well as conducted regular progress updates to the client and USEPA. Designed additional and separate excavation on nearby portions of the site concurrent with overseeing and coordinating initial source removal actions.

## Professional History

- Natural Resource Technology, Inc. (2011 to Present), Geologist
- Terracon Consultants, Inc. (2007 to 2011) Senior Staff Geologist/Project Manager
- Integrity Environmental Services Inc., (2001-2007), Project Manager
- GSC Environmental Laboratories, Inc. (1999-2001) Environmental Specialist

## Other Achievements

- 40-Hour OSHA Hazardous Waste Site Operations (HAZWOPER) Training and relevant annual refreshers, 1999
- 10-Hour Occupational Safety and Health Training Course, Construction Safety & Health, 1999

## Representative Project Experience (continued)

Project Manager and lead field person for site investigation soil boring work and coordinated remediation sampling activities consisting of soil, groundwater, air, and wipe sampling for a range of known contaminants. Known RECs included seven underground storage tanks, PCB contamination, hydraulic fluid, and used oil. Property was divided into nine sectors based on prior use, geography and contaminants of concern in order to organize and expedite site activities and reporting.

Responsibilities also included soil core logging, groundwater depth/direction determination, soil boring layout, and boring log development. The former industrial property was remediated to residential cleanup objectives following removal of impacted soil for future use as a school. Worked closely with Illinois Environmental Protection Agency during their regular on-site visits. Following remediation, Project received Phoenix Award for excellence in Brownfield Reclamation.

Task Manager and Project Geologist for risk assessment investigation consisting of soil and groundwater sampling for a range of known contaminants. Known RECs included underground storage tanks, PCB contamination, hydraulic fluid, along with former smelting and chroming facilities. Responsibilities also included soil core logging, groundwater depth/direction determination, soil boring layout, boring log development, hydraulic conductivity testing, and surveying. Sites are part of on-going Brownfield redevelopment work of former industrial and commercial properties along the lakefront of Waukegan, Illinois.

Project Manager as a subcontractor to large demolition company, consulted, coordinated and served as the point of contact for numerous phases of work at the O'Hare Modernization Project. Project activities included the coordination of soil disposal profiling and acceptance between Contractor, the City of Chicago Department of Aviation consultants, and soil disposal landfill in accordance with Toxic Substance Control Act requirements. Field oversight activities included excavation coordination for PCB contaminated soil and confirmation sampling as well as Hazardous Materials Manifest collection and distribution. In addition, assisted Contractor in preparation of plans and procedure documents for various stages of work including, concrete cleaning procedures and protocols as well as hydraulic lift removal design and remediation.

Project/Program Manager for various projects with the City of Chicago Department of Environment. Performed various projects throughout the City of Chicago from environmental due diligence assessments resulting in the identification of RECs and conducted Phase II investigations in accordance with Site Remediation Program (SRP) requirements through project remediation design and soil/groundwater modeling. Activities included surveying of groundwater levels in order to determine the on-site groundwater flow direction, modeling of soil and groundwater contaminant migration, Tier II evaluations including as well as 95% Upper Confidence Limit "averaging" of sample data and Tier II development of advection-dispersion modeling using site-chemical specific retardation factors resulting in the issuance of No Further Remediation letters from the IEPA.

## Licenses and Credentials



## **Laurie L. Parsons, PE, PH**

### **President/Principal Engineer**

#### **Areas of Expertise**

- Gas and electric utility residuals management and environmental program management support
- Management and oversight of complex remediation projects
- Leading soil, groundwater, and sediment investigation and remediation work involving a wide variety of contaminant types
- Feasibilities studies: conventional and innovative technologies/ approaches
- Groundwater hydraulics and contaminant transport analysis
- Environmental risk management, cost impact analysis, property transfers, redevelopment, and negotiations support
- Permitting, regulatory agency liaison support and policy negotiation
- Water resource engineering
- Project and technical management
- RCRA, CERCLA, and state agency-lead remediation project

#### **Education**

- M.S., Civil and Environmental Engineering, UW-Madison, 1987
- B.S., Environmental Science/Water Chemistry, UW-Green Bay, 1980

#### **Professional Registrations**

- Professional Engineer  
#E27812 - WI
- Professional Hydrologist  
#34 - WI

#### **Summary of Qualifications**

Thirty three years of professional experience in environmental consulting and water resource engineering, with leadership roles in client service, staff development, environmental program management, and developing strategic and technical aspects of corporate environmental liability matters. Technical expertise includes soil/groundwater and sediment contamination assessments, storm water management, solid waste management, remedial design engineering/analysis, construction management, regulatory interface, landfill liner and containment analysis, brownfield redevelopment, and developing site closure strategies.

#### **Representative Project Experience**

##### ***Property Redevelopment/Brownfields/Remediation***

Project director for multiple former manufacturing facilities where subsurface chlorinated solvent and petroleum compound contamination was at issue. Projects included assessment, remediation and follow on vapor intrusion evaluation, concurrent with providing assistance on environmental aspects for attaining property transaction and redevelopment goals.

Program manager and principal lead for strategic and technical support to a utility client for all aspects of their manufactured gas plant (MGP) site management program. Activities included developing site management strategies, cost planning, environmental liability estimating,, due diligence reviews, site history and subsurface/sediment assessments, coal tar mobility assessments, feasibility studies, remedy selections, construction, regulatory liaison, public communications, and interfacing with redevelopment interests.

Project principal for planning and design of the redevelopment of a former industrial cooling water reservoir and utility corridor property in southeastern Wisconsin. Project included obtaining a state-funded grant for converting the reservoir into a wet detention basin to serve the community for water quality improvements and integrating environmental remediation into the site-wide redevelopment plan.

Project manager for environmental management controls during the three-year construction of the Milwaukee Art Museum – Santiago Calatrava Addition.

Project engineer for numerous feasibility studies and project designs involving ex-situ and in-situ remedial technologies to treat VOCs, PAHs, metals, cyanide, and other compounds.

Project-specific experience in variety of soil remediation technologies: thermal treatment, in-situ stabilization, steam-enhanced stripping, and vapor extraction.

Project specific experience in groundwater remediation technologies: carbon adsorption, permeable reactive barriers, in-situ stabilization, chemical oxidation, biological treatment and natural attenuation.



## Professional Affiliations

- American Society of Civil Engineers (ASCE)
- American Coal Ash Association (ACAA)
- National Ground Water Association (NGWA)
- Federation of Environmental Technologists (FET)
- Western Dredging Association (WEDA)
- Women Environmental Professionals (WEP)

## Professional History

- Natural Resource Technology, Inc. (2007 to present) President; (1994 to 2007) Engineering Services Manager/Vice President/Principal Engineer
- Warzyn Engineering, Inc. (1986 to 1994), Water Resources and Environmental Engineer
- University of WI-Madison (1984 to 1986), Civil and Environmental Engineering, Hydraulics Division, Research Assistant
- WDNR, Bureaus of Water Resources and Wastewater Management, (1980 to 1984), Planning Analyst and Environmental Specialist

## Publications/Presentations

Ms. Parsons has more than ten technical publications and presentations on the subjects of coal ash site remediation, brownfields redevelopment, innovative site remediation approaches, alternative landfill cover performance and design, regulatory policy issues, and subsurface waste disposal systems analysis.

## Representative Project Experience (continued)

### *Electric and Gas Utilities*

Project manager/technical director for environmental aspects of power generation facility and utility infrastructure expansions and decommissioning plans. Projects included property assessments, developing material management plans, water program permitting, feasibility evaluations, engineering design, permitting for construction on waste sites, construction oversight and quality assurance, groundwater monitoring, and site restoration and re-vegetation. Other aspects were to develop plans integrating prairie restorations, wetland protection, Chapter 30 permitting and habitat protection.

Program director for managing multiple coal ash combustion product processing and disposal facilities, including site assessments, ash impoundment reviews and liner upgrades, legacy site remediation, and developing state-approved material reclamation and beneficial use plans.

Developed and implemented plans for pentachlorophenol-contaminated soil remediation at multiple former wood treatment sites, including favorable resolution of hazardous waste issues through regulatory negotiations and research. Sensitive area protections used where working adjacent to high quality wetlands and a trout stream.

### *Water Resources*

Project manager for evaluating the impact of mercury reduction requirements and related state of practice assessment for discharges at waste containment and remediation sites in the Great Lakes region.

Project engineer for site developments requiring construction-time and long-term erosion controls, storm water conveyance and detention facilities, and related permitting for work adjacent to wetlands and surface water features.

Project engineer performing detailed in-field hydrologic/water balance studies of landfill covers and related evaluations of cover and leachate collection system performance/management options.

Project manager for multiple studies designed to evaluate the potential sources of VOC contamination in high capacity municipal wells, capture zone, historical records. Performed related groundwater investigations and feasibility studies. Plume recovery plan designed and implemented including wetland impact analysis for discharge options.

Program manager for remedial investigations for a portfolio of contaminated sediment sites under federal- and state-lead programs in the Upper Midwest.

Licenses and Credentials

No. 27812



**Department of Regulation and Licensing**  
Examining Board of Architects,  
Professional Engineers, Designers and Land Surveyors

Hereby certifies that

**LAURIE J PARSONS**

a certificate of registration as a

**Professional Engineer**

in the State of Wisconsin in accordance with Wisconsin law  
on the 14<sup>th</sup> day of May, 1991.

The authority granted herein must be renewed each biennium by the granting authority.

In witness thereof, the State of Wisconsin  
Examining Board of Architects  
Professional Engineers, Designers and Land Surveyors  
has caused this certificate to be issued under  
the seal of the Department of Regulation and Licensing.

This certificate issued this 22<sup>nd</sup> day of May, 1991.

Chairperson

Secretary

No. 29 117



**Department of Regulation and Licensing**  
Professional Hydrologist Section  
Examining Board of Professional Geologists,  
Hydrologists and Soil Scientists

Hereby certifies that

**LAURIE J PARSONS**

was granted a license as a

**Professional Hydrologist**

in the state of Wisconsin in accordance with Wisconsin law  
on the 26<sup>th</sup> day of May, 1999.

The authority granted herein must be renewed each biennium by the granting authority.

In witness thereof, the State of Wisconsin  
Examining Board of Professional Geologists,  
Hydrologists and Soil Scientists

has caused this license to be issued under  
the seal of the Department of Regulation and Licensing.

This certificate issued this 31<sup>st</sup> day of June, 1999.

Chairperson

Secretary

## Areas of Expertise

- Environmental site assessment and remedial design
- Construction planning, scheduling, and cost estimating
- Construction management, oversight, and implementation
- Procurement and contracting for construction activities
- Operation, maintenance and optimization of remediation systems

## Education

- BS, Environmental Engineering, Michigan Technological University, 2006

## Professional Registrations

- Professional Engineer, State of Illinois, #062.065973
- Professional Engineer, State of Michigan, #6201058475

## Other Training

- OSHA 40-Hour Hazardous Waste Site Operations (HAZWOPER) Training
- OSHA 30-Hour Construction Supervisor Training
- OSHA 8-Hour Emergency Response Management/ Supervisor Training
- OSHA 10-Hour Construction Safety Training
- OSHA Hazard Communication Training
- OSHA Asbestos Awareness Training
- OSHA Field Safety and Legal Issues Training
- Standard First Aid/CPR
- Certified Forklift Operator

## Summary of Qualifications

Eight years of experience in environmental consulting, design and process engineering, construction management, quality control, and project management of environmental remediation projects. Experience includes: environmental site assessment and remedial design, environmental reporting; remediation treatability studies and bench tests; project management; construction planning, scheduling, cost estimating, and procurement; and operation, maintenance, and optimization of remediation systems.

## Representative Project Experience

### *Manufactured Gas Plant (MGP) Site Investigation and Remediation*

Served as site manager for a former MGP site in the Illinois Environmental Protection Agency (IEPA) Site Remediation Program (SRP) located in the western Chicago suburbs. Duties included: construction planning, scheduling, cost estimating, and budget preparation; data evaluation and remediation objective development using Tiered Approach to Corrective Action Objectives (TACO); assessment of remediation alternatives; development of health and safety plans; perimeter air monitoring plan development; and procurement and contracting efforts.

Performed investigation activities at two former MGP sites in the northern and western Chicago suburbs for a large utility client. Planning activities involved the development of investigation work plans, cost estimating, project scheduling, and the procurement and contracting of environmental investigation subcontractors. Field activities included soil and groundwater sampling, air monitoring, and quality control. In addition to the planning activities and field work, Mr. Ridgway assisted in Phase I environmental assessments, data compilation and evaluation, and the preparation of Site Investigation reports for the IEPA SRP.

