FULLY EXECUTED
Contract Number: 4400026815
Original Contract Effective Date: 09/09/2022
Valid From: 11/01/2022 To: 10/31/2025

All using Agencies of the Commonwealth, Participating Political Subdivision, Authorities, Private Colleges and Universities

Your SAP Vendor Number with us: 152776

Supplier Name/Address:
SKELLY AND LOY INC
449 EISENHOWER BLVD STE 300
HARRISBURG PA 17111-2302 US

Supplier Phone Number: 717-232-0593
Supplier Fax Number: 717-232-1799

Purchasing Agent
Name: Kujat Maurice
Phone: 717-346-2671
Fax: 717-346-3820

Please Deliver To:

To be determined at
the time of the Purchase Order
unless specified below.

Contract Name:
Environmental Remediation Services

Payment Terms
NET 30

Solicitation No.: Issuance Date:

Supplier Bid or Proposal No. (if applicable): Solicitation Submission Date:

This contract is comprised of: The above referenced Solicitation, the Supplier's Bid or Proposal, and any documents attached to this Contract or incorporated by reference.

Item	Material/Service Desc	Qty	UOM	Price	Per Unit	Total
1	Environmental Remediation Services	0.000		0.00	1	0.00

General Requirements for all Items:

Information:

Supplier's Signature _____ Title _____

Printed Name _____ Date _____

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Supplier Name:
SKELLY AND LOY INC

Header Text

SUPPLIER Contact Info:
Skelly and Loy, Inc.
449 Eisenhower Boulevard, Suite 300
Harrisburg, PA 17111
CONTACT: Mark Ioos or Rob Rowley
PHONE: 717-232-0593
EMAIL: mioos@skellyloy.com or rrowley@skellyloy.com

EMERGENCY Contact & Phone: Rob Rowley at 717-574-0242

No further information for this Contract

Information:

CONTRACT
FOR
ENVIRONMENTAL REMEDIATION SERVICES

THIS CONTRACT for the provision of **Environmental Remediation Services** ("Contract") is entered into by and between the **Commonwealth of Pennsylvania,** acting through the Department of General Services ("DGS") and **Skelly and Loy, Inc. ("Contractor").**

WHEREAS, DGS issued a Request for Proposals for the Provision of **Environmental Remediation Services** for Commonwealth executive agencies, RFP No**. 6100052061** ("RFP"); and

WHEREAS, Contractor submitted a proposal in response to the RFP; and

WHEREAS, Contractor's proposal was selected for the Best and Final Offer ("BAFO") phase of the RFP process; and

WHEREAS, in response to the DGS BAFO request, Contractor submitted a BAFO Cost Submittal; and

WHEREAS, DGS determined that Contractor's proposal, as revised by its BAFO Cost Submittal, was the most advantageous to the Commonwealth after taking into consideration all of the evaluation factors set forth in the RFP and selected Contractor for contract negotiations; and

WHEREAS, DGS and Contractor have negotiated this Contract as their final and entire agreement in regard to providing **Environmental Remediation Services** to the Commonwealth.

NOW THEREFORE, intending to be legally bound hereby, DGS and Contractor agree as follows:

1. Contractor shall, in accordance with the terms and conditions of this Contract, provide **Environmental Remediation Services** as more fully defined in the RFP, to the Commonwealth.

2. Commonwealth executive agencies shall procure their requirements for **Environmental Remediation Services** in accordance with the terms and conditions of this Contract.

3. Contractor agrees to provide the **Environmental Remediation Services** listed in its BAFO Cost Submittal "BAFO Appendix A – Cost Submittal Revised 02.15.2022," which is attached hereto as Exhibit B and made a part hereof, at the prices listed for those items in Exhibit B.

4. Contractor agrees to meet and maintain its commitments to Small Diverse Businesses made in its Small Diverse Business Participation Submittal, attached hereto as Exhibit C and made a part hereof. The Contractor shall submit any

proposed change to a Small Diverse Business commitment to the Department of General Services' Bureau of Diversity Inclusion and Small Business Opportunities ("BDISBO"), which will make a recommendation as to a course of action to the Contracting Officer. The Contractor shall complete Monthly Utilization Reports within DGS's PRiSM Compliance Management System within ten (10) workdays at the end of each calendar month that the Contract is in effect.

5. Contractor agrees to meet and maintain its commitments to Veteran Business Enterprises made in its Veteran Business Enterprise Participation Submittal, attached hereto as Exhibit D and made a part hereof. The Contractor shall submit any proposed change to a Veteran Business Enterprise commitment to the Department of General Services' Bureau of Diversity Inclusion and Small Business Opportunities ("BDISBO"), which will make a recommendation as to a course of action to the Contracting Officer. The Contractor shall complete Monthly Utilization Reports within DGS's PRiSM Compliance Management System within ten (10) workdays at the end of each calendar month that the Contract is in effect.

6. This Contract is comprised of the following documents, which are listed in order of precedence in the event of a conflict between these documents:

a. The Contract document contained herein.

b. The Contract Terms and Conditions contained in the RFP, which is attached hereto as Exhibit A and made part of this Contract.

c. BAFO Appendix A – Cost Submittal Revised 02.15.2022, which is attached hereto as Exhibit B and made a part hereof.

d. The Contractor's Small Diverse Business Participation Submittal, which is attached hereto as Exhibit C and made a part hereof.

e. The Contractor's Veteran Business Enterprise Participation Submittal, which is attached hereto as Exhibit D and made a part hereof.

f. The RFP, including all of the referenced Appendices and as revised by all Addenda issued thereto, which is attached hereto as Exhibit E and made a part hereof.

g. The Contractor's Technical Submittal, which is attached hereto as Exhibit F and made a part hereof.

IN WITNESS WHEREOF, the parties have signed this Contract below. Execution by the Commonwealth is described in the Contract Terms and Conditions.

Witness:

[redacted]
(Assistant) Secretary

August 25, 2022
Printed Name/Date

CONTRACTOR:

By:_[redacted]_____
(Vice) President

Sandra K Basehore August 25, 2022
Printed Name/Date

[redacted]
Federal I.D. Number

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF GENERAL SERVICES

By: To be obtained electronically
Deputy Secretary for Procurement Date

APPROVED AS TO FORM AND LEGALITY:

To be obtained electronically
Office of Chief Counsel Date

To be obtained electronically
Office of General Counsel Date

To be obtained electronically
Office of Attorney General Date

APPROVED:

To be obtained electronically
Comptroller Date

EXHIBIT E

Environmental Remediation Services 6100052061

ORIGINAL RFP DOCUMENTS

EXHIBIT E

Environmental Remediation Services 6100052061

EVENT SUMMARY

Event Summary - 6100052061 Environmental Remediation Services

Type	Request for Proposal	**Number**	Energy-RFP002722
Stage Title	-	**Organization**	CommonwealthPA
Currency	US Dollar	**Event Status**	Under Evaluation
Work Group	Energy	**Exported on**	8/10/2022
Exported by	Maurice Kujat	**Estimated Value**	9,000,000.00 USD
Payment Terms	-		

Bid and Evaluation

Respond by Proxy	Disallow	**Use Panel Questionnaire**	No
Sealed Bid	Yes	**Auto Score**	No
		Cost Analysis	No
Alternate Items	No		

Visibility and Communication

Visible to Public Yes

Enter a short description for this public event

Environmental Remediation Services

Commodity Codes

Commodity Code	Description
77100000	Environmental management
77110000	Environmental protection
77120000	Pollution tracking and monitoring and rehabilitation

Event Dates

Time Zone	EDT/EST - Eastern Standard Time (US/Eastern)
Released	-
Open	1/3/2022 8:30 AM EST
Close	3/7/2022 2:00 PM EST
Sealed Until	3/7/2022 2:00 PM
	Show Sealed Bid Open Date to Supplier
Q&A Close	2/11/2022 12:00 PM EST

Event Users

Event Creator

Maurice Kujat

mkujat@pa.gov

Phone +1 717-346-2671

Description

1. **Purpose.** This request for proposals (RFP) provides information to enable potential Offerors to prepare and submit proposals for the Commonwealth of Pennsylvania's consideration.

2. Determination to use Competitive Sealed Proposal Method. As set forth in Bureau of Procurement Policy Directive 2018-1, the Secretary of General Services has determined that the competitive sealed proposals process generally is the most practical and advantageous method for awarding contracts to obtain the best value for the Commonwealth. There are no features of this particular Project that are inconsistent with the rationale set forth in BOP Policy Directive 2018-1 and the justification for the use of competitive sealed proposals set forth in BOP Policy Directive 2018-1 is hereby adopted for this Project.

3. Issuing Office. The **Department of General Services** ("Issuing Office") has issued this RFP on behalf of the Commonwealth. The sole point of contact in the Commonwealth for this RFP shall be the Contact listed above, who is the Issuing Officer for this RFP. Please refer all inquiries to the Issuing Officer. Any violation of this condition may be cause for the Issuing Office to reject the offending Offeror's proposal. Offerors must agree not to distribute any part of their proposals beyond the Issuing Office. An Offeror who shares information contained in its proposal with other Commonwealth personnel and/or competing Offeror may be disqualified.

4. Project Description. Through this RFP, The Pennsylvania Department of General Services (DGS) will secure a single qualified Supplier to provide all labor, materials, tools, equipment and incidentals necessary to perform a full range of environmental remediation and investigative services on an as needed basis, including but not limited to, storage tank removal/replacement and/or corrective action services, excavation, soil and groundwater remediation, asbestos inspection/abatement, sampling and laboratory analysis, and waste survey, identification, and disposal, as well as any other related remediation and restoration services. This Contract will cover all areas within the Pennsylvania Department of Transportation (PennDOT) highway right-of-way, facility property boundary, or the points of compliance, as defined under the Land Recycling and Environmental Remediation Standards Act (Act 2) and any other applicable laws and/or policies. All services performed shall be in accordance with all applicable state and federal laws regulations and local ordinances. Limited to PennDOT only within any and all areas affected.

PennDOT's eleven (11) Districts oversee programs and policies affecting highways, urban and rural public transportation, airports, railroads, ports and waterways. Further responsibilities include the ongoing monitoring and compliance with state and federal environmental laws. The first Environmental Remediation Services Contract was established due to the possibility of encountering unexpected hazardous/non-hazardous wastes during construction of highways/bridges, and over the years successive contracts have become routinely used for providing emergency and non-emergency remediation services at existing PennDOT roadways, maintenance facilities and offices.

There are two different types of response times within the scope of services under this Contract: Normal Response (non-emergency) and Rapid Response (emergency). In the past, approximately sixty percent (60%) of purchase orders were for Rapid Response.

5. Type of Contract. If the Issuing Office enters into a contract as a result of this RFP, it will be an Established Price Contract With Escalation and will contain the **Contract Terms and Conditions** attached to this RFP in the **Buyer Attachments** section.

6. Small Diverse Business (SDB) and Veteran Business Enterprise (VBE) Participation. The Department's Bureau of Diversity, Inclusion and Small Business Opportunities (BDISBO) has developed a goal setting policy based upon recommendations from its 2018 Disparity Study. The goal setting policy requires BDISBO and agencies to identify contract-specific participation goals for SDBs (which include Minority Business Enterprises, Women Business Enterprises, LGBT Business Enterprises, Disability-Owned Business Enterprises, and Service-Disabled Veteran-Owned Small Business Enterprises) and VBEs (which include Veteran-Owned Small Business Enterprises and Service-Disabled Veteran-Owned Small Business Enterprises). Proposers must either agree to meet the participation goals in full or must request a full or partial Good Faith Efforts waiver from one or both of the participation goals. Failure to meet the participation goals or establish they have made good faith efforts to meet the participation goals will result in rejection of a proposal as nonresponsive. The goals that have been established for this Project are set forth below:

SDB - 9%

VBE - 3%

Further information can be found in RFP Questions Groups 1.2 and 1.3.

7. New SDB and VBE Goal Information Session. The Commonwealth has made significant changes to the SDB and VBE requirements, and failure to meet these requirements may result in your proposal being deemed nonresponsive. Therefore, the Issuing Office will hold an SDB and VBE Goal Information Session for this RFP which we highly recommend you attend. The purpose of this Session is to provide an overview of the RFP and SDB and VBE Participation submission instructions. Offerors may ask questions in accordance with **Section 10, Questions and Answers** contained in this **Description Section**. Offerors may also ask questions during the Session, however responses provided during the Session are **not official** until the question is submitted in writing using the **Q&A Board** in JAGGAER. Q&A Board questions and written responses shall become part of this RFP.

The date and time of the Virtual SDB and VBE Goal Information Session are as follows:

Date: January 10, 2022, via Microsoft Teams

Time: 11:00 AM

To obtain the Microsoft Teams login information, Offerors shall RSVP via email to the Issuing Officer, Maurice Kujat at mkujat@pa.gov, no later than 8:30 AM on January 10, 2022.

8. Rejection of Proposals. The Issuing Office reserves the right, in its sole and complete discretion, to reject any proposal received as a result of this RFP.

9. Incurring Costs. The Issuing Office is not liable for any costs the Offeror incurs in preparation and submission of its proposal, in participating in the RFP process or in anticipation of award of the contract.

10. Questions & Answers. Questions must be submitted using the Q&A Board within this event. Questions must be submitted as individual questions. Only one question is to be submitted at a time and no attachments are to be uploaded. Questions must be submitted by the posted deadline. All questions and responses are considered an addendum to and part of this RFP. The Issuing Office shall not be bound by any verbal information, nor shall it be bound by any written information that is not either contained within the RFP or formally issued by the Issuing Office. The Issuing Office does not consider questions to be a protest of the specifications or the solicitation.

11. Addenda to the RFP. Any revisions to this RFP will be made electronically within this site.

12. Response Date. To be considered for selection, electronic proposals must be submitted on or before the time and date specified. The Issuing Office will reject any late proposals.

13. Proposal Submission: To be considered, Offerors must submit a complete response to this RFP by the due date and time from an official authorized to bind the Offeror to its provisions along with any additional Mandatory Responsiveness requirements as set forth in the Mandatory Responsive Requirements section, which are the only RFP requirements that the Commonwealth will consider to be not waivable. Clicking the submit button within this site constitutes an electronic signature. The Issuing Office reserves the right, in its sole discretion, to (1) waive any other technical or immaterial nonconformities in an Offeror's proposal, (2) allow the Offeror to cure the nonconformity, or (3) consider the nonconformity in the scoring of the Offeror's proposal. The proposal must remain valid for **120 days** or until a contract is fully executed, whichever is later. If the Issuing Office selects the Offeror's proposal for award, the contents of the selected Offeror's proposal will become, except to the extent the contents are changed through Best and Final Offers or negotiations, contractual obligations.

14. Proposal Format: To be considered, the Offeror must respond to all proposal requirements. Each proposal consists of four submittal components: Technical, Cost, SDB Participation Submittal (along with the SDB Utilization Schedule, Good Faith Efforts Wavier request, or both) and VBE Participation Submittal (along with the VBE Utilization Schedule, Good Faith Efforts Waiver request, or both). Offerors should provide any other information thought to be relevant, but not applicable to the enumerated categories, as attachments. The Issuing Office reserves the right to request additional information which, in the Issuing Office's opinion, is necessary to assure that the Offeror's competence, number of qualified employees, business organization, and financial resources are adequate to perform according to the RFP. The Issuing Office may make investigations as deemed necessary to determine the ability of the Offeror to perform the Project, and the Offeror shall furnish to the Issuing Office all requested information and data.