Served as the project manager for remedial design and construction at a former MGP site located in southwestern Michigan. Project activities included: remedial design; preparation of plans and specifications; bidding and contracting support; construction planning coordination; management of construction implementation; and documentation of construction activities. This project required the implementation of an auger-cast pile wall earth retention system, deep excavation and backfilling in areas with limited access and space, settlement and vibration monitoring, extensive air monitoring, and legal support.

Served as the project engineer for remedial design and environmental management planning for a former MGP site in Chicago, Illinois. Duties included: environmental data evaluation; preparation of planning documents for submittal to the USEPA under the Superfund Alternative Sites (SAS) program; and design, startup, and oversight of an extensive air monitoring program.

Served as a technical resource to support air monitoring efforts during remediation of a former MGP site in southeastern Wisconsin. Duties included: program development; training field staff; and continued support of operation and reporting for the program.

## Professional History

- Natural Resource Technology, Inc. (2012 to Present), Environmental Engineer
- Burns & McDonnell Engineering Company, (2007 to 2012), Environmental Engineer / Site Manager
- Michigan Technological University, (2006), Research Assistant
- US Forest Service, (2005), Research Assistant

## Presentations

Mr. Ridgway presented *System Optimization through Operational Enhancements – Waukegan Groundwater Remediation Project* at the Illinois Water Environment Association (IWEA) and the Illinois Section of the American Water Works Association (ISAWWA) joint conference, WaterCon 2012.

## Awards

Mr. Ridgway was the Project Engineer for the Waukegan Groundwater Remedy Implementation, which was the winner of the 2012 American Council of Engineering Companies of IL (ACEC-IL) *Engineering Excellence Special Achievement Award*.

## Representative Project Experience (continued)

Served as project engineer for start-up, operation, maintenance, and enhancement of a full-scale groundwater extraction, treatment, and reinjection system at a former MGP site in Waukegan, IL. The treatment system utilized biological, chemical, and physical treatment processes. Duties included: development and production of an onsite analytical laboratory including quality control and training for operators; development and preparation of an operation and maintenance manual for the extraction, treatment, and reinjection systems; quality control of start-up and operation of groundwater treatment plant; field management of large-scale performance verification sampling efforts; data management, evaluation, and quality control; and field management of various subcontractors including drilling, mechanical, and electrical subcontractors. Additional project duties involved assisting in identifying system weaknesses and bottlenecks and working with the Lead Technical Engineer to develop and implement major system enhancements.

Served as Site Manager for the operation, maintenance, and optimization of a dense non-aqueous phase liquid (DNAPL) collection and extraction system at a former MGP site in Waukegan, IL. Duties included: project scheduling and staffing; management of equipment maintenance; communication with regulators; and staff training.

Served as Construction Manager during remediation of an MGP site in Chicago, IL. Duties included: managing multiple subcontractors; maintaining work activity records; site health and safety; and periodic (weekly and monthly) progress reporting.

Performed Construction Management and Field Engineering duties at a former MGP site in Bismarck, ND. Duties included: management of subcontractors; record keeping; collection of confirmation samples, air monitoring; and health and safety.

### *Geotechnical Engineering and Coal Combustion Residuals Management*

Served as the project engineer for the design, construction planning, and construction management for five pond liner construction projects at multiple coal-fired power plants. Duties included: preparation of plans and specifications; coordination with facility operators; bidding and contracting support; construction oversight; and quality assurance/quality control.

### *Emergency Response Contingency Planning and Vulnerability Assessment*

Developed emergency contingency plans for a major oil transmission company. This involved development of emergency response plans for specific pipeline segments through extensive research and data gathering coupled with field reconnaissance efforts. Also assisted oil transmission company in identifying system vulnerability and prioritizing work in order to develop a regional plan.

Performed source vulnerability assessment for multiple bottling facilities in IL for a large beverage company. This involved assessment and summarization of system and source (water) vulnerability and the development of specific contingency plans.

## Licenses and Credentials



## Areas of Expertise

- Database Management Systems (DBMS) and Data management
- Geographic Information Science (GIS)
- Aquatic Ecology

## Education

- Graduate Certificate, Geographic Information Science and Technology, University of Southern California, 2014
- B.S., Environmental Science, University of Michigan, 2010

## Professional Affiliations

- Association of American Geographers

## Professional History

- Natural Resource Technology, Inc., Chicago, IL (2014 to present), Data Analyst
- Cardno ENTRIX, Okemos, MI (2011 to 2014), Data Analyst
- NOAA (GLERL), Muskegon, MI (2010 to 2011), Aquatic Biology Research Associate
- MSU Dept. of Fisheries & Wildlife, Muskegon, MI (2010), Aquatic Ecology Research Assistant

## Other Training

- 40-Hour OSHA Health & Safety Training for Hazardous Waste Operations
- 8-Hour OSHA HAZWOPER Refresher Training

## Publications

- Habitat Consideration for Ecological Risk Assessments of Wildlife Exposed to Persistent Organic Pollutants. DL Tazelaar, A Neigh, AJ Sookhai, JP Giesy and MJ Zwiernik at the 34<sup>th</sup> Annual SETAC North America Meeting, Nov 17-21, 2013, Nashville, TN, USA.

## Summary of Qualifications

Five years of experience in environmental consulting including data management, ecological studies, wildlife hazard assessments, mapping/spatial analysis, and product safety and compliance.

Data management experience includes the technical design, implementation, and productions support activities for relational database management systems including MS SQL Server, MS Access, and third party software, quality assurance and quality control on large datasets, and technical communication of data-related issues with field, lab, engineering, and mapping staff.

Field experience includes freshwater ichthyoplankton, zooplankton, macroinvertebrate, and fish sampling in rivers, lakes, and wetlands, water chemistry and sample collection, sediment sample collection, and vegetation surveys and habitat assessments. Laboratory experience includes water filtration for phytoplankton, identification of Great Lakes zooplankton and larval fish to species level, analytical chemistry methods (mass spectrometry, volumetric analysis), and DNA extraction.

## Representative Project Experience

### *Data Management*

Design, implementation, and maintenance of data management system for project field and laboratory analytical data using Microsoft SQL Server and Microsoft Access. Creates database programming and reporting to meet management and field staff information needs.

Maintains core file groups, updates as needed to meet management and field staff requests. Performs quality control on incoming laboratory data and provides special data analysis/reporting. Performs data conversions on historic and legacy data for utility and industrial clients.

### *Ecological Investigations*

Conducted brook trout surveys using electrofishing techniques to look at gill formation anomalies due to elevated levels of selenium in cold water streams in northern Michigan.

Performed bird nest surveys and wetland delineation along right-of-way prior to pipeline replacement in southwest Michigan.

Conducted coastal wetland vegetation surveys and erosion surveys for post-oil spill monitoring in the Gulf of Mexico.

### *Mapping and Spatial Analysis*

Executed geostatistical analysis of water, sediment, fish, avian, invertebrate, and vegetation sample datasets, resulting in report-quality map figures. Performed habitat suitability index model and ecological risk assessment for passerine species exposed to organic pollutants, using LIDAR and NDVI datasets.

### *Product Safety and Compliance*

Conducted product label review per USEPA standards for pesticide registration.

## Areas of Expertise

- Soil, sediment and groundwater investigation and remediation involving a wide variety of contaminant types
- Construction management
- Construction quality assurance and quality control
- Site investigations pertaining to sediment and soil contamination
- Field engineering/oversight and management of remedial construction
- In-situ stabilization/solidification and contaminated sediment remedial construction
- Environmental regulatory compliance
- Geotechnical laboratory testing

## Education

- BS, Environmental Science/Geoscience, University of Wisconsin – Green Bay, 2011.

## Professional History

- Natural Resource Technology, Inc. (2013-Present), Remediation Coordinator
- Foth Infrastructure and Environment, LLC. (2010-2011, 2012-2013), Environmental Technician
- Weston Solutions. (2011-2012), Assistant Geoscientist
- Construction Quality Management, Inc. (Summer 2008), Geotechnical Lab Technician

## Professional Affiliations

- Wisconsin Ground Water Association 2013-2015

## Summary of Qualifications

Five years of experience in environmental consulting, field engineering, construction management, construction oversight and quality assurance for environmental projects, geotechnical engineering / analysis, including soils analysis in a laboratory setting, and field sample collection of soils, water, and sediment for environmental site investigations. Project experience has focused on soil and sediment investigation and remedial construction, *In Situ* Solidification/Stabilization (ISS) construction, Phase II soil investigation, groundwater investigation, compliance reporting and inspections and geotechnical soil testing.

## Representative Project Experience

### *MGP Site Remediation*

Field Engineer for a Time Critical Removal Action at a former MGP site located in Two Rivers, WI. The project required the ISS of approximately 80,000 cubic yards of MGP impacted soils. Duties included daily reporting, engineer oversight, construction quality assurance, construction oversight of ISS operations, managing on site ISS quality control lab, material tracking and manifesting of offsite disposal of non-hazardous soils, client communication/representation, data management, soil and water sampling, building management, and survey documentation.

Project Technician for at a Time Critical Removal Action at a former MGP site located in Waukegan, Illinois. The project required the ISS of approximately 300,000 cubic yards of MGP impacted soils. Duties included daily reporting, construction quality assurance, construction oversight of ISS operations, managing on site ISS quality control lab, material tracking and manifesting of offsite disposal of non-hazardous soils, client communication/representation, data management, soil and water sampling, building management, and survey documentation.

### *Environmental Assessments and Site Investigations*

Field activities include analytical and geotechnical soil sampling and logging (e.g. Geoprobe, drill rigs, and test pits), low flow groundwater sampling, landfill gas emission monitoring, and wastewater sampling for industrial clients.

Additional work included data collection, background review, site reconnaissance, and reports for Phase I and II Environmental Site Assessments (ESAs) for industrial and commercial property transfers in Wisconsin and Illinois.

### *Compliance*

Compliance work includes annual TRI (Form R) reporting, Tier II reporting, SWPPP reporting and inspections, and waste water collection from industrial clients.

### **Additional Training**

- 40-Hour OSHA Health & Safety Training for Hazardous Waste Operations (29 CFR 1910.120)
- 8-Hour Annual OSHA HAZWOPER Refresher Training
- 10-Hour OSHA Construction Safety Training
- USEPA START Emergency Response Training

### **Most Recent Presentations**

- *Cold Weather Dredging for a Non-Time Critical Removal Action.*  
WEDA Midwest 2014 Conference,  
April 11, 2014, Cincinnati, OH.

## **Representative Project Experience (continued)**

### *Geotechnical*

Duties included laboratory and field testing of soil and aggregates for landfills, streets, and highways. Specific testing included grain size analysis (with hydrometers and sieves), proctor compaction, permeability, and liquid/plastic limit (Atterburg limits). Field work included soil sampling and construction oversight for landfill construction.

### *Sediment Remediation/Investigation*

Field Technician for an USEPA 'Non-Time Critical' Superfund Project. The project required approximately 16,000 cubic yards of NAPL/PAH impacted sediments to be dredged from a former MGP site in Marinette, Wisconsin. Duties included construction oversight, daily activity reporting, post dredge verification sampling, and bathymetric and deflection monitoring survey oversight.

Field Team Leader and member for the investigation and remediation of an USEPA Superfund Project. The project required approximately 14,000,000 cubic yards of contaminated sediments to be dredged or capped from the Fox River in Brown and Outagamie Counties, Wisconsin. Duties included sediment sampling utilizing vibrocore, piston core, push core, ponar, and Russian Peat Borer sampling devices, sediment thickness poling, QA/QC oversight or verification sampling activities and bathymetric surveys, processing core samples for laboratory analysis, and turbidity monitoring during dredging activities.

Construction Quality Assurance Technician for an USEPA Superfund Project. The project required approximately 90,000 cubic yards of impacted sediments to be dredged from a river in Sheboygan County, Wisconsin. Duties included providing technical recommendations on sampling procedures, daily reporting, turbidity monitoring, sediment and water sampling, bathymetric survey oversight and processing, and data management.