15. Mandatory Responsiveness Requirements. To be eligible for selection, the proposal must be:

1. Timely received from and timely submitted by an Offeror (see Proposal Submission section);

2. Electronically signed by the Offeror (see Proposal Submission section);

3. Contain a completed SDB participation submittal and additional required documentation; and either (a) agree to meet the SDB participation goal in full or (b) receive an approved GFE waiver from any unmet portion of the SDB participation goal; and

4. Contain a completed VBE participation submittal and additional required documentation; and either (a) agree to meet the VBE participation goal in full or (b) receive an approved VBE waiver from any unmet portion of the VBE participation goal.

16. Alternate Proposals. The Issuing Office has identified the basic approach to meeting its requirements, allowing Offerors to be creative and propose their best solution to meeting these requirements. The Issuing Office will not accept alternate proposals.

17. Discussions for Clarification. Offerors may be required to make an oral or written clarification of their proposals to the Issuing Office to ensure thorough mutual understanding and responsiveness to the solicitation requirements. The Issuing Office will initiate requests for clarification. Clarifications may occur at any stage of the evaluation and selection process prior to contract execution.

18. Prime Contractor Responsibilities. The selected Offeror must perform at least 50% of the total contract value. Nevertheless, the contract will require the selected Offeror to assume responsibility for all services offered in its proposal whether it produces them itself or by subcontract. Further, the Issuing Office will consider the selected Offeror to be the sole point of contact with regard to all contractual matters.

A. Insurance: There are three (3) types of Insurance certificates that must be submitted prior to commencement of work under this Contract and at each insurance renewal date during the term of the Contract. These certificates (policies) shall contain a provision that the coverage's afforded under the policies will not be cancelled or changed until at least thirty (30) days written notice has been given to the Commonwealth.

The Commonwealth shall be under no obligation to obtain such certificates from the Supplier. Failure by the Commonwealth to obtain the certificates shall not be deemed a waiver of the Supplier's obligation to obtain and furnish certificates. The Commonwealth shall have the right to inspect the original insurance policies.

1. General Liability Insurance – The awarded Supplier must submit a certificate of General Liability Insurance as listed in the [V.47 CONTRACT-045.1 Insurance - General (Dec 12, 2006)] of the standard Contract Terms and Conditions.

2. Asbestos Contractor Liability Insurance– The awarded Supplier must submit a certificate of Asbestos Contractor Liability Insurance. The Supplier may use the certificate of their Subcontractor for Asbestos Contractor Liability Insurance prior to commencement of work under this Contract.

Should the awarded Supplier use a different Subcontractor other than the one initially used, then the different Subcontractor's certificate of insurance should be included with the Technical Proposal(s) & Cost Estimate(s) or as part of the Rapid Response(s) process.

3. Environmental Pollution Liability Insurance - The awarded Supplier must submit a certificate of Environmental Pollution Liability Insurance, issued by a company acceptable to the Commonwealth and authorized to conduct such business under the laws of the Commonwealth of Pennsylvania.

Environmental Pollution Liability Insurance to protect the Commonwealth, the Supplier and any Subcontractors from claims for any environmental and pollution damage which may arise from the activities performed under the Contract or the failure to perform under the Contract, whether such performance or non-performance be by the Supplier, by any Subcontractor, or by anyone directly or indirectly employed by either.

B. Bond Requirements:

1. Performance Bonds - The awarded Supplier must furnish within ten (10) days after award of the purchase order, the following:

For purchase orders in excess of $100,000, a Performance Bond at one hundred percent (100%) of the purchase order amount, conditioned upon the faithful performance of the contract in accordance with the plans, specifications and conditions of the contract. The bond shall be solely for the protection of the contracting body which awarded the contract. The Commonwealth may require additional Performance Bond protection, should the cost of a project increase. If the Commonwealth requires an increase in the Performance Bond amount, the Supplier will be notified of this requirement through a written Change Notice and the Supplier will have ten (10) days to provide the new or increased Performance Bond.

If a project is initially below $100,000 then exceeds this threshold due to changes necessitated in the project, a Performance Bond may be required. If the Commonwealth requires Performance Bond due to the project's increased cost, the Supplier will be notified of this requirement through a written Change Notice and the Supplier will have ten (10) days to provide the Performance Bond.

Failure to furnish the required performance security within the required ten (10) day time frame shall be considered a failure to perform a contractual obligation which may result in termination of the purchase order and award to another Supplier. In the event of termination and re-award for failure to provide performance security, the Supplier shall be responsible for any increase in cost to the Commonwealth.

Where the Supplier does not comply with the requirements of the purchase order, the amount of the performance security shall be paid to the Commonwealth as liquidated damages for the Supplier's failure to comply, or the Commonwealth may, at its sole option, sue the Supplier or its surety for the damages it has suffered for any breach of contract, in which case security held by the Commonwealth shall be applied as a credit in such suit for damages.

2. Payment Bonds - The awarded Supplier must furnish the payment bond within ten (10) days after award of the purchase order, the following:

For purchase orders in excess of $100,000, the awarded Supplier must furnish a Payment Bond in an amount equal to one hundred percent (100%) of the purchase order amount. The Payment Bond must be executed by a surety company authorized to do business in the Commonwealth and made payable to the Commonwealth. The Commonwealth may require additional Payment Bond protection, should the cost of a project increase. If the Commonwealth requires an increase in the Payment Bond amount, the Supplier will be notified of this requirement through a written Change Notice and the Supplier will have ten (10) days to provide the new or increased Payment Bond.

If a project is initially below $100,000 then exceeds this threshold due to changes necessitated in the project, a Payment Bond may be required. If the Commonwealth requires Payment Bond due to the project's increased cost, the Supplier will be notified of this requirement through a written Change Notice and the Supplier will have ten (10) days to provide the Payment Bond.

The Payment Bond shall be conditioned on the prompt payment for all materials furnished or labor supplied or performed in the performance of the work. Labor and materials include public utility services and reasonable rentals of equipment for the periods when the equipment rented is actually used at the site.

A Payment Bond shall be solely for the protection of claimants supplying labor and materials to the awarded Supplier, or to any of its Subcontractors, in the performance of the work provided for in the contract.

C. Prevailing Wage Determination: The contract with the awarded Supplier is subject to and shall comply with the provisions, duties, obligations, remedies and penalties of the Pennsylvania Prevailing Wage Act, 43 P.S. §§ 165-1 – 165-17 and its regulations 34 Pa. Code §§ 9.101 – 9.112, which are incorporated herein by reference as if fully set forth herein. The Supplier shall pay no less than the wage rates including contributions for employee benefits as determined by the Secretary of Labor and Industry (hereinafter referred to in this paragraph as "Secretary") for each craft or classification of all workers needed to perform this contract during the term hereof for the county in which the work is to be performed. In compliance with said Pennsylvania Prevailing Wage Act, the Prevailing Minimum Wage Predetermination, as approved by the Secretary, is attached hereto and made a part hereof.

1. The provisions of this paragraph shall apply to all work performed on the contract by the Supplier and to all work performed on the contract by all Subcontractors. The Supplier shall insert in each of its Subcontracts all of these required contract provisions and stipulations contained in this paragraph and such other stipulations as may be required.

2. No worker may be employed on the public work except in accordance with the classifications set forth in the decisions of the Secretary. In the event that additional or different classifications are necessary, the procedure set forth in section 8 of the Act

(43 P.S. § 165-8) and section 9.107 of the Act's Regulations (relating to petition for review of rates and hearings) shall be followed.