## Steven G. Wiskes

### Senior Scientist

#### Areas of Expertise

- Health and Safety Manager
- Health and Safety Plans
- Health and Safety Audits
- Design and implementation of Quality Assurance Project Plans (QAPPs)
- Data validation of organics and inorganics according to USEPA National Functional Guidelines
- Contaminated soil and groundwater investigations and remediation
- Multi-media site investigations for evaluating human health and environmental risks
- ASTM Phase I and II Environmental Site Assessments
- Cross connection and backflow prevention surveys
- Analytical laboratory auditing and procurement

#### Education

- B.S., Water Chemistry / Limnology University of Wisconsin at Stevens Point, 1980/1982

#### Other Training

- 40-Hour OSHA HAZWOPER Training for Hazardous Waste Operations (29 CFR 1910.120), HAZWOPER Supervisors Training, and updated 8-Hour Refresher Courses
- Wisconsin Boater Safety
- 40-hr course (UW Madison Engineering Department) cross connection and backflow prevention
- First Aid and CPR
- OSHA 30-hr construction safety course

#### Summary of Qualifications

Mr. Wiskes has thirty years of professional experience in environmental consulting throughout the Midwest, as well as Colorado, Washington, Maine, North Carolina, Texas and Japan, focusing on investigation and remediation of petroleum, solvents, explosives, and metals contaminated sediments, soils, and groundwater. He has experience with a variety of field analytical equipment including Energy-Dispersive X-Ray Fluorescence (EDXRF) and organic vapor analyzer (OVA). As a project chemist he has written USEPA Region 5 QAPPs as well as Department of Defense (DoD) Uniform Federal Policy QAPPs for Federal projects, and has performed data validation of organic and inorganic data according to USEPA and DoD guidelines. As a Health and Safety Manager he has written health and safety plans, reviewed health and safety plans, provided staff training, performed site health and safety audits for a variety of environmental and construction projects.

#### Representative Project Experience

##### *Health and Safety Manager*

Health and safety manager. Writes health and safety plans. Performs site personnel and visitor health and safety orientations: inspections of the site layouts, signage, and safety procedures: audits personnel health and safety documentation. Performs health and safety audits on active sites, which include documentation of training, air monitoring, personal protective equipment use, daily tailgate safety meetings topics and attendance, and review of certifications for equipment's operation.

Health and Safety officer for numerous manufactured gas plant sites in Chicago and the Midwest. Wrote health and safety plans. Held health and safety orientations for site personnel. Performed daily tailgate safety meetings for site work. Performed air monitoring for site personnel for oxygen, hydrogen sulfide, cyanide, carbon monoxide, benzene, organics, metals, particulates, and other contaminants of concern. Performed health and safety audits on active sites, which included documentation of training, air monitoring, personal protective equipment use, daily tailgate safety meetings topics and attendance and review of certification for equipment operation.

Health and safety officer for manufactured gas plant in-situ stabilization construction sites in the Midwest. Performed: site personnel and visitor health and safety orientations; inspections of the site layouts, signage, and safety procedures; audited personnel health and safety documentation; reviewed crane construction documentation; reviewed operator licensing documentation.

##### *Remedial Investigation/Feasibility Study Sites*

Project chemist for soil and/or groundwater remediation for metals, explosives, and solvents at DoD sites throughout the Midwest. Wrote QAPPs and work plans, collected samples, validated data, wrote analytical summaries and fate and transport reports, and quality control summary reports.

Team leader for a cross connection and backflow prevention survey performed at a DoD site. Wrote the quality project plan, health and safety plan, and the work plan.

### **Professional History**

- Natural Resource Technology, Inc. (2012 to Present)
- Warzyn/MWH Americas, Inc. (1984 to 2012)
- Intermountain Laboratories, Inc. (1982 to 1983)

### **Representative Project Experience (continued)**

Surveyed over 400 buildings, wrote the report, and put together a range of magnitude cost to bring the Air Force Base up to the current plumbing code. Provided a debriefing of the Base Command when the survey was completed.

Team leader for storm and sanitary drain survey at facilities in Colorado, Washington, and Iowa, Managed the project by procuring and scheduling the subcontractors, performing the field work, and writing the reports. Team leader for completing Facility Spill Contingency Plans and Storm Water Management Plans throughout the Midwest, performing the field work and wrote the associated plans.

Project chemist and field team leader for the investigation and remediation pilot study at a DoD facility in the Midwest, wrote work plans and reports, installed soil borings and monitoring wells, sampled soil and groundwater. Performed hydraulic conductivity testing, validated the data, wrote quality control summary reports, and managed the analytical data.

Proposed, managed, performed and wrote reports at over 175 Phase I and II American Society of Testing and Materials (ASTM) Environmental Site Assessments in the United States. Client types include; attorneys, developers, medical clinics, and radio and television stations.

Project chemist and field team leader at several manufacturing and industrial facilities throughout the Midwest. Developed data quality objectives and the site-specific QAPPs. Directed team of scientists in collection and analysis of soils, groundwater, surface water, and sediments.

Field team leader for remedial investigation/feasibility studies at 10 Superfund sites throughout Indiana, Michigan, and Wisconsin. Developed data quality objectives and the site-specific QAPPs. Directed team of scientists in collection and analysis of soils, groundwater, surface water, and sediments.

#### ***Investigative and Remediation Sites***

Project chemist and field team leader for several US Army Corps of Engineers (USACE) Savanna Army Depot Activity (SVDA) sites in Savanna, Illinois. Developed data quality objectives and the site-specific QAPPs for each site. Directed team of scientists in collection and analysis of soils and treated soils. Prepared construction completion report detailing extent of contamination, remediation, treatment and disposal of the soil. Also project chemist and field team leader for polychlorinated biphenyls (PCB) vaults decommissioning, design and execution of assessment of concrete investigation, remediation, treatment, and disposal. Directed team of scientists in collection and analysis of concrete samples which included: a pilot study to determine treatment options for the concrete, and a construction completion report detailing extent of contamination, remediation, treatment and disposal of the concrete.

Project chemist and field team leader at Crab Orchard National Wildlife Refuge a former munitions manufacturing site in Marion Illinois. Design and execution of assessment of soil investigation, soil remediation, and disposal of metal and explosive contaminated soil. Developed data quality objectives and the site-specific QAPP. Wrote an air permit for the destruction of over 800 pounds of 2,4,6-trinitrotoluene (TNT) on site. Provided oversight to a UST removal contractor, documented the UST removal, collected soil and UST contents characterization samples, and performed closure reporting.

## Areas of Expertise

- Environmental and civil engineering for site restoration and redevelopment
- Construction management for civil and environmental related projects
- Regulatory negotiation and permitting
- Feasibility studies
- Remedial design and implementation to address soil and groundwater impacts
- Geotechnical testing and design
- Bench and pilot scale treatability studies

## Education

- M.S., Civil Engineering, University of Colorado, 1990
- B.S., Civil Engineering, University of Colorado, 1985
- B.S., Sociology, University of Illinois at Chicago Circle, 1977

## Professional Registrations

- Professional Engineer, #E32332 - WI
- Professional Engineer, #062-050371 - IL
- Professional Engineer, #045489 - MI
- Professional Engineer, #27747 - CO
- Professional Engineer #67656 - FL

## Summary of Qualifications

Twenty-five years of experience performing project engineering and management, technical supervision, design engineering and analysis, construction oversight, budget management, and client and regulatory interface. Project management and construction experience includes a number of site remedial restoration projects along major waterways. Environmental experience includes assessment of environmental impacts, conducting remedial alternatives evaluations, and development of risk-based cleanup objectives. Experienced in working under the IEPA SRP program and with the City of Chicago on various environmental projects. Technical experience includes environmental engineering several projects utilizing in situ stabilization/solidification to address soil/sediment impacts for a variety of contaminants.

## Representative Project Experience

Project/Construction Manager and Chief Design Engineer for the design and construction of an integrated interceptor trench and groundwater recovery system to capture groundwater impacted with chlorinated solvents and petroleum hydrocarbons at an active 80 year old manufacturing facility in Chicago, Illinois. Designed and constructed a load out facility for the transportation of chlorinated solvent impacted groundwater for off-site treatment. Prepared comprehensive procedures for performing load out operations and managing hazardous waste storage tank systems. Designed a groundwater treatment system which incorporated low profile air stripping, dense and light non-aqueous phase liquid (DNAPL and LNAPL) separation and direct discharge of treated effluent to a Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) combined sewer system.

Senior Project Engineer for the design of an integrated composite asphalt cap system for chlorinated solvent impacted soils and storm water drainage modifications, which included rerouting several key aboveground facility drainage structures at an active manufacturing facility in Chicago, Illinois.

Senior Project Engineer and Construction Manager in meeting Illinois Environmental Protection Agency (IEPA) risk based closure requirements for the construction of a new banking facility in the Austin neighborhood of Chicago, Illinois. Previous subsurface investigations documented the presence of petroleum hydrocarbon contamination in soil. The initial closure approach was to install a vapor barrier liner system beneath the entire banking facility. However, on the basis of environmental evaluations during the excavation operations and continued negotiations with the IEPA, the requirement for the vapor barrier installation was successfully eliminated and construction of the facility was able to proceed without further environmental restrictions. Elimination of the vapor barrier substantially reduced project costs. Completion of the site operations required extensive communication and coordination with the site architect, general contractor and owner.

Project Manager and Senior Engineer for the closure-in-place of one 5,000 gallon, two 15,000 gallon, and one 30,000 gallon underground storage tank (UST), the upgrade of one 4,000 gallon, and the installation of a new 30,000 gallon UST to support hospital emergency heating operations and boiler fuel requirements in Elmhurst, Illinois.

### **Professional Affiliation**

- American Society of Civil Engineers (ASCE)
- Federation of Environmental Technologists (FET)

### **Professional History**

- Natural Resource Technology, Inc. (1998 to Present), Principal Engineer
- Dames & Moore (1996-1998), Senior Engineer
- Environmental Science & Engineering (1993-1996), Senior Project Engineer
- IT Corporation (1988 to 1993), Project Engineer
- Aguirre Engineers, Inc. (1986 to 1988), Staff Engineer

### **Publications - Presentations**

Mr. Wittenberg has authored or coauthored a number of publications and presentations on the subjects of remediation, material management, innovative remedial approaches and site restoration for former industrial sites along major waterways.

### **Representative Project Experience (continued)**

Senior Engineer for the design of a soil vapor extraction and 225 gallon per minute (gpm) groundwater treatment system to remediate soil and groundwater impacted with chlorinated solvents for a major manufacturing facility in northern Illinois. Design of the groundwater system included a tower air stripper equipped with a sequestering agent additive feed system and acid wash cleaning system. Key engineering responsibilities included coordination and oversight of the engineering design team to meet civil, structural, mechanical and electrical design objectives, client communication, and overall quality assurance and quality control.

Project Manager and Principal Engineer for the remedial design and construction at an MGP site located in Sanford Florida. Project elements include permanent diversion of a tributary (Cloud Branch Creek) to nearby Lake Monroe, in situ stabilization/solidification (ISS) of up 150,000 cubic yards of petroleum hydrocarbon (coal tar related) impacted soil, flow diversion, removal of two feet of sediment along a portion of the creek, bank stabilization and waterway restoration. Project responsibilities included preparation of various design submittals for USEPA Region IV and project/construction management. Remedial construction is on-going and will continue through the early winter 2011.

Senior Engineer for the planning and implementation of full-scale land and river based ISS at a former industrial site along the Fox River in Appleton. Project planning and design included oversight support of bench and pilot scale testing of mix designs using both Portland cement and ground blast furnace slag to address a range of contaminants including elevated concentrations of inorganic arsenic that was characteristically hazardous. Full-scale operations included ISS of approximately 34,000 cubic yards of impacted soil/debris and reconstruction/restoration of approximately 680 feet of riverbank. Field operations were conducted using a variety of techniques that included in-situ soil auger mixing and specialized backhoe mixing and injection.

Senior Engineer/Project Manager for remedial construction at a former industrial site along the Menomonee River in Milwaukee, Wisconsin. Key project elements included thermal treatment and/or off-site disposal of approximately 57,000 tons and ISS of 25,000 cubic yards of coal tar-impacted soil. Related project aspects included installation of a temporary sealed sheet piling system to divert river flow and reconstruction of approximately 700 feet of riverbank. Access to the area targeted for ISS required demolition and reconstruction of the major property access ramp leading from an interstate overpass adjacent the site.

Senior Engineer for the design of an engineered cofferdam river diversion system, sediment removal and river restoration along approximately 900 feet of the Ashuelot River in Keene, New Hampshire to address petroleum hydrocarbon (coal tar related) impacts due to historic industrial processes. Key design elements include phased installation of sheet pile cofferdams to bifurcate flow, removal of sediment in cells in the "dry" proceeding from upstream to downstream and river bottom and bank reconstruction. Construction is scheduled for 2010.

## **Representative Project Experience (continued)**

Project Manager for the Remedial Investigation/Feasibility Study (RI/FS) and remedial design and construction for approximately 4,000 cubic yards of PCB-impacted sediment located in the Lincoln Park/Blatz Pavilion embayment located on the Milwaukee River in Milwaukee, Wisconsin. Key remedial elements included segregation and removal of less than and greater than 50 ppm impacted sediment, installation of temporary river diversions, dewatering and aboveground treatment and restoration for future fish habitat and recreational use.