3. Workers employed or working on the public work shall be paid unconditionally, regardless of whether any contractual relationship exists or the nature of a contractually relationship which may be alleged to exist between a Supplier, Subcontractor(s) and workers, at least once a week without deduction or rebate, on any account, either directly or indirectly, except authorized deductions, the full amounts due at the time of payment, computed at the rates applicable to the time worked in the appropriate classification. Nothing in the contract, the Prevailing Wage Act or its Regulations prohibits the payment of more than the general prevailing minimum wage rates as determined by the Secretary to any worker or public work.

4. The Supplier and each Subcontractor shall post for the entire period of construction the wage determination decisions of the Secretary, including the effective date of changes thereof, in a prominent and easily accessible place or places at the site of the work and at the place or places used by them to pay workers their wages. The posted notice of wage rates shall contain the following information:

a. The name of project.

b. The name of public body for which it is being constructed.

c. The crafts and classifications of workers listed in the Secretary's general prevailing minimum wage rate determination for the particular project.

d. The general prevailing minimum wage rates determined for each craft and classification and the effective date of changes.

e. A statement advising workers that if they have been paid less than the general prevailing minimum wage rate for their job classification or that the Supplier or Subcontractor(s) are not complying with the act or the regulations in any manner whatsoever, the worker may file a protest in writing with the Secretary of Labor and Industry within three (3) months of the date of the occurrence, objecting to the payment to a Supplier to the extent of the amount due or to become due to them as wages for work performed on the public work project. A worker paid less than the rate specified in the contract shall have a civil right of action for the difference between the wage paid and the wages stipulated in the contract, which right of action must be exercised within six (6) months from the occurrence of the event creating the right.

5. The Supplier and Subcontractor(s) shall keep an accurate record showing the name, craft or classification, number of hours worked per day, and the actual hourly rate of wage paid including employee benefits, to each worker employed by the Supplier or Subcontractor(s) in connection with the public work. The record shall include deductions from each worker. The record shall be preserved for two (2) years from the date of payment and shall be open at reasonable hours to the inspection of the public body awarding the contract and to the Secretary or the Secretary's authorized

representatives. First and last weekly payroll forms must be kept on file for a minimum of four (4) years after completion of work/project.

6. Apprentices shall be limited to numbers in accordance with a bona fide apprenticeship program registered with and approved by the Pennsylvania Apprenticeship and Training Council and only apprentices whose training and employment are in full compliance with The Apprenticeship and Training Act (43 P.S. §§ 90.1 – 90.10), approved July 14, 1961 and the regulations issued thereto shall be employed on the public work project. A worker using the tools of a craft who does not qualify as an apprentice within the provisions of this subsection shall be paid the rate predetermined for journeymen in that particular craft or classification.

7. Wages shall be paid without deductions except authorized deductions. Employers not parties to a contract requiring contributions for employee benefits which the Secretary of Labor & Industry has determined to be included in the general prevailing minimum wage rate shall pay the monetary equivalent thereof directly to the workers.

8. Payment of compensation to workers for work performed on public work on a lump sum basis, or a piece work system, or a price certain for the completion of a certain amount of work, or the production of a certain result shall be deemed a violation of the Act, regardless of the average hourly earnings resulting therefrom.

9. Each Supplier and each Subcontractor shall file a statement each week and a final statement at the conclusion of the work on the contract with the contracting agency, under oath, and in form satisfactory to the Secretary, certifying that workers have been paid wages in strict conformity with the provisions of the contract. If wages remain unpaid, the Supplier or Subcontractor(s) shall set forth the amount of wages due and owing to each worker respectively. A copy of the form entitled "Contractor's or Subcontractor's Weekly Payroll Certification for Public Works Projects" is attached hereto.

10. Before final payment is made, a final wage certification must be submitted by all Suppliers and Subcontractor(s).

Since the costs and location of each specific work assignment will vary, when applicable, the State or Federal wage determination will be provided by PennDOT personnel to the Supplier for their technical and cost proposal preparation.

In accordance with the Pennsylvania Prevailing Wage Act of 1963, work assignments under the Contract estimated to be greater than $25,000 that are one hundred percent (100%) state funded, are subject to the Prevailing Wage Act. Certified payrolls may be requested by PennDOT, or its designated representative, in accordance with Section 6 of the Act.

In accordance with the Davis-Bacon Act, for work assignments under this contract that are funded in any percent (%) with Federal dollars, the Supplier is required to pay its employees, both contracted and subcontracted, federal prevailing wages on all Federal aid

projects exceeding $2,000, except those on roadways classified as local roads or rural minor collectors.

19. Proposal Contents.

A. Confidential Information. The Commonwealth is not requesting confidential proprietary information or trade secrets to be included as part of Offerors' submissions. Accordingly, except as provided herein, Offerors should not label proposal submissions as confidential or proprietary or trade secret protected. Any Offeror who determines that it must divulge such information as part of its proposal must submit the signed written statement described in subsection c. below. After contract award, the selected Offeror must additionally provide a redacted version of its proposal, which removes only the confidential proprietary information and trade secrets, for required public disclosure purposes.

B. Commonwealth Use. All material submitted with the proposal shall be considered the property of the Commonwealth of Pennsylvania. The Commonwealth has the right to use any or all ideas not protected by intellectual property rights that are presented in any proposal regardless of whether the proposal becomes part of a contract. Notwithstanding any Offeror copyright designations contained in proposals, the Commonwealth shall have the right to make copies and distribute proposals internally and to comply with public record or other disclosure **requirements** under the provisions of any Commonwealth or United States statute or regulation, or rule or order of any court of competent jurisdiction.

C. Public Disclosure. After the award of a contract pursuant to this RFP, all proposal submissions are subject to disclosure in response to a request for public records made under the Pennsylvania Right-to-Know-Law, 65 P.S. § 67.101, et seq. If a proposal submission contains confidential proprietary information or trade secrets, a signed written statement to this effect must be provided with the submission in accordance with 65 P.S. § 67.707(b) for the information to be considered exempt under 65 P.S. § 67.708(b)(11) from public records requests. Refer to the **Additional Required Documentation** section for a **Trade Secret Confidential Proprietary Information Notice Form** that may be utilized as the signed written statement, if applicable. If financial capability information is submitted, such financial capability information is exempt from public records disclosure under 65 P.S. § 67.708(b)(26).

20. Best and Final Offers (BAFO). The Issuing Office reserves the right to conduct discussions with Offerors for the purpose of obtaining "best and final offers" in one or more of the following ways, in any combination and order: schedule oral presentations, request revised proposals, conduct an online auction, and enter into pre-selection negotiations.

The following Offerors will **not** be invited by the Issuing Office to submit a Best and Final Offer: those Offerors which the Issuing Office has determined to be not responsible or whose proposals the Issuing Office has determined to be not responsive; those Offerors which the Issuing Office has determined in accordance with the **Offeror Responsibility** subsection from the submitted and gathered financial and other information, do not possess the financial capability, experience or qualifications to assure good faith performance of the contract; and those Offerors whose score for their technical submittal of the proposal is less than 75 % of the total amount of technical points allotted to the technical criterion.

The Issuing Office may further limit participation in the best and final offers process to those remaining responsible Offerors which the Issuing Office has determined to be within the top competitive range of responsive proposals. The Evaluation Criteria shall also be used to evaluate the Best and Final offers. Price reductions offered through any online auction shall have no effect upon the Offeror's Technical Submittal.

21. News Releases. Offerors shall not issue news releases, Internet postings, advertisements or any other public communications pertaining to this Project without prior written approval of the Issuing Office, and then only in coordination with the Issuing Office.

22. Term of Contract. The initial term of the contract will be three (3) years and commence on the Effective Date which shall be no earlier than July 1, 2022. The Issuing Office will fix the Effective Date after the contract has been fully executed by the selected Offeror and by the Commonwealth and all approvals required by Commonwealth contracting procedures have been obtained. The selected Offeror shall not start the performance of any work prior to the Effective Date of the contract, and the Commonwealth shall not be liable to pay the selected Offeror for any service or work performed or expenses incurred before the Effective Date of the contract.

23. Notification of Selection for Contract Negotiations. The Issuing Office will notify all Offerors in writing of the Offeror selected for contract negotiations after the Issuing Office has determined, taking into consideration all of the evaluation factors, the proposal that is the most advantageous to the Issuing Office. Prior to execution of the contract resulting from the RFP, the selected Offeror must be registered in the Commonwealth of Pennsylvania's Vendor Master file. In order to register, Offerors must visit the Pa Supplier Portal at https://www.pasupplierportal.state.pa.us/ or call the Customer Support Center at 877-435-7363.

24. Notification of Award. Offerors whose proposals are not selected will be notified when contract negotiations have been successfully completed, and the Issuing Office has received the final negotiated contract signed by the selected Offeror.

25. Debriefing Conferences. Upon notification of award, Offerors whose proposals were not selected will be given the opportunity to be debriefed. The Issuing Office will schedule the debriefing at a mutually agreeable time. The debriefing will not compare the Offeror with other Offerors, other than the position of the Offeror's proposal in relation to all other Offeror proposals. An Offeror's exercise of the opportunity to be debriefed does not constitute nor toll the time for filing a protest.

26. RFP Protest Procedure. The RFP Protest Procedure is on the DGS website at click here. A protest by a party that has not or has not yet submitted a proposal must be filed no later than the proposal submission deadline. Offerors may file a protest within seven (7) days after the protesting Offeror knew or should have known of the facts giving rise to the protest, but in no event may an Offeror file a protest later than seven (7) days after the date the notice of award of the contract is posted on the DGS website. The date of filing is the date of receipt of the protest. A protest must be filed in writing with the Issuing Office. To be timely, the protest must be received by 4:00 p.m. on the seventh day.

27. Attachments to the RFP. All attachments to the RFP, including those contained in the **Buyer Attachments, RFP Questions** and **Additional Required Documentation** sections, are incorporated into and made part of the RFP.

28. Evaluation Criteria. The Issuing Office has selected a committee of qualified personnel to review and evaluate timely submitted proposals. The following criteria will be used in evaluating each proposal:

A. Technical: The Issuing Office has established the weight for the Technical criterion for this RFP as 70% of the total points. Evaluation will be based upon the following: Soundness of Approach, Offeror Qualifications, Available Facilities, etc. The final Technical scores are determined by giving the maximum number of technical points available to the proposal(s) with the highest raw technical score. The remaining proposals are rated by applying the Technical Scoring Formula set forth at the following webpage: https://www.dgs.pa.gov/Materials-Services-Procurement/Procurement-Resources/Pages/RFP_SCORING_FORMULA.aspx

B. Cost: The Issuing Office has established the weight for the Cost criterion for this RFP as 30% of the total points. The cost criterion is rated by giving the proposal with the lowest total cost the maximum number of Cost points available. The remaining proposals are rated by applying the Cost Formula set forth at the following webpage: https://www.dgs.pa.gov/Materials-Services-Procurement/Procurement-Resources/Pages/RFP_SCORING_FORMULA.aspx

C. Domestic Workforce Utilization: Any points received for the Domestic Workforce Utilization criterion are bonus points in addition to the total points for this RFP. The maximum amount of bonus points available is 3% of the total points for this RFP. To the extent permitted by the laws and treaties of the United States, each proposal will be scored for its commitment to use domestic workforce in the fulfillment of the contract. Maximum consideration will be given to those Offerors who will perform the contracted direct labor exclusively within the geographical boundaries of the United States or within the geographical boundaries of a country that is a party to the World Trade Organization Government Procurement Agreement. Those who propose to perform a portion of the direct labor outside of the United States and not within the geographical boundaries of a party to the World Trade Organization Government Procurement Agreement will receive a correspondingly smaller score for this criterion. The Domestic Workforce Utilization Formula is at the following webpage: https://www.dgs.pa.gov/Materials-Services-Procurement/Procurement-Resources/Pages/RFP_SCORING_FORMULA.aspx

29. Offeror Responsibility. To be responsible, an Offeror must submit a responsive proposal and possess the capability to fully perform the contract requirements in all respects and the integrity and reliability to assure good faith performance of the contract. In order for an Offeror to be considered responsible for this RFP and therefore eligible for selection for best and final offers or selection for contract negotiations:

The total score for the technical submittal of the Offeror's proposal must be greater than or equal to **75%** of the available technical points and the Offeror must demonstrate the financial capability to assure good faith performance of the contract.

An Offeror who fails to demonstrate sufficient financial capability to assure good faith performance of the contract as specified herein may be considered by the Issuing Office, in its sole discretion, for

Best and Final Offers or contract negotiation contingent upon such Offeror providing contract performance security for the first contract year cost proposed by the Offeror in a form acceptable to the Issuing Office. Based on the financial condition of the Offeror, the Issuing Office may require a certified or bank (cashier's) check, letter of credit, or performance bond conditioned upon the faithful performance of the contract by the Offeror. The required performance security must be issued or executed by a bank or surety company authorized to do business in the Commonwealth. The cost of the required performance security will be the sole responsibility of the Offeror and cannot increase the Offeror's cost proposal or the contract cost to the Commonwealth.

Further, the Issuing Office will award a contract only to an Offeror determined to be responsible in accordance with the most current version of Commonwealth Management Directive 215.9, Contractor Responsibility Program.

30. Final Ranking and Award. After any best and final offer process is conducted, the Issuing Office will combine the evaluation committee's final technical scores, the final cost scores, and the domestic workforce utilization scores. The Issuing Office will rank responsible Offerors according to the total overall score assigned to each in descending order. The Issuing Office must select for contract negotiations the Offeror with the highest overall score. The Issuing Office has the discretion to reject all proposals or cancel the request for proposals at any time prior to the time a contract is fully executed when it is in the best interests of the Commonwealth. The reasons for the rejection or cancellation shall be made part of the contract file.

31. Agility Agreements Notwithstanding any other right or obligation under this Contract, PennDOT reserves the right to obtain these services pursuant to separate contracts, known as agility agreements, that it has entered into or may enter into with political subdivisions, public authorities, other governmental agencies or other eligible entities, institutions, or organizations under the authority of Chapter 19 of the Commonwealth Procurement Code (Act 1998-57, 62 Pa. C.S. § 101, et seq.) for the exchange of supplies, services, facilities, personnel or such other items as may be procured through intergovernmental contracting pursuant to Chapter 19.

Stage Description

No description available.

Prerequisites

★ Required to Enter Bid

1 ★ **Instructions To Supplier :**

Responsibility to Review.

Certification

I certify that I have read and agree to the terms above.

Supplier Must Also Upload a File:

No

Prerequisite Content:

The Offeror acknowledges and accepts full responsibility to ensure that it has reviewed the most current content of the RFP including any amendments to the RFP.