Senior Engineer for the design, planning and removal of coal tar and impacted sediment from along a portion of the Fox River in Appleton, Wisconsin. Key design elements included extensive permitting and coordination with the city, the Wisconsin Department of Natural Resources, and the U.S. Corps of Engineer to temporarily dam off a portion of the river so the impacted materials could be accessed by conventional excavation equipment. Site-specific logistics included implementing a fish rescue program, channeling residual river flow around impacted zones and conducting a general cleanup of non-impacted debris from the bottom of the canal in the vicinity of the impacted zone. Additional activities included in-situ stabilization/ solidification of approximately 700 feet of impacted canal bottom next to the river bank and riverbank restoration.

Senior Engineer/Project Manager for the design and construction management of a multi-layer geosynthetic cap and sealed sheet pile wall for a future neighborhood park at a former MGP site located along the Sheboygan River in eastern Wisconsin. Design plans were tailored to integrate with city redevelopment design objectives. Riverfront plans included construction of condominium complexes and a river walk, park and recreation area over the geosynthetic cap. The design accommodated planting and foundation depths, stability of future park structures and architectural aesthetics for river bank restoration which required extensive coordination with the city through completion of park construction.

Senior Engineer for the design and construction of a new sea wall, earthen cover and groundwater control system for a future neighborhood park at a former MGP site along the Upper Fox River in Wisconsin. A key element of the design for this project included considering several redevelopment scenarios that would minimize future economic and environmental liabilities while maximizing redevelopment return.

## Licenses and Credentials



RICK SNYDER  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS  
CORPORATIONS, SECURITIES & COMMERCIAL LICENSING BUREAU  
PROFESSIONAL ENGINEER  
LICENSE

L550074

ROY E WITTENBERG  
802 E DEAN ROAD  
FOX POINT WI 53217

PERMANENT I.D. NO.  
6201045489

EXPIRATION DATE  
10/31/2016

AUDIT NO  
2912348

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OF MICHIGAN

# State of Florida

## Board of Professional Engineers

Attests that

**Leroy E. Wittenberg , P.E.**



**FBPE**  
FLORIDA BOARD OF  
PROFESSIONAL ENGINEERS

Is licensed as a Professional Engineer under Chapter 471, Florida Statutes

Expiration: 2/28/2017

Audit No: 228201716484

P.E. Lic. No:

67656

## Areas of Expertise

- Site Remediation Program Remediation/Closure
- Field Engineering and Oversight
- IEPA LUST Regulatory Compliance, Reporting, and Remediation
- Site Investigation and Sampling

## Education

- B.S., Civil Engineering, University of Wisconsin - Madison, 2011
- CERET Renewable Energy Certificate, Madison Area Technical College, 2010

## Additional Training

- OSHA 40-Hour Hazardous Waste Site Operations (HAZWOPER) Training w/ Annual 8-Hour Refreshers
- OSHA Construction & Excavation Safety Training
- Illinois DNR Boater Education Certification
- IATA Dangerous Goods, IATA and DOT Shipping Batteries
- Standard First Aid and CPR Certification
- Fire Safety & Asbestos Awareness

## Professional Registrations

- State of Wisconsin, EIT

## Professional History

- Natural Resource Technology, Inc. (2012 to Present), Environmental Engineer
- CW<sup>3</sup>M Company, Inc. (2011 to 2012), Environmental Engineer
- RAPPS Engineering & Applied Science (2009), Summer Engineering Intern
- GIS Solutions, (2006 to 2008), Summer Intern

## Summary of Qualifications

Over four years of experience in environmental site investigations, field engineering/oversight, and reporting. Project experience has focused on remediation of petroleum contaminated soils and groundwater resulting from leaking underground storage tanks (UST), remediation services through the Illinois Site Remediation Program (SRP), and remediation services for manufactured gas plants (MGP) sites. Experience includes: environmental site investigation and remedial design, field engineering and oversight, environmental reporting and compliance, cost estimating and budgeting, environmental liability estimating, soil and groundwater sampling, and operation of real-time air monitoring systems.

## Representative Project Experience

### *In-Situ Chemical Oxidation and Remediation Services*

Served as the Environmental Engineer for the in-situ chemical oxidation (ISCO) and remediation services at the Whitney Young Library Chicago, IL. The work included ISCO treatment and soil mixing, excavation of impacted soils, installation of soil retention measures, installation of a clay soil layer to act as an engineered barrier, and backfilling/compaction. Robert assisted with preparing the proposal for the work, which included preparing subcontractor request for quotes, ensuring all project specifications were met, and developing the proposal document. Project responsibilities included: development of site-specific work plans, submittal of contract specifications and requirements, execution of subcontractor agreements, scheduling site activities, environmental oversight, documentation, on-site safety coordinator, excavation competent person. Two previously unidentified underground storage tanks and two previously unidentified PERC tanks were encountered during excavation activities. Robert's integral role in the permitting, waste characterization, removal, and disposal of the four tanks allowed the project to be completed on-schedule.

### *Site Remediation Program*

Performed supplemental site investigation work for an 87.8-acre site enrolled into the Illinois SRP. The project objective was to re-evaluate the site for redevelopment under residential land use restrictions. Duties included: review and assessment of previous work and environmental files, site investigation planning, preparing subcontractor request for quotes, execution of subcontractor agreements, performing site investigation activities (soil logging and soil sampling), site investigation documentation, development of Site Investigation Report, Remediation Objectives Report, and Remedial Action Plan.

### *Leaking Underground Storage Tank Site Investigation and Remediation*

Served as Project Manager for over 50 UST sites regulated by the Illinois Environmental Protection Agency's (IEPA) Leaking Underground Storage Tank (LUST) program. Duties included: initial release and response reporting, site investigation plan development, corrective action plan development, budget preparation, cost estimation, data evaluation and quality control, contaminant transport modeling, remediation objective



## **Representative Project Experience (continued)**

development using Tiered Approach to Corrective Action Objectives (TACO), drafting maps for reports and field activities, and preparation of sampling and investigation plans. Additional duties included: execution of off-site access agreements for investigation purposes, negotiation and implementation of intuitional controls with local city governments, and correspondence with clients and IEPA project managers. Robert currently serves as a project engineer for an UST site owned by a federal government agency. Responsibilities include: review of historical investigations and remediation activities, development of a combination site investigation and remedial action work plan, investigation and remedial sampling and oversight, documentation and development of a site investigation and remediation completion report.

Served as a Field Engineer for UST tank removals and remedial excavations at multiple UST sites throughout central and southern Illinois. Duties included: soil screening, soil sampling, field documentation, and excavation oversight.

Served as a Field Engineer for soil investigations at multiple UST sites throughout central and southern Illinois. Duties included: utility locating, oversight of direct-push and hollow stem auger drilling, monitoring well installation and development, elevation surveying, slug testing, soil screening, soil and groundwater sampling, and classification of soil boring logs.

### ***Environmental Liability Estimations***

Prepare yearly and quarterly cost estimates for environmental management and remediation of several Manufactured Gas Plant (MGP) sites in Wisconsin, Illinois, and Michigan.

### ***In Situ Solidification/Stabilization (ISS)***

Project Engineer involved with the implementation of ISS at a former manufactured gas plant site in Waukegan, Illinois. Work included field engineering oversight, construction quality assurance, project reporting, compliance with necessary permits, and client and agency correspondence.

### ***Manufactured Gas Plant (MGP) Site Investigation and Remediation***

Provide excavation/environmental oversight and air monitoring for implementation of a time critical remediation at a large-scale historic MGP site in Chicago, IL. Responsibilities include: implementation of a real-time air monitoring program, air quality analytical sampling, excavation oversight, and environmental sampling. Other responsibilities include daily, weekly, and monthly construction and analytical documentation records.

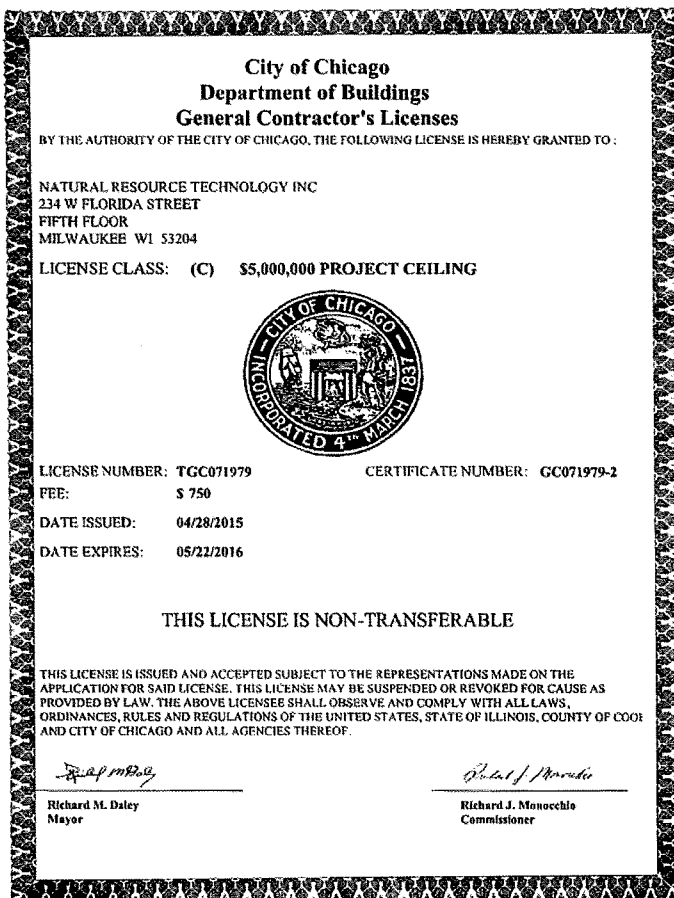
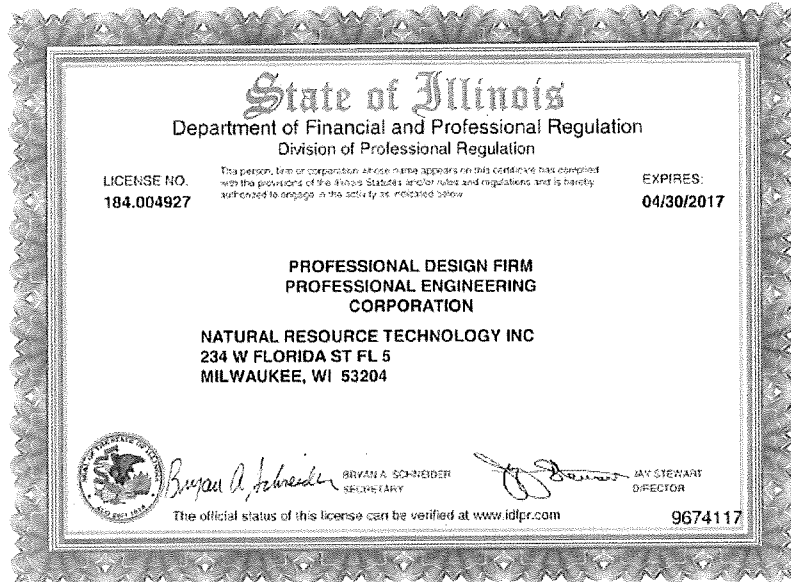
Served as the Project Engineer for a former MGP site in Coldwater, MI. Responsibilities included: general engineering and environmental construction oversight, preparation of daily field reports and sample logs, material contractor invoice tracking, operation of real-time air monitoring systems, air quality analytical sampling, and construction quality assurance duties (wastewater sample collection and discharge permit compliance, verification of earth retention system installation compliance, verification of settlement and vibration monitoring compliance, verification of excavation limits and work layout, instruct and verify contractor compliance with environmental management and fugitive emission requirements).

### ***GIS Experience***

Performed data base compilation, correction, and mapping for a national public school districts project which is currently being used as a school locator to match addresses to school boundaries. Duties involved correcting school facility locations using ESRI's ArcView GIS mapping software and collecting individual school and district data.

## Additional Illinois/Chicago Licensure

In addition, NRT is licensed in the State of Illinois as a Professional Design Firm and is a registered corporate entity in good standing with the Illinois Secretary of State. As a firm that has a strong focus and ability to undertake environmental remediation projects with expert construction management capabilities, NRT is also licensed by the City of Chicago as a General Contractor. Copies of relevant licenses are provided below.



**EXHIBIT A**  
**LEGAL ACTIONS**

**(ATTACHED HERETO AND INCORPORATED HEREIN)**

**Firm Name:** Natural Resource Technology, Inc.

If the answer to any of the questions below is **YES**, you must provide a type written, brief description, and/or explanation on a separate sheet following this page. Each question must be answered.