Buyer Attachments

Technical Submittal Environmental Remediation Services.docx	Technical Submittal Environmental Remediation Services.docx	../Attachments/Technical Submittal Environmental Remediation Services.docx
T&C Environmental Remediation Services.pdf	T&C Environmental Remediation Services.pdf	../Attachments/T&C Environmental Remediation Services.pdf
Appendix A - Cost Submittal Revised 02.15.2022.xlsx	Appendix A - Cost Submittal Revised 02.15.2022.xlsx	../Attachments/Appendix A - Cost Submittal Revised 02.15.2022.xlsx
Appendix B - Regional-District Map.pdf	Appendix B - Regional-District Map.pdf	../Attachments/Appendix B - Regional-District Map.pdf
Appendix C Short List of Petroleum Products.pdf	Appendix C Short List of Petroleum Products.pdf	../Attachments/Appendix C Short List of Petroleum Products.pdf
Appendix D Technical Acronyms Definitions.pdf	Appendix D Technical Acronyms Definitions.pdf	../Attachments/Appendix D Technical Acronyms Definitions.pdf
Informational Session Sign In Sheet.xlsx	Informational Session Sign In Sheet.xlsx	../Attachments/Informational Session Sign In Sheet.xlsx
Pre Quote BDISBO presentation 6100052061 Environmental Remediation Services .pdf	Pre Quote BDISBO presentation 6100052061 Environmental Remediation Services .pdf	../Attachments/Pre Quote BDISBO presentation 6100052061 Environmental Remediation Services .pdf

EXHIBIT E

Environmental Remediation Services 6100052061

SDB VBE

APPENDIX [insert]

MODEL FORM OF SMALL DIVERSE BUSINESS/VETERAN BUSINESS ENTERPRISE SUBCONTRACTOR AGREEMENT

This Subcontractor Agreement ("Subcontract") is made effective as of _____ __, 20__, by and between _____, ("Contractor") and _____,
a Small Diverse Business or Veteran Business Enterprise ("Subcontractor") (collectively referred to as the "Parties").

RECITALS

Contractor has entered into a contract dated _____ (the "Prime Contract") with the Department of _____ of the Commonwealth of Pennsylvania ("Commonwealth"). Under the Prime Contract, Contractor has agreed to provide certain supplies, services or construction ("Services") to the Commonwealth.

In connection with the Procurement leading to the Prime Contract, Contractor and Subcontractor entered into a letter agreement dated _____ ("Letter of Commitment") whereby the Contractor committed a certain percentage of work ("Small Diverse Business or Veteran Business Enterprise Commitment") under the Prime Contract to the Subcontractor.

As contemplated by the Letter of Commitment and in accordance with the provisions of the Procurement and Prime Contract, the Parties have agreed to enter into this Subcontract to fulfill the Small Diverse Business or Veteran Business Enterprise Commitment expressed in the Letter of Commitment and as required by the Prime Contract.

DEFINITIONS

The following words and terms when used in this Subcontract shall have the following meanings:

Bureau – The Department's Bureau of Diversity, Inclusion and Small Business Opportunities.

Contracting Officer – The person authorized to administer and make written determinations for the Commonwealth with respect to the Prime Contract.

Department – The Department of General Services of the Commonwealth of Pennsylvania.

Issuing Office – The department, board, commission or other agency of the Commonwealth of Pennsylvania that issued the Procurement.

Procurement – The Invitation for Bids, Request for Quotes, Request for Proposals or other solicitation and all associated final procurement documentation issued by the Commonwealth to obtain proposals from firms for award of the Prime Contract.

Small Business – A business in the United States which is independently owned, not dominant in its field of operation, employs no more than 100 full-time or full-time equivalent employees, and earns less than $38.5 million in gross annual revenues.

Small Diverse Business – A Department-verified minority-owned small business, woman-owned small business, LGBT-owned small business, disability-owned small business, or service-disabled veteran-owned small business.

Veteran Business Enterprise – A Department-verified veteran-owned small business or service-disabled veteran-owned small business.

AGREEMENT

Now, therefore, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and intending to be legally bound, the Parties hereby agree as follows:

1. Subcontractor Representations. Subcontractor represents and warrants to Contractor as follows:

(a) Subcontractor is verified as a Small Diverse Business or Veteran Business Enterprise by the Bureau of Diversity, Inclusion and Small Business Opportunities in accordance with the requirements and procedures established by the Bureau;

(b) Subcontractor possesses the necessary knowledge, experience, expertise, capital, resources and personnel required to perform the Services it will provide under this Subcontract;

(c) Subcontractor (i) is duly organized, validly existing and in good standing under the laws of its state of incorporation or organization, (ii) has the power and authority to own its properties and to carry on business as now being conducted, and (iii) has the power to execute and deliver this Subcontract;

(d) The execution and performance by Subcontractor of the terms and provisions of this Subcontract have been duly authorized by all requisite action, and neither the execution nor the performance of this Subcontract by Subcontractor will violate any provision of law, any order of any court or other agency of government, the organizational documents of Subcontractor or any indenture, agreement or other instrument to which Subcontractor is a party, or by which Subcontractor is bound, or be in conflict with, result in a breach of, or constitute (with due notice or lapse of time or both) a default under, or except as may be provided by this Subcontract, result in the creation or imposition of any lien, charge or encumbrance of any nature whatsoever upon any of the property or assets of Subcontractor pursuant to, any such indenture agreement or instrument;

(e) Subcontractor has obtained all licenses, permits and approvals required to perform the Services it will provide under this Subcontract; and

(f) Subcontractor is not under suspension or debarment by the Commonwealth or any other governmental entity, instrumentality or authority.

2. Contractor Representations. Contractor represents and warrants to Subcontractor as follows:

(a) Contractor (i) is duly organized, validly existing and in good standing under the laws of its state of incorporation or organization, (ii) has the power and authority to own its properties and to carry on business as now being conducted, and (iii) has the power to execute and deliver this Subcontract;

(b) The execution and performance by Contractor of the terms and provisions of this Subcontract by Contractor have been duly authorized by all requisite action, and neither the execution nor the performance of this Subcontract will violate any provision of law, any order of any court or other agency of government, the organizational documents of Contractor or any indenture, agreement or other instrument to which Contractor is a party, or by which Contractor is bound, or be in conflict with, result in a breach of, or constitute (with due notice or lapse of time or both) a default under, or except as may be provided by this Subcontract, result in the creation or imposition of any lien, charge or encumbrance of any nature whatsoever upon any of the property or assets of Contractor pursuant to, any such indenture agreement or instrument;

(c) Contractor has obtained all licenses, permits and approvals required to perform the Services to be provided by Contractor under the Prime Contract; and

(d) Contractor is not under suspension or debarment by the Commonwealth or any other governmental entity, instrumentality or authority.

3. Relationship of the Parties. The provisions of this Subcontract are not intended to create, nor shall be deemed or construed to create, any joint venture, partnership or other relationship between Contractor and Subcontractor, other than that of independent entities contracting with each other solely for the purpose of carrying out the provisions of this Subcontract. Neither of the Parties to this Subcontract, nor any of their respective employees, agents, or other representatives, shall be construed to be the agent, employee or representative of the other party. Neither party shall have the authority to bind the other party, nor shall a party be responsible for the acts or omissions of the other party, unless otherwise stated in this Subcontract. Similarly, the Parties expressly acknowledge that neither the Contractor nor the Subcontractor is an agent, employee or representative of the Commonwealth and each party covenants not to represent itself accordingly.

4. Prime Contract Flow-Down.

(a) General. This agreement is a subcontract under the Prime Contract and all provisions of the Prime Contract and any amendments thereto applicable to the Services being performed by the Subcontractor shall extend to and be binding upon the Parties as part of this Subcontract.

(b) Specific. The Parties agree to comply with the following provisions of the Prime

Contract, which are incorporated herein by reference:

(1) The Americans with Disabilities Act Provisions.
(2) Nondiscrimination/Sexual Harassment Clause.
(3) Contractor Integrity Provisions.
(4) Contractor Responsibility Provisions.

(c) Termination. Should the Prime Contract be terminated pursuant to the terms and conditions provided in the Procurement, such termination shall have the same effect on this Subcontract. Payment for Services provided as of the date of termination must be made in accordance with the Section 13 of this Subcontract.

(d) Audit Provisions. The Commonwealth shall have the right, at reasonable times and at a site designated by the Commonwealth, to audit the books, documents, and records of the Parties to the extent that the books, documents, and records relate to the Parties' compliance with the provisions set forth in subsection (b) above or to the Small Diverse Business or Veteran Business Enterprise Commitment effectuated through this Subcontract. The Parties shall preserve such books, documents, and records for a period of three years from the date of final payment hereunder. The Parties shall give full and free access to all such records to the Commonwealth and/or its authorized representatives.

5. Order of Precedence. The Letter of Commitment, Procurement and Prime Contract are incorporated herein by reference into this Subcontract. In the event of any conflict or inconsistency among the individual components of this Subcontract, such conflict or inconsistency shall be resolved by observing the following order of precedence:

(a) This Subcontract;
(b) The Letter of Commitment;
(c) The Prime Contract; and
(d) The Procurement.

6. Further Action. The Parties shall take such actions and complete, execute and deliver any and all documents or instruments necessary to carry out the terms and provisions of this Subcontract, to effectuate the purpose of this Subcontract, and to fulfill the obligations of each party hereunder.

7. Description of Services. Subcontractor will perform the following Services for the Contractor which Contractor is obligated to provide to the Commonwealth under the Prime Contract:

[DESCRIBE IN DETAIL THE SPECIFIC SUPPLIES, SERVICES OR CONSTRUCTION THE SUBCONTRACTOR WILL PROVIDE OR PERFORM WITH THE CORRESPONDING UNITED NATIONS STANDARD PRODUCTS AND SERVICES CODES (UNSPSC)]

_____

_____

_____

_____
_____
_____.

8. Small Diverse Business or Veteran Business Enterprise Commitment. The above-referenced Services represent __ % of the final negotiated total cost for the initial term of the Prime Contract. Any proposed change to the Small Diverse Business or Veteran Business Enterprise Commitment must be submitted in writing to the Bureau and the Contracting Officer. The Bureau will make a recommendation to the Commonwealth Contracting Officer regarding a course of action.

9. Performance of Services. Subcontractor may not subcontract more than 50% of the work subcontracted to it hereunder without written permission from the Bureau. Subcontractor will perform the Services strictly in accordance with any applicable plans and specifications as contained in the Prime Contract and the reasonable deadlines set by Contractor in view of the requirements of the Prime Contract, and in a good workmanlike manner consistent with industry standards, meeting all applicable local, state and federal laws, regulations and policies.

10. Location of Services. Subcontractor will provide the Services at the following address(es):
_____
_____.

11. Timeframe for Performance of Services. The Services will be provided by Subcontractor during the initial term of the Prime Contract, and during any extensions, options or renewal periods of the Prime Contract exercised by the Commonwealth, as more specifically set forth below:

[IDENTIFY THE SPECIFIC TIME PERIODS DURING THE INITIAL CONTRACT TERM AND EXTENSIONS, OPTIONS AND RENEWALS WHEN THE SUBCONTRACTOR WILL PERFORM COMPONENT SERVICES]

_____
_____
_____
_____
_____.

12. Pricing of Services. Subcontractor shall provide or perform the Services at the pricing specified in Exhibit ___ to this Subcontract.

[ATTACH A BILL OF MATERIALS, RATE CARD OR OTHER APPROPRIATE COST SHEET COVERING THE SERVICES TO BE PROVIDED.]

13. Payment for Services. Contractor shall exert reasonable and diligent efforts to collect prompt payment from the Commonwealth. Contractor shall pay Subcontractor in proportion to amounts received from the Commonwealth which are attributable to the Services performed by Subcontractor. Contractor shall pay Subcontractor within fourteen (14) days after the Contractor receives such payment from the Commonwealth, unless the parties expressly agree upon a

different payment schedule or structure as set forth below: _____
_____
_____.

14. Utilization Reports. Both the Contractor and Subcontractor shall complete Monthly Utilization Reports (or similar type documents containing the same information) and submit them to the Contracting Officer and to the Bureau within ten (10) business days at the end of each month. This information will be used to determine the actual dollar amount paid to Subcontractor and will also serve as a record of fulfillment of Contractor's Small Diverse Business and Veteran Business Enterprise Commitments. If there was no activity during the month, then the form must be completed by stating "No activity in this month." A late fee of $100.00 per day may be assessed against the Contractor if the Contractor's Utilization Report is not submitted in accordance with the schedule above.

15. Change Orders. If the Commonwealth issues any change order or other formal contract instrument either expanding or limiting the work to be performed under the Prime Contract, the Parties shall accept such Change Orders. Contractor agrees to provide Subcontractor with written notice of any such change orders that affect the Services to be provided by the Subcontractor hereunder as soon as practical after Contractor receives such notice. Any resulting increase or decrease in the Services, Small Diverse Business or Veteran Business Enterprise Commitment provided for in Paragraphs 7 or 8 above must be in writing, mutually agreed to, and signed by both Parties and communicated to the Bureau. If the Parties are unable to reach an agreement regarding any adjustment to the Services, Small Diverse Business or Veteran Business Enterprise Commitment necessitated by a Commonwealth Change Order, the Parties must submit the matter in writing to the Bureau which will make a recommendation to the Contracting Officer regarding a course of action.

16. Force Majeure. Neither party will incur any liability to the other if its performance of any obligation under this Subcontract is prevented or delayed by causes beyond its control and without the fault or negligence of either party. Causes beyond a party's control may include, but are not limited to, acts of God or war, changes in controlling law, regulations, orders or the requirements of any governmental entity, severe weather conditions, civil disorders, natural disasters, fire, epidemic and quarantines, general strikes throughout the trade, and freight embargoes. The existence of such causes beyond a party's control shall extend the period for performance to such extent as may be necessary to enable complete performance in the exercise of reasonable diligence after the causes have been removed.

17. Dispute Resolution.

(a) The Parties will attempt to resolve any dispute arising out of or relating to this Subcontract through friendly negotiations.

(1) The Parties expressly acknowledge and confer upon the Bureau and Contracting Officer the authority to adjudicate disputes that the Parties cannot resolve amicably concerning the Parties' compliance with their Small Diverse Business and Veteran

Business Enterprise Commitments as provided in the Prime Contract and this Subcontract.

(2) The Bureau may recommend to the Contracting Officer a range of sanctions it deems appropriate if the Bureau determines a party has failed to satisfy or perform its Small Diverse Business or Veteran Business Enterprise commitment. Such sanctions include, but are not limited to, one or more of the following: a determination that the party is not responsible under the Contractor Responsibility Program; withholding of Prime Contract and/or Subcontract payments; suspension or termination of the Prime Contract and/or Subcontract together with consequential damages; revocation of the party's Small Diverse Business and/or Veteran Business Enterprise verification status; and/or suspension or debarment of one or both parties from future contracting opportunities with the Commonwealth.

(3) The Parties' acknowledge that their prior performance in meeting their Small Diverse Business and Veteran Business Enterprise contractual obligations may be considered by the Commonwealth when reviewing future bids or proposals for responsiveness and responsibility.

(b) Nothing herein shall be construed to prevent either party from seeking such relief as provided by law in a court or tribunal of competent jurisdiction.

18. Notices. Any written notice to any party under this Subcontract shall be deemed sufficient if delivered personally, or by facsimile, telecopy, electronic or digital transmission (provided such delivery is confirmed), or by a recognized overnight courier service (e.g., DHL, Federal Express, etc.) with confirmed receipt, or by certified or registered United States mail, postage prepaid, return receipt requested, and sent to the following:

If to Contractor:

_____
_____
_____

If to Subcontractor:

_____
_____
_____

19. Waiver. No waiver by either party of any breach of this Subcontract shall be deemed to waive any other breach. No acceptance of payment or performance after any breach shall be deemed a waiver of any breach. No failure or delay to exercise any right by a party upon another's default shall prevent that party from later exercising that right, nor shall such failure or delay operate as a waiver of any default.