Question	Yes	No
Has the firm or venture been issued a notice of default on any contract awarded to it in the last 3 years?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does the firm or venture have any legally filed judgments, claims (liquidated damages, or other), arbitration proceedings or suits pending or outstanding against the firm or venture or its officers?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If the answer to the preceding question is "Yes", provide the requisite explanation on a separate sheet and enter the dollar amount of claims or judgments and the contract value of the contract on which the claim was filed <u>N/A</u> .	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Within the past 3 years has the firm or venture been a party to any lawsuits or arbitration proceedings with regard to any contracts?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Within the last 3 years, has any officer or principal of the firm or venture ever been an officer or principal of another organization that failed to complete any contract as a result of termination, litigation, arbitration or similar matter?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Has any key person with the firm or venture or its predecessor ever been convicted of or charged with any state or federal crime (excluding traffic violations), including but not limited to, embezzlement, theft, forgery, bribery, falsification or destruction of records, receipt of stolen property, criminal anti-trust violations, bid-rigging or bid-rotating?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Has the firm or venture ever been temporarily or permanently debarred from contract award by any federal, state, or local agency?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Within the last 3 years, has the firm or venture been investigated or assessed penalties for any statutory or administrative violations (including but not limited to MBE, WBE, EEOC violations)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Has the firm or venture ever failed to complete any work awarded to it?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**EXHIBIT B**  
**DISCLOSURE AFFADAVIT**

**(ATTACHED HERETO AND INCORPORATED HEREIN)**

Any firm proposing to conduct any business transactions with the Public Building Commission of Chicago must complete this Disclosure Affidavit. Please note that in the event the Contractor is a joint venture, the joint venture and each of the joint venture partners must submit a completed Disclosure Affidavit.

The undersigned John M. Nardozzi, as Vice President/Principal Engineer  
Name Title

and on behalf of Natural Resource Technology, Inc.  
("Bidder/Proposer/Respondent or Contractor") having been duly sworn under oath certifies the following:

1. Name of Firm: Natural Resource Technology, Inc.
2. Address: 300 S. Wacker Drive, Suite 1300, Chicago, IL 60606
3. Telephone: 312.465.1740 Fax: 414.837.3608
4. FEIN: 391753368 SSN: \_\_\_\_\_
5. Nature of transaction (check the appropriate box):

- ☐ Sale or purchase of land  
☐ Construction Contract  
☒ Professional Services Agreement  
☐ Other \_\_\_\_\_

6. Disclosure of Ownership Interests  
Pursuant to Resolution No. 5371 of the Board of Commissioners of the Public Building Commission of Chicago, all bidders/proposers shall provide the following information with their bid/proposal. If the question is not applicable, answer "NA". If the answer is none, please answer "none".

- ☒ Corporation  
☐ Partnership  
☐ Sole Proprietorship  
☐ Joint Venture

- ☐ Limited Liability Company  
☐ Limited Liability Partnership  
☐ Not-for-profit Corporation  
☐ Other: \_\_\_\_\_

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## **CORPORATIONS AND LLC'S**

1. State of Incorporation or organization: Wisconsin
2. Authorized to conduct business in the State of Illinois: ☒ Yes ☐ No
3. Identify the names of all officers and directors of the business entity (attach list if necessary).

Name	Title
Laurie L. Parsons	President
Richard H. Weber	Vice President/Secretary
Clark J. Crosby	Vice President/Treasurer
Richard G. Fox	Vice President
Roy E. Wittenberg & John M. Nardozi	Vice President

4. Identify all shareholders whose ownership percentage exceeds 7.5% of the business entity (attach list if necessary).

Name	Address	Ownership Interest Percentage
Laurie L. Parsons	234 W. Florida St, Milwaukee, WI	35.4%
Richard H. Weber	234 W. Florida St, Milwaukee, WI	13.2%
Clark J. Crosby	234 W. Florida St, Milwaukee, WI	13.7%
Richard G. Fox	234 W. Florida St, Milwaukee, WI	13.0%
Roy E. Wittenberg	234 W. Florida St, Milwaukee, WI	12.8%

5. LLC's ONLY, indicate management type and name:  
☐ Member-managed  
☐ Manager-managed  
Name: \_\_\_\_\_
6. Is the corporation or LLC owned partially or completely by one or more other corporations or legal entities?  
☐ Yes  
☐ No

If "yes" provide the above information, as applicable, for each such corporation or entity such that any person with a beneficial ownership interest of 7.5% or more in the corporation contracting in the PBC is disclosed. For example, if Corporation B owns 15% of Corporation A, and Corporation A is contracting with the PBC, then Corporation B must complete a Disclosure Affidavit. If Corporation B is owned by Corporations C and D, each of which owns 50% of Corporation B, then both Corporations C and D must complete Disclosure Affidavits.

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### **PARTNERSHIPS**

1. If the bidder/proposer or Contractor is a partnership, indicate the name of each partner and the percentage of interest of each therein. Also indicate, if applicable, whether general partner (GP) or limited partner (LP)

Name	Ownership Interest Percentage

### **SOLE PROPRIETORSHIP**

1. The bidder/proposer or Contractor is a sole proprietorship and is not acting in any representative capacity on behalf of any beneficiary: ☐ Yes ☐ No

If the answer to the previous question is no, complete items 2 and 3 of this section.

2. If the sole proprietorship is held by an agent(s) or a nominee(s), indicate the principal(s) for whom the agent or nominee holds such interest.

Name(s) of Principal(s)

3. If the interest of a spouse or any other party is constructively controlled by another person or legal entity, state the name and address of such person or entity possessing such control and the relationship under which such control is being or may exercised

Name	Address

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## **CONTRACTOR CERTIFICATION**

### **A. CONTRACTORS**

1. The Contractor, or any affiliated entities of the Contractor, or any responsible official thereof, or any other official, agent or employee of the Contractor, any such affiliated entity, acting pursuant to the direction or authorization of a responsible official thereof has not, during a period of three years prior to the date of execution of this certification:
  - a. Bribe or attempted to bribe, or been convicted of bribery or attempting to bribe a public officer or employee of the City of Chicago, the State of Illinois, any agency of the federal government or any state or local government in the United States (if an officer or employee, in that officer's or employee's official capacity); or
  - b. Agreed or colluded, or been convicted of agreement or collusion among bidders or prospective bidders in restraint of freedom of competition by agreement to bid a fixed price or otherwise; or
  - c. Made an admission of such conduct described in 1(a) or (b) above which is a matter of record but has not been prosecuted for such conduct.
2. The Contractor or agent, partner, employee or officer of the Contractor is not barred from contracting with any unit of state or local government as a result of engaging in or being convicted of bid-rigging<sup>2</sup> in violation of Section 3 of Article 33E of the Illinois Criminal Code of 1961, as amended (720 ILCS 5/33E-3), or any similar offense of any state or the United States which contains the same elements as the offense of bid-rigging during a period of five years prior to the date of Submission of this bid, proposal or response.
3. The Contractor or any agent, partner, employee, or officer of the Contractor is not barred from contracting with any unit of state or local government as a result of engaging in or being convicted of bid-rotating<sup>4</sup> in violation of Section 4 of Article 33E of the Illinois Criminal Code of 1961, as amended (720 ILCS 5/33E-4), or any similar offense of any state or the United States which contains the same elements as the offense of bid-rotating.
4. The Contractor understands and will abide by all provisions of Chapter 2-56 of the Municipal Code entitled "Office of the Inspector General" and all provisions of the Public Building Commission Code of Ethics Resolution No.5339, as amended by Resolution No. 5371.
5. The Contractor certifies to the best of its knowledge and belief, that it and its principals:
  - a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any federal, state or local department or agency.
  - b. Have not within a three-year period preceding this bid or proposal been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state or local) transaction or contract under a public transaction; violation of federal or state antitrust statutes; commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property;

- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, state or local) with commission of any of the offenses enumerated in paragraph (5)(b) above; and
- d. Have not within a three-year period preceding this bid or proposal had one or more public transactions (federal, state or local) terminated for cause or default.

**B. SUBCONTRACTORS**

1. The Contractor has obtained from all subcontractors being used in the performance of this contract or agreement, known by the Contractor at this time, disclosures substantially in the form of Section 1, and certifications substantially in the form of Section 2, of this Disclosure Affidavit. Based on such disclosures and certification(s), and any other information known or obtained by the Contractor, is not aware of any such subcontractor or subcontractor's affiliated entity or any agent, partner, employee or officer of such subcontractor or subcontractor's affiliated entity having engaged in or been convicted of (a) any of the conduct described as prohibited in this document; (b) bid-rigging, bid-rotating, or any similar offense of any state or the United States which contains the same elements as bid-rigging or bid-rotating, or having made an admission of guilt of the conduct described in Section 2 which is matter of record but has/have not been prosecuted for such conduct.
2. The Contractor will, prior to using them as subcontractors, obtain from all subcontractors to be used in the performance of this contract or agreement, but not yet known by the Contractor at this time, certifications substantially in the form of this certification. The Contractor shall not, without the prior written permission of the Commission, use any of such subcontractors in the performance of this contract if the Contractor, based on such certifications or any other information known or obtained by Contractor, became aware of such subcontractor, subcontractor's affiliated entity or any agent, employee or officer of such subcontractor or subcontractor's affiliated entity having engaged in or been convicted of (a) any of the conduct described as prohibited in this document of or (b) bid-rigging, bid-rotating or any similar offenses of any state or the United States which contains the same elements as bid-rigging or bid-rotating or having made an admission of guilt of the conduct described as prohibited in this document which is a matter of record but has/have not been prosecuted for such conduct. The Contractor shall cause such subcontractors to certify as to all necessary items. In the event any subcontractor is unable to certify to a particular item, such subcontractor shall attach an explanation to the certification.
3. For all subcontractors to be used in the performance of this contract or agreement, the Contractor shall maintain for the duration of the contract all subcontractors' certifications required by this document and Contractor shall make such certifications promptly available to the Public Building Commission of Chicago upon request.
4. The Contractor will not, without the prior written consent of the Public Building Commission of Chicago, use as subcontractors any individual, firm, partnership, corporation, joint venture or other entity from whom the Contractor is unable to obtain a certification substantially in the form of this certification.
5. The Contractor hereby agrees, if the Public Building Commission of Chicago so demands, to terminate its subcontractor with any subcontract if such subcontractor was ineligible at the time that the subcontract was entered into for award of such subcontract. The Contractor shall insert adequate provisions in all subcontracts to allow it to terminate such subcontract as required by this certification.

C. STATE TAX DELINQUENCIES

1. The Contractor is not delinquent in the payment of any tax administered by the Illinois Department of Revenue or, if delinquent, the Contractor is contesting, in accordance with the procedures established by the appropriate Revenue Act, its liability for the tax or amount of the tax.
2. Alternatively, the Contractor has entered into an agreement with the Illinois Department of Revenue for the payment of all such taxes that are due and is in compliance with such agreement.
3. If the Contractor is unable to certify to any of the above statements, the Contractor shall explain below. Attach additional pages if necessary.

N/A

If the letters "NA", the word "None" or no response appears on the lines above, it will be conclusively presumed that the Undersigned certified to the above statements.

4. If any subcontractors are to be used in the performance of this contract or agreement, the Contractor shall cause such subcontractors to certify as to paragraph (C)(1) or (C)(2) of this certification. In the event that any subcontractor is unable to certify to any of the statements in this certification, such subcontractor shall attach an explanation to this certification.

D. OTHER TAXES/FEES

1. The Contractor is not delinquent in paying any fine, fee, tax or other charge owed to the City of Chicago.
2. If Contractor is unable to certify to the above statement, Contractor shall explain below and (attach additional pages if necessary).

N/A

If the letters "NA", the word "None" or no response appears on the lines above, it will be conclusively presumed that the Undersigned certified to the above statements.

E. PUNISHMENT

1. A Contractor who makes a false statement material to Section II(A)(2) of this certification commits a Class 3 felony. 720 ILCS 5/33E-11(b).

F. JUDICIAL OR ADMINISTRATIVE PROCEEDINGS

1. The Contractor is not a party to any pending lawsuits against the City of Chicago or the Public Building Commission of Chicago nor has Contractor been sued by the City of Chicago or the Public Building Commission of Chicago in any judicial or administrative proceeding.

2. If the Contractor cannot certify to the above, provide the (1) case name; (2) docket number; (3) court in which the action is or was pending; and (4) a brief description of each such judicial or administrative proceeding. Attach additional sheets if necessary.

N/A

If the letters "NA", the word "None" or no response appears on the lines above, it will be conclusively presumed that the Undersigned certified to the above statements.

#### **CERTIFICATION OF ENVIRONMENTAL COMPLIANCE**

- A. Neither the Contractor nor any affiliated entity of the Contractor has, during a period of five years prior to the date of execution of this Affidavit: (1) violated or engaged in any conduct which violated federal, state or local Environmental Restriction<sup>5</sup>; (2) received notice of any claim, demand or action, including but not limited to citations and warrants, from any federal, state or local agency exercising executive, legislative, judicial, regulatory or administrative functions relating to a violation or alleged violation of any federal, state or local statute, regulation or other Environmental Restriction; or (3) been subject to any fine or penalty of any nature for failure to comply with any federal, state or local statute, regulation or other Environmental Restriction.

If the Contractor cannot make the certification contained in the above paragraph, identify any exceptions (attach additional pages if necessary):

N/A

If the letters "NA", the word "None" or no response appears on the lines above, it will be conclusively presumed that the Undersigned certified to the above statements.

- B. Without the prior written consent of the Public Building Commission of Chicago, Contractor will not employ any subcontractor in connection with the contract or proposal to which this Affidavit pertains without obtaining from such subcontractor a certification similar in form and substance to the certification contained in Paragraph A of this Section III prior to such subcontractor's performance of any work or services or furnishing any goods, supplies or materials of any kind under the proposal or the contract to which this Affidavit pertains.
- C. Until completion of the Contract's performance under the proposal or contract to which this Affidavit pertains, the Contractor will not violate any federal, state or local statute, regulation or other Environmental Restriction, whether in the performance of such contract or otherwise.

#### **INCORPORATION INTO CONTRACT AND COMPLIANCE**

The above certification shall become part of any contract awarded to the Contractor set forth on page 1 of this Disclosure Affidavit and are a material inducement to the Public Building Commission of Chicago's execution of the contract, contract modification or contract amendment with respect to which this Disclosure Affidavit is being executed and delivered on behalf of the Contractor. Furthermore, Contractor shall comply with these certifications during the term and/or performance of the contract.

**VERIFICATION**

Under penalty of perjury, I certify that I am authorized to execute this Disclosure Affidavit on behalf of the Contractor set forth on page 1, that I have personal knowledge of all the certifications made herein and that the same are true.

The Contractor must report any change in any of the facts stated in this Affidavit to the Public Building Commission of Chicago within 14 days of the effective date of such change by completing and submitting a new Disclosure Affidavit. Failure to comply with this requirement is grounds for your firm to be deemed non-qualified to do business with the PBCC. Deliver any such new Disclosure Affidavit to: Public Building Commission of Chicago, Director of Compliance, 50 W. Washington, Room 200, Chicago, IL 60602.

*John M. Nardozzi*  
Signature of Authorized Officer  
John M. Nardozzi  
Name of Authorized Officer (Print or Type)  
Vice President/Principal Engineer  
Title  
773.796.4601  
Telephone Number

State of Illinois  
County of Cook

Signed and sworn to before me on this 2<sup>nd</sup> day of February, 2016 by  
John M. Nardozzi (Name) as Vice President (Title) of  
Natural Resource Technology, Inc. (Bidder/Proposer/Respondent or Contractor)

*Mike Roa*  
Notary Public Signature and Seal



**EXHIBIT C**  
**DISCLOSURE OF RETAINED PARTIES**

**(ATTACHED HERETO AND INCORPORATED HEREIN)**

**Definitions and Disclosure Requirements**

As used herein, "Consultant" means a person or entity who has any contract with the Public Building Commission of Chicago ("Commission").

Commission bids, contracts, and/or qualification submissions must be accompanied by a disclosure statement providing certain information about lobbyists whom the Consultant has retained or expects to retain with respect to the contract. In particular, the Consultant must disclose the name of each such person, his or her business address, the name of the relationship, and the amount of fees paid or estimated to be paid. The Consultant is not required to disclose employees who are paid solely through the Consultant's regular payroll.

"Lobbyists" means any person who (a) for compensation or on behalf of any person other than himself undertake to influence any legislative or administrative action or (b) any part of whose duties as an employee of another includes undertaking to influence any legislative or administrative action.

**Certification**

Consultant hereby certifies as follows:

This Disclosure relates to the following transaction(s):

**Environmental Engineering Services**

Description of goods or services to be provided under Contract:

PS2060

Name of Consultant: Natural Resource Technology, Inc.

**EACH AND EVERY** lobbyist retained or anticipated to be retained by the Consultant with respect to or in connection with the contract listed below. Attach additional pages if necessary.

Retained Parties:

<b>Name</b>	<b>Business Address</b>	<b>Relationship</b> (Attorney, Lobbyist, etc.)	<b>Fees</b> (indicate total whether paid or estimated)

☒ Check Here If No Such Persons Have been Retained or Are Anticipated To Be Retained

The Consultant understands and agrees as follows:

- a. The information provided herein is a material inducement to the Commission execution of the contract or other action with respect to which this Disclosure of Retained Parties form is being executed, and the Commission may rely on the information provided herein. Furthermore, if the Commission determines that any information provided herein is false, incomplete, or inaccurate, the Commission may terminate the contract or other transaction, terminate the Consultant's participation in the contract or other transactions with the Commission.
- b. If the Consultant is uncertain whether a disclosure is required, the Consultant must either ask the Commission's Representative or his or her manager whether disclosure is required or make the disclosure.
- c. This Disclosure of Retained Parties form, some or all of the information provided herein, and any attachments may be made available to the public on the Internet, in response to a Freedom of Information Act request, or otherwise. The Consultant waives and releases any possible rights or claims it may have against the Commission in connection with the public release of information contained in the completed Disclosure of Retained Parties form and any attachments.

Under penalty of perjury. I certify that I am authorized to execute this Disclosure of Retained Parties on behalf of the Consultant and that the information disclosed herein is true and complete.

*John M. Nardozzi*  
Signature  
John M. Nardozzi  
Name (Type or Print)

2/2/2016  
Date  
Vice President/Principal Engineer  
Title

Subscribed and sworn to before me <sup>2016</sup>  
this 2 day of Feb 2016  
*Mike Roa*  
Notary Public





**EXHIBIT D**  
**SPECIAL CONDITIONS REGARDING THE UTILIZATION OF**  
**MINORITY AND WOMEN OWNED BUSINESS ENTERPRISES**  
**FOR PROFESSIONAL SERVICES**

**(ATTACHED HERETO AND INCORPORATED HEREIN)**

### 1. Policy Statement

- a. It is the policy of the Commission to ensure competitive business opportunities for MBE and WBE firms in the performance of Contracts, to prohibit discrimination in the award of or participation in Contracts, and to abolish arbitrary barriers to full participation in Contracts by all persons, regardless of race, sex or ethnicity. Therefore, during the performance of this Contract, the Consultant must agree that it will not discriminate against any person or business on the basis of race, color, religion, ancestry, age, marital status, physical or mental handicap, unfavorable discharge from military service, parental status, sexual orientation, national origin or sex, in the solicitation or the purchase of goods and services or the subcontracting of work in the performance in this Contract.
- b. The Commission requires the Consultant also agree to take affirmative action to ensure that MBE and WBE firms have the maximum opportunity to compete for and perform subcontracts with respect to this Contract.
- c. The Commission requires the Consultant to notify MBE and WBE firms, utilized on this contract, about opportunities on contracts without affirmative action goals.

### 2. Aspirational Goals

- a. Upon the effective date of these Special Conditions, the bi-annual aspirational goals are to award 25% of the annual dollar value of all Commission Construction Contracts to MBEs and 5% of the annual dollar value of all Commission Construction Contracts to WBEs.
- b. Further, the Consultant must agree to use its best efforts to include MBE and WBE firms in any Contract modification work that increases the Contract value by 10% of the initial Contract value or \$50,000, whichever is less. Where the proposed contract modification involves work which can be performed by MBEs and WBEs already performing work on the contract such MBEs and WBEs will participate in such work specified in the contract modification.
- c. Failure to carry out the commitments and policies set forth in this Program constitute a material breach of contract and may result in termination of the Consultant or such other remedy, as the Commission deems appropriate.

### 3. Definitions

- a. For purposes of this Special Condition, the following definitions applies:
  - i. "Certified Minority Business Enterprise" means a person or entity granted certification by the City of Chicago or County of Cook.
  - ii. "Certified Women's Business Enterprise" means a person or entity granted certification by the City of Chicago or County of Cook.
  - iii. "Professional Service Contract" means a contract for professional services of any type.
  - iv. "Contract Specific Goals" means the subcontracting goals for MBE and WBE participation established for a particular contract based upon the availability of MBEs and WBEs to perform and anticipated scope of work of the contract and the Commission's progress towards meeting the aspirational goals.
  - v. "Consultant" means any person or business entity that seeks to enter into a Professional Services Contract with the Commission and includes all partners, affiliates and Joint Ventures of such person or entity.
  - vi. "Executive Director" means the Executive Director of the Commission or his duly designated representative as appointed in writing.

- vii. "Good faith efforts" means actions undertaken by a Consultant to achieve a Contract Specific Goal that by their scope, intensity and appropriateness to the objective can reasonably be expected to fulfill the Program's requirements.
- viii. "Joint Venture" means an association of two or more persons or entities or any combination of two or more business enterprises and persons numbering two or more, proposing to perform a single for-profit business enterprise, in which each Joint Venture partner contributes property, capital, efforts, skill and knowledge, and in which the MBE or WBE is responsible for a distinct, clearly-defined portion of the work of the contract and whose share in the capital contribution, control, management, risks and profits of the Joint Venture is equal to its ownership interest. Joint Ventures must have an agreement in writing specifying the terms and conditions of the relationships between the parties and their relationship and responsibilities to the contract.
- ix. "Program" means the minority- and women-owned business enterprise professional service procurement program established in this special condition.

#### 4. Determining MBE/WBE Utilization

The methodology for determining MBE and WBE utilization will be determined for purposes of analysis with respect to this contract as follows:

- a. The total dollar value of the contract awarded to the certified MBE or WBE firm will be credited to such participation. Only minority business participation may be counted toward MBE participation and only women business participation may be counted toward WBE participation.
- b. The total dollar value of a contract with a firm owned and controlled by minority women is counted toward either the MBE or WBE goal, but not both. The Consultant employing the firm may choose the goal to which the contract value is applied. Various work done by one and the same subconsultant will be considered, for the purpose of this principle, as work effectively done under one subcontract only, which subconsultant may be counted toward only one of the goals, not toward both.
- c. A Consultant may count toward its MBE or WBE goal the portion of the total dollar value of a contract with an eligible Joint Venture equal to the percentage of the ownership and control of the MBE or WBE partner in the Joint Venture. A Joint Venture seeking to be credited for MBE participation may be formed among certified MBE and WBE firms, or between certified MBE and WBE firms and a non-MBE/WBE firm. A Joint Venture satisfies the eligibility standards of this Program if the certified MBE or WBE participant of the Joint Venture:
  - i. Shares in the ownership, control, management responsibilities, risks and profits of the Joint Venture; and
  - ii. Is responsible for a clearly defined portion of work to be performed in proportion to the MBE or WBE ownership percentage.
- d. A Consultant may count toward its MBE and WBE goals only expenditures to firms that perform a commercially useful function in the work of a contract. A firm is considered to perform a commercially-useful function when it is responsible for execution of a distinct element of the work of a contract and carries out its responsibilities by actually performing, managing, and supervising the work involved. To determine whether a firm is performing a commercially useful function, the Commission will evaluate the amount of work subcontracted, industry practices and other relevant factors.
- e. Consistent with normal industry practices, a MBE or WBE firm may enter into subcontracts. If a MBE or WBE Consultant subcontracts a significantly greater portion of the work of a contract than would be expected on the basis of normal industry practices, the MBE or WBE will be rebuttably presumed not to be performing a commercially-useful function.

- f. A Consultant may count toward its goals expenditures to MBE or WBE manufacturers (i.e., suppliers that produce goods from raw materials or substantially alters them before resale).
- g. A Consultant may count toward its goals expenditures to MBE or WBE suppliers provided that the supplier performs a commercially useful function in the supply process. Expenditures to suppliers will only be counted if the supplies are sold to the Consultant or subconsultant that installs those supplies in the Work.