20. Severability. If any provision of this Subcontract shall be held to be invalid or unenforceable for any reason, the remaining provisions shall continue to be valid and enforceable. If a court finds that any provision of this Subcontract is invalid or unenforceable, but that by limiting such provision it would become valid and enforceable, then such provision shall be deemed to be written, construed, and enforced as so limited.

21. Assignment. Neither party may assign or transfer this Subcontract without the prior written consent of the Commonwealth. If Contractor's Prime Contract with the Commonwealth is assigned to another contractor, the new contractor must maintain the Small Diverse Business and Veteran Business Enterprise Commitments set forth in the Prime Contract as implemented through this Subcontract.

22. Applicable Law. This Subcontract shall be governed by the laws of the Commonwealth of Pennsylvania.

23. Entire Agreement. This Subcontract constitutes the entire agreement of the Parties regarding the subject of this Subcontract as of the date of execution. No other agreement or understandings, verbal or written, expressed or implied, are a part of this Subcontract unless specified herein.

24. Amendment. This Subcontract may be modified or amended only if made in writing and signed by both Parties. Any proposed change to the Contractor's Small Diverse Business or Veteran Business Enterprise Commitment to Subcontractor must be submitted in writing to the Bureau which will make a recommendation to the Contracting Officer regarding a course of action.

25. Binding Effect. This Subcontract shall be binding upon, and inure to the benefit of, the Parties and their respective heirs, representatives, successors and assigns.

26. Counterparts. This Subcontract may be executed by the Parties in counterparts, each of which together shall be deemed an original but all of which together shall constitute one and the same instrument. A party's delivery of a duly executed signature page of this Subcontract in electronic format shall have the same force and effect as delivery of an original signature page.

ADDITIONAL TERMS AND CONDITIONS

[THE PARTIES MAY INCLUDE ADDITIONAL TERMS AND CONDITIONS APPROPRIATE FOR THE SERVICES TO BE PROVIDED SO LONG AS THEY ARE COMMERCIALLY REASONABLE TERMS FOR THE APPLICABLE BUSINESS OR INDUSTRY, ARE NO LESS FAVORABLE THAN THE TERMS OF THE PRIME CONTRACT, AND DO NOT PLACE DISPROPORTIONATE RISK ON THE SMALL DIVERSE BUSINESS OR VETERAN BUSINESS ENTERPRISE RELATIVE TO THE NATURE AND LEVEL OF THE SMALL DIVERSE BUSINESS' OR VETERAN BUSINESS ENTERPRISE'S PARTICIPATION IN THE PROJECT. SUCH TERMS MAY INCLUDE:

Background Checks
Confidentiality/Disclosure of Information

Data Security
Insurance
Invoicing Requirements
Environmental Protection
Intellectual Property Rights
Record Retention/Audits
Service Level Agreements (SLAs) (consistent with Prime Contract SLAs)
Public Works Construction Requirements (including Bonding, E-Verify, Prevailing Wage, and Prompt Payment provisions)

IN WITNESS WHEREOF, the Parties hereto have caused this Subcontract to be executed by their duly authorized officers as set forth below.

Contractor	Subcontractor
Insert Company Name	*Insert Company Name*
By: _____	By: _____
Signature	Signature
_____	_____
Printed Name	Printed Name
_____	_____
Title	Title
_____	_____
Date	Date

SMALL DIVERSE BUSINESS PARTICIPATION INFORMATION

1. SDB Participation Goals. The Issuing Office and BDISBO have set an SDB Participation Goal for this RFP which is listed on the SDB Participation Summary Sheet. The SDB Participation Goal was calculated based upon the market availability of SDBs for work scopes identified for this solicitation and an assessment of past performance under the prior contract.

This is a significant programmatic change from the SDB and SB Participation program contained in prior RFPs issued by the Commonwealth. Offerors now must agree to meet the SDB Participation Goal in full or demonstrate they have made Good Faith Efforts to meet the Goal.

2. Small Diverse Business (SDB) Participation Submittal Packet (Forms SDB-1, SDB-2, SDB-3, SDB-3.1, SDB-4, SDB-5). The SDB Participation Submittal Packet and associated required documentation shall be submitted in accordance with the Instructions for Completing SDB Participation Submittal and SDB Utilization Schedule and shall be submitted electronically in accordance with Group 1.2 Small Diverse Participation Questions.

NOTE: Equal employment opportunity and contract compliance statements referring to company equal employment opportunity policies or past contract compliance practices do not constitute proof of SDB Status or entitle an Offeror to receive credit towards the SDB participation goal.

3. Contract Requirements—SDB Participation.

A. SDB Participation Documents. All documents completed and submitted by the selected Offeror in connection with its SDB Participation Submittal (including the SDB Participation Submittal, SDB Utilization Schedule, and any Good Faith Efforts Documentation to Support Waiver Request of SDB Participation Goal) shall be considered a part of the Contract and are hereby expressly incorporated into the Contract by reference thereto.

B. Required contract terms. All contracts containing SDB participation must contain the following contract provisions to be maintained through the initial contract term and any subsequent options or renewals:

1. Each SDB participation commitment which was credited by BDISBO and the total percentage of the SDB participation commitments made at the time of proposal submittal or contract negotiations, as applicable, become contractual obligations of the selected Offeror upon execution of its contract with the Commonwealth.

2. For purposes of monitoring compliance with the selected Offeror's SDB participation commitments, the contract cost is the total amount paid to the selected Offeror throughout the initial contract term and all renewal option terms.

3. The selected Offeror cannot alter its overall SDB commitment or commitments made to individual SDB subcontractors without written approval from the Issuing Officer and BDISBO.

4. Both the overall percentage SDB commitment and individual SDB commitments must be maintained in the event the contract is assigned to another prime contractor.

C. Subcontract requirements.

1. The selected Offeror and each SDB listed on the SDB Utilization Schedule must enter into a final, definitive subcontract agreement signed by the selected offeror and the SDB within 30 calendar days of the final execution date of the Commonwealth contract. A Model Form of Small Diverse Business/Veteran Business Enterprise Subcontractor Agreement which may be used to satisfy this requirement – is available in Group 1.2 of the RFP Questions.

2. In addition to any requirements in the selected Offeror's contract documents, the subcontract must contain:

   a. The specific work, supplies or services the SDB will perform; location for work performed; how the work, supplies or services relate to the contract; and the specific timeframe during the initial term and any extensions, options and renewals of the prime contract when the work, supplies or services will be provided or performed;

   b. The fixed percentage commitment and/or associated estimated dollar value that each SDB will receive based on the final negotiated cost for the initial term of the prime contract and any renewal option terms;

   c. Payment terms indicating that the SDB will be paid for work satisfactorily completed within 14 calendar days of the selected offeror's receipt of payment from the Commonwealth for such work. Subcontractors are encouraged to utilize electronic payment methods;

   d. Commercially reasonable terms for the applicable business/industry that are no less favorable than the terms of the selected offeror's contract with the Commonwealth and that do not place disproportionate risk on the SDB relative to the nature and level of the SDB's participation in the contract; and

   e. The requirement that the SDB submit to BDISBO utilization reports.

3. If the subcontract terms omit any of the information required in subparagraph 2 but that information is otherwise reflected within the selected offeror's SDB Participation Submittal or associated documents (SDB Utilization Schedule and Letters of Commitment), the information listed in the SDB Participation Submittal

or associated documents is incorporated into the subcontract agreement. To the extent that any subcontract terms conflict with the requirements of paragraph (2) or information contained within the selected offeror's SDB Participation Submittal and associated documents, the order of precedence is as follows: 1) the requirements of paragraph 2, 2) the selected offeror's SDB Participation Submittal and associated documents; and 3) the terms of the subcontract agreement.

4. If the selected offeror and a SDB listed on the SDB Utilization Schedule cannot agree upon a definitive