## 5. Submission of Bid Proposals

- a. The following schedules and documents constitute the Bidder's MBE/WBE compliance proposal and must be submitted at the time of the bid or proposal or within such extended period as provided in Article 23.
  - i. Evidence of Certification: Affidavit of MBE/WBE. A copy of each proposed MBE and WBE firm's Letter of Certification from the City of Chicago, Department of Procurement Services or the County of Cook must be submitted.
  - ii. Schedule B: Affidavit of MBE/Non-MBE or WBE/Non-WBE Joint Ventures. Where the Bidder's MBE/WBE compliance proposal includes participation of any MBE or WBE as a Joint Venture participant, the Bidder must submit a "Schedule B: Affidavit of MBE/Non-MBE or WBE/Non-WBE Joint Venture" with an attached copy of the Joint Venture agreement proposed among the parties. The Schedule B and the Joint Venture agreement must clearly evidence that the MBE or WBE participant will be responsible for a clearly defined portion of the work to be performed and that the MBE or WBE firm's responsibilities are in proportion with its ownership percentage.
  - iii. Schedule C: Letter of Intent to Perform as a Subconsultant, Subconsultant, or Material Supplier, Schedule C, executed by the MBE/WBE firm (or Joint Venture Subconsultant) must be submitted by the Bidder for each MBE/WBE included on the Schedule D. Schedule C must accurately detail the work to be performed by the MBE or WBE firm and the agreed rates and prices to be paid.
  - iv. Schedule D: Affidavit of Prime Consultant Regarding MBE or WBE Utilization. A completed Schedule D committing to the utilization of each listed MBE or WBE firm. Unless the Bidder has submitted a completed request for a waiver of participation by MBE/WBE firms (See Request for Waiver procedures in Section 23.01.10), the Bidder must include the specific dollar amount of participation of each MBE/WBE firm listed on its Schedule D. The total dollar commitment to proposed MBE firms must at least equal the MBE goal, and the total dollar commitment to proposed WBE firms must at least equal the WBE goal. Bidders are responsible for calculating the dollar equivalent of MBE or WBE utilization as percentages of their total base bid.
- b. The submittals must have all blank spaces on the Schedule pages applicable to the contract correctly filled in. Agreements between a Bidder and a MBE/WBE in which the MBE/WBE promises not to provide subcontracting quotations to other Bidders are prohibited.

## 6. Evaluation of Compliance Proposals

- a. During the period between bid opening and contract award, the Bidder's MBE/WBE compliance proposal will be evaluated by the Commission. The Bidder agrees to provide, upon request, earnest and prompt cooperation to the Executive Director or his designee in submitting to interviews that may be necessary, in allowing entry to places of business, in providing further documentation, or in soliciting the cooperation of a proposed MBE or WBE firm in providing such assistance. A bid may be treated as non-responsive by reason of the determination that the Bidder's proposal did not contain a sufficient level of Certified MBE or WBE participation, that the Bidder was unresponsive or uncooperative when asked for further information relative to the proposal, or that false statements were made in the Schedules.

- b. If the Commission's review of a Bidder's proposal concludes that the MBE or WBE proposal was deficient, the Commission will promptly notify the Bidder of the apparent deficiency and instruct the Bidder to submit (within 3 business days of such notice given by the Commission) a modification of the MBE or WBE Proposal, in proper format, which remedies the deficiencies cited. Failure to correct all deficiencies cited by the Commission will be cause for rejection of the Bidder's proposal as non-responsive.
- c. Bidders will not be permitted to modify their MBE/WBE compliance proposal except insofar as directed to do so by the Commission. Therefore, all terms and conditions stipulated for prospective MBE and WBE subconsultants or suppliers should be satisfactorily negotiated prior to the submission to the Commission of the Bidder's MBE/WBE compliance proposal with the bid. If circumstances should arise, however, where a proposed MBE/WBE is no longer available, the process described in Section 23.01 should be followed.
- d. If the Compliance Proposal includes participation by material suppliers, the PBC will request copies of the offers from such suppliers. The offers must be furnished to the PBC within three (3) business days of the bidder's receipt of the request for such offers from the PBC. The PBC may make such request by electronic mail. The offers must specify: (i) the particular materials, equipment and/or supplies that will be furnished; (ii) the supplier's price for each of the items; (iii) the total price of the items to be furnished by the supplier, (iv) the supplier's source for the items (e.g., manufacturer, wholesaler) and (v) the subconsultant that the supplies will be purchased by.

#### 7. Request for Waiver

- a. If a Bidder is unable to identify qualified MBE and WBE firms to perform sufficient work to fulfill the MBE or WBE percentage goals for this Contract, the bid or proposal must include a written request for waiver. A request for waiver must be sent to the Executive Director and must set forth the Bidder's inability to obtain sufficient MBE and WBE firms notwithstanding good faith attempts to achieve such participation.
- b. Good Faith efforts to achieve participation include but are not limited to:
  - i. Attendance at the Pre-bid conference;
  - ii. The Bidder's general affirmative action policies regarding the utilization of MBE and WBE firms, plus a description of the methods used to carry out those policies;
  - iii. Advertisement in trade association newsletters and minority and woman-oriented and general circulation media for specific sub-bids;
  - iv. Timely notification of specific sub-bids to minority and woman Consultant assistance agencies and associations;
  - v. Description of direct negotiations with MBE and WBE firms for specific sub-bids, including:
    - a. The name, address and telephone number of MBE and WBE firms contacted;
    - b. A description of the information provided to MBE and WBE firms regarding the portions of the work to be performed; and
    - c. The reasons why additional MBE and WBE firms were not obtained in spite of negotiations.
  - vi. A statement of the efforts made to select portions of the work proposed to be performed by MBE and WBE firms (such as sub-supplier, transport, engineering, distribution, or any other roles contributing to production and delivery as specified in the contract) in order to increase the likelihood of achieving sub participation.

- vii. As to each MBE and WBE contacted which the Bidder considers to be not qualified, a detailed statement of the reasons for the Bidder's conclusion.
- viii. Efforts made by the Bidder to expand its search for MBE and/or WBE firms beyond usual geographic boundaries.
- ix. General efforts made to assist MBE and WBE firms to overcome participation barriers.
- c. The Executive Director, after review and evaluation of the request provided by the Bidder, may grant a waiver request upon the determination that:
  - i. Sufficient qualified MBE and/or WBE firms capable of providing the goods or services required by the contract are unavailable despite the good faith efforts of the Bidder;
  - ii. The price(s) quoted by potential MBE and/or WBE firms for goods or services is above competitive levels to an extent unwarranted by any increased cost of doing business attributable to the present effects of disadvantage or discrimination.

#### 8. Failure To Achieve Goals

- a. If the Consultant cannot achieve the contract specific goals, as the Project proceeds, it must have documented its good faith efforts to do so. In determining whether the Consultant has made such good faith efforts, the performance of other Consultants in meeting the goals may be considered. The Executive Director or his designee shall consider, at a minimum, the Consultant's efforts to do the following:
  - i. Soliciting through reasonable and available means the interest of MBEs or WBEs that Provide interested MBEs or WBEs with adequate information about the plans, specifications and requirements of the contract, including addenda, in a timely manner to assist them in responding to the solicitation.
  - ii. Provide interested MBEs or WBEs with adequate information about the plans, specifications and requirements of the contract, including addenda, in a timely manner to assist them in responding to the solicitation.
  - iii. Negotiating in good faith with interested MBEs or WBEs that have submitted bids. Documentation of negotiation must include the names, addresses and telephone numbers of MBEs or WBEs that were solicited; the date of each such solicitation; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why agreements could not be reached with MBEs or WBEs to perform the work. That there may be some additional costs involved in solicitation and using MBEs and WBEs is not a sufficient reason for a Consultant's failure to meet the goals, as long as such costs are reasonable.
  - iv. Not rejecting MBEs or WBEs as being unqualified without sound reasons based on the thorough investigation of a their capabilities. The MBEs' or WBEs' standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations are not legitimate cases for rejecting or not soliciting bids to meet the goals.
  - v. Making a portion of the work available to MBE or WBE subconsultants and suppliers and to select those portions of the work or material consistent with the available MBE or WBE subconsultants and suppliers, so as to facilitate meeting the goals.

- vi. Making good faith efforts despite the ability or desire of a Consultant to perform the work of a contract with its own organization. A Consultant that desires to self-perform the work of a contract must demonstrate good faith efforts unless the goals have been met.
  - vii. Selecting portions of the work to be performed by MBEs or WBEs in order to increase the likelihood that the goals will be met. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate MBE or WBE participation even when the Contract might otherwise prefer to perform these items with its own forces.
  - viii. Making efforts to assist interested MBEs or WBEs in obtaining bonding lines of credit or insurance as required by the Commission or Consultant.
  - ix. Making efforts to assist interested MBEs or WBEs in obtaining necessary equipment, supplies, materials or related assistance or services, including participation in a mentor-protégée program; and
  - x. Effectively using the services of the Commission; minority or women community organizations; minority or women Consultants' groups; local, state and federal minority or women business assistance offices; and other organizations to provide assistance in the recruitment and placement of MBEs or WBEs.
- b. In the event the Public Building Commission determines that the Consultant did not make a good faith effort to achieve the goals, the Consultant may file a dispute to the Executive Director as provided in Article XI of the Standard Terms and Conditions.

#### 9. Reporting and Record-Keeping Requirements

- a. The Consultant, within 5 working days of contract award, must execute a formal subcontract or purchase order in compliance with the terms of the Consultant's bid proposal and MBE/WBE assurances, and submit to the Commission a copy of the MBE and WBE subcontracts or purchase orders, each showing acceptance of the subcontract or purchase order by the MBE and WBE firms. During the performance of the contract, the Consultant will submit waivers of lien from MBE and WBE subconsultants and suppliers indicating the current payment amount and the cumulative dollar amount of payments made to date. The Consultant will file regular MBE and WBE utilization reports on the form entitled "Status Report of MBE and WBE (Sub) Contract Payments" at the time of submitting each monthly Payment Estimate, which reflects the current status of cumulative and projected payments to MBE and WBE firms.
- b. The Consultant must maintain records of all relevant data with respect to the utilization of MBE and WBE firms, including without limitation payroll records, tax returns and records, and books of account in such detail as the Commission requires, and retain such records for a period of at least 3 years after final acceptance of the work. Full access to such records will be granted to the Commission and/or its designees, on 5 business days' notice in order for the Commission to determine the Consultant's compliance with its MBE and WBE commitments and the status of any MBE or WBE firm performing any portion of the contract.

#### 10. Disqualification of MBE or WBE

- a. The Contract may be terminated by the Executive Director upon the disqualification of the Consultant as an MBE or WBE if the Consultant's status as an MBE or WBE was a factor in the award and such status was misrepresented by the Consultant.

- b. The Contract may be terminated by the Executive Director upon the disqualification of any MBE or WBE if the Subconsultant's or supplier's status as an MBE or WBE was a factor in the award of the contract and the status of the subconsultant or supplier was misrepresented by the Consultant. If the Consultant is determined not to have been involved in any misrepresentation of the status of the disqualified subconsultant or supplier, the Consultant shall make good faith efforts to engage a qualified MBE or WBE replacement.

#### 11. Prohibition On Changes To MBE/WBE Commitments

The Consultant must not make changes to its contractual MBE and WBE commitments or substitute such MBE or WBE subconsultants without the prior written approval of the Executive Director. Unauthorized changes or substitutions, including performing the work designated for a subconsultant with the Consultant's own forces, is a violation of this section and a breach of the contract with the Commission, and may cause termination of the contract for breach, and/or subject the Consultant to contract remedies or other sanctions. The facts supporting the request must not have been known nor reasonably should have been known by the parties prior to entering into the subcontract.

#### 12. MBE/WBE Substitution Requirements and Procedures

- a. Arbitrary changes by the Consultant of the commitments earlier certified in the **Schedule D** are prohibited. Further, after once entering into each approved MBE and WBE sub-contract agreement, the Consultant shall thereafter neither terminate the subcontract, nor reduce the scope of the work to be performed by the MBE or WBE, nor decrease the price to the MBE or WBE, without in each instance receiving the prior written approval of the Executive Director. In some cases, however, it may become necessary to substitute a new MBE or WBE in order to actually fulfill the MBE or WBE requirements. In such cases, the Executive Director must be given reasons justifying the release by the Consultant of prior specific MBE or WBE commitments established in the contract, and will need to review the eligibility of the MBE or WBE presented as a substitute. The substitution procedure will be as follows:

- i. The Consultant must notify the Executive Director immediately in writing of an apparent necessity to reduce or terminate a MBE or WBE subcontract and to propose a substitute firm for some phase of work, if needed in order to sustain the fulfillment of the MBE/WBE contract requirements.
- ii. The Consultant's notification should include the specific reasons for the proposed substitution. Stated reasons which would be acceptable include any of the following reasons: a) Unavailability after receipt of reasonable notice to proceed; b) failure of performance; c) financial incapacity; d) refusal by the subconsultant to honor the bid or proposal price or scope; e) mistake of fact or law about the elements of the scope of work of a solicitation where a reasonable price cannot be agreed; f) failure of the subconsultant to meet insurance, licensing or bonding requirements; g) the subconsultant's withdrawal of its bid or proposal; or h) decertification of the subconsultant as MBE or WBE.

The Consultant's position must be fully explained and supported with adequate documentation. Stated reasons which will not be acceptable include: replacement firm has been recruited to perform the same work under terms more advantageous to the Consultant; issues about performance by the committed MBE or WBE were disputed (unless every reasonable effort has already been taken to have the issues resolved or mediated satisfactorily); an MBE or WBE has requested reasonable price escalation which may be justified due to unforeseen circumstances.

- iii. The Consultant's notification should include the names, address and principal official of any proposed substitute MBE or WBE and the dollar value and scope of work of the proposed subcontract. Attached should be all the same MBE/WBE affidavits, documents and Letters of Intent which are required of the proposed MBE or WBE firms.



- iv. The Executive Director will evaluate the submitted documentation, and respond within fifteen (15) working days to the request for approval of a substitution. The response may be in the form of requesting more information, or requesting an interview to clarify or mediate the problem. In the case of an expressed emergency need to receive the necessary decision for the sake of job progress, the Executive Director will instead respond as soon as practicable.
  - v. Actual substitution of a replacement MBE or WBE to fulfill contract requirements must not be made before the Executive Director's approval is given of the acceptability of the substitute MBE or WBE. This subcontract must be executed within five (5) working days, and a copy of the MBE WBE subcontract with signatures of both parties to the agreement should be submitted immediately to the Executive Director.
- b. The Executive Director will not approve extra payment for escalated costs incurred by the Consultant when a substitution of subconsultants becomes necessary for the Consultant in order to comply with MBE/WBE contract requirements.
  - c. No relief of the MBE/WBE requirements will be granted by the Executive Director except in exceptional circumstances. Requests for complete or partial waiver of the MBE/WBE requirements of this contract must be made in writing, stating all details of the request, the circumstances, and any additional relevant information. The request must be accompanied by a record of all efforts taken by the Consultant to locate specific firms, solicit MBE and WBE bids, seek assistance from technical assistance agencies, and other good faith efforts undertaken to achieve compliance with the MBE/WBE goals.

#### 13. Non-Compliance

- a. The Executive Director has the authority to apply suitable sanctions to the Consultant if the Consultant is found to be in non-compliance with the MBE and WBE requirements. Failure to comply with the MBE or WBE terms of this contract or failure to use MBE or WBE firms as stated in the Consultant's assurances constitutes a material breach of the contract, and may lead to the suspension or termination of the contract in part or in whole. In some cases, monthly progress payments may be withheld until corrective action is taken.
- b. When the contract is completed, if the Executive Director has determined that the Consultant did not comply in the fulfillment of the required MBE and/or WBE goals, and a grant of relief of the requirements was not obtained, the Commission will be damaged in the failure to provide the benefit of participation to minority or women business to the degree set forth in this Special Condition. In that case, the Commission may disqualify the Consultant from entering into future contracts with the Commission.

#### 14. Severability

- a. If any section, subsection, paragraph, clause, provision or application of these Special Conditions is held invalid by any court, the invalidity of such section, paragraph, clause or provision will not affect any of the remaining provisions hereof.

### SCHEDULE B - Joint Venture Affidavit (1 of 3)

This form is not required if for a Joint Venture where all parties are certified MBE/WBE firms. In such case, however, a written Joint Venture agreement among the MBE/WBE firms should be submitted. Each MBE/WBE Joint Venturer must also attach a copy of their current certification letter.

1. Name of Joint Venture \_\_\_\_\_

2. Address of Joint Venture \_\_\_\_\_

3. Phone number of Joint Venture \_\_\_\_\_

4. Identify the firms that comprise the Joint Venture

A. Describe the role(s) of the MBE/WBE firm(s) in the Joint Venture. (Note that a "clearly defined portion of work" must here be shown as under the responsibility of the MBE/WBE firm.)

B. Describe very briefly the experience and business qualifications of each non-MBE/WBE Joint Venturer.

5. Nature of Joint Venture's business

6. Provide a copy of the Joint Venture agreement.

7. Ownership: What percentage of the Joint Venture is claimed to be owned by MBE/WBE? \_\_\_\_\_%

8. Specify as to:

A. Profit and loss sharing \_\_\_\_\_%

B. Capital contributions, including equipment \_\_\_\_\_%

C. Other applicable ownership interests, including ownership options or other agreements which restrict ownership or control.

D. Describe any loan agreements between Joint Venturers, and identify the terms thereof.

**SCHEDULE B - Joint Venture Affidavit (2 of 3)**

9. Control of and participation in this Contract: Identify by name, race, sex, and "firm" those individuals (and their titles) who are responsible for day-to-day management and policy decision making, including, but not limited to, those with prime responsibility for:

A. Financial decisions: \_\_\_\_\_

B. Management decisions such as:

1. Estimating: \_\_\_\_\_

2. Marketing/Sales: \_\_\_\_\_

C. Hiring and firing of management personnel:   X   \_\_\_\_\_

D. Purchasing of major items or supplies: \_\_\_\_\_

E. Supervision of field operations: \_\_\_\_\_

F. Supervision of office personnel: \_\_\_\_\_

- G. Describe the financial controls of the Joint Venture, e.g., will a separate cost center be established; which venturer will be responsible for keeping the books; how will the expense therefor be reimbursed; the authority of each Joint Venturer to commit or obligate the other. Describe the estimated contract cash flow for each Joint Venturer.

- H. State approximate number of operational personnel, their craft/role and positions, and whether they will be employees of the majority firm or the Joint Venture.

10. Please state any material facts of additional information pertinent to the control and structure of this Joint Venture.

### SCHEDULE B - Joint Venture Affidavit (3 of 3)

THE UNDERSIGNED SWEAR THAT THE FOREGOING STATEMENTS ARE CORRECT AND INCLUDE ALL MATERIAL INFORMATION NECESSARY TO IDENTIFY AND EXPLAIN THE TERMS AND OPERATIONS OF OUR JOINT VENTURE AND THE INTENDED PARTICIPATION BY EACH JOINT VENTURER IN THE UNDERTAKING. FURTHER, THE UNDERSIGNED COVENANT AND AGREE TO PROVIDE TO THE PUBLIC BUILDING COMMISSION OF CHICAGO CURRENT, COMPLETE AND ACCURATE INFORMATION REGARDING ACTUAL JOINT VENTURE WORK AND THE PAYMENT THEREFOR AND ANY PROPOSED CHANGES IN ANY OF THE JOINT VENTURE AGREEMENTS AND TO PERMIT THE AUDIT AND EXAMINATION OF THE BOOKS, RECORDS, AND FILES OF THE JOINT VENTURE, OR THOSE OF EACH JOINT VENTURER RELEVANT TO THE JOINT VENTURE, BY AUTHORIZED REPRESENTATIVES OF THE COMMISSION. ANY MATERIAL MISREPRESENTATION WILL BE GROUNDS FOR TERMINATING ANY CONTRACT WHICH MAY BE AWARDED AND FOR INITIATING ACTION UNDER FEDERAL OR STATE LAWS CONCERNING FALSE STATEMENTS.

Note: If, after filing this Schedule B and before the completion of the Joint Venture's work on this Contract, there is any significant change in the information submitted, the Joint Venture must inform the Public Building Commission of Chicago, either directly or through the Consultant if the Joint Venture is a sub-consultant.

\_\_\_\_\_  
Name of Joint Venturer

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

State of \_\_\_\_\_ County of \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

before me appeared (Name)

\_\_\_\_\_  
to me personally known, who, being duly sworn,  
did execute the foregoing affidavit, and did state  
that he or she was properly authorized by

(Name of Joint Venture)  
to execute the affidavit and did so as his or her  
free act and deed.

\_\_\_\_\_  
Notary Public

Commission expires:

(SEAL)

X  
\_\_\_\_\_  
Name of Joint Venturer

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

State of \_\_\_\_\_ County of \_\_\_\_\_

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

before me appeared (Name)

\_\_\_\_\_  
to me personally known, who, being duly sworn,  
did execute the foregoing affidavit, and did state  
that he or she was properly authorized by

(Name of Joint Venture)  
to execute the affidavit and did so as his or her  
free act and deed.

\_\_\_\_\_  
Notary Public

Commission expires:

(SEAL)

**SCHEDULE C - Letter of Intent from MBE/WBE (1 of 2)**  
**To Perform As**  
**Subcontractor, Subconsultant, and/or Material Supplier**

Name of Project: \_\_\_\_\_

Project Number: \_\_\_\_\_

FROM:

\_\_\_\_\_ MBE \_\_\_\_\_ WBE \_\_\_\_\_

(Name of MBE or WBE)

TO:

\_\_\_\_\_ and Public Building Commission of Chicago

(Name of Bidder)

The undersigned intends to perform work in connection with the above-referenced project as (check one):

☐ \_\_\_\_\_ a Sole Proprietor

☐ \_\_\_\_\_ a Corporation

☐ \_\_\_\_\_ a Partnership

☐ \_\_\_\_\_ a Joint Venture

The MBE/WBE status of the undersigned is confirmed by the attached Letter of Certification, dated \_\_\_\_\_. In addition, in the case where the undersigned is a Joint Venture with a non-MBE/WBE firm, a Schedule B, Joint Venture Affidavit, is provided.

The undersigned is prepared to provide the following described services or supply the following described goods in connection with the above-named project.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

The above-described services or goods are offered for the following price, with terms of payment as stipulated in the Contract Documents.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**SCHEDULE C - Letter of Intent from MBE/WBE (2 of 2)**  
**To Perform As**  
**Subcontractor, Subconsultant, and/or Material Supplier**

**PARTIAL PAY ITEMS**

For any of the above items that are partial pay items, specifically describe the work and subcontract dollar amount:

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If more space is needed to fully describe the MBE/WBE firm's proposed scope of work and/or payment schedule, attach additional sheet(s).

**SUB-SUBCONTRACTING LEVELS**

\_\_\_\_\_ % of the dollar value of the MBE/WBE subcontract will be sublet to non-MBE/WBE contractors.

\_\_\_\_\_ % of the dollar value of the MBE/WBE subcontract will be sublet to MBE/WBE contractors.

If MBE/WBE subcontractor will not be sub-subcontracting any of the work described in this Schedule, a zero (0) must be filled in each blank above. If more than 10% percent of the value of the MBE/WBE subcontractor's scope of work will be sublet, a brief explanation and description of the work to be sublet must be provided.

The undersigned will enter into a formal agreement for the above work with the Bidder, conditioned upon its execution of a contract with the Public Building Commission of Chicago, and will do so within five (5) working days of receipt of a notice of Contract award from the Commission.

BY:

\_\_\_\_\_  
Name of MBE/WBE Firm (Print)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Phone

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name (Print)

IF APPLICABLE:

BY:

\_\_\_\_\_  
Joint Venture Partner (Print)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Phone

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name (Print)

MBE \_\_\_\_ WBE \_\_\_\_ Non-MBE/WBE \_\_\_\_

**SCHEDULE D - Affidavit of General Contractor Regarding MBE/WBE Participation (1 of 2)**

Name of Project: \_\_\_\_\_

STATE OF ILLINOIS    }

                              } SS

COUNTY OF COOK     }

In connection with the above-captioned contract, I HEREBY DECLARE AND AFFIRM that I am the

\_\_\_\_\_

Title and duly authorized representative of

\_\_\_\_\_

Name of General Contractor whose address is

\_\_\_\_\_

in the City of \_\_\_\_\_, State of \_\_\_\_\_

and that I have personally reviewed the material and facts submitted with the attached Schedules of MBE/WBE participation in the above-referenced Contract, including Schedule C and Schedule B (if applicable), and the following is a statement of the extent to which MBE/WBE firms will participate in this Contract if awarded to this firm as the Contractor for the Project.

Name of MBE/WBE Contractor	Type of Work to be Done in Accordance with Schedule C	Dollar Credit Toward MBE/WBE Goals	
		MBE	WBE
		\$	\$
		\$	\$
		\$	\$
		\$	\$
		\$	\$
		\$	\$
		\$	\$
		\$	\$
<b>Total Net MBE/WBE Credit</b>		\$	\$
<b>Percent of Total Contract Value</b>		%	%

The Professional Service Provider may count toward its MBE/WBE goal a portion of the total dollar value of a contract with a joint venture equal to the percentage of the ownership and control of the MBE/WBE partner.

**SCHEDULE D - Affidavit of General Contractor Regarding MBE/WBE Participation (2 of 2)**

The undersigned will enter into a formal agreement for the above work with the above-referenced MBE/WBE firms, conditioned upon performance as Contractor of a Contract with the Commission, and will do so within five (5) business days of receipt of a notice of Contract award from the Commission.

BY:

\_\_\_\_\_  
Name of Contractor (Print)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name (Print)

\_\_\_\_\_  
Phone

IF APPLICABLE:

BY:

\_\_\_\_\_  
Joint Venture Partner (Print)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name (Print)

\_\_\_\_\_  
Phone/FAX

MBE \_\_\_\_ WBE \_\_\_\_ Non-MBE/WBE \_\_\_\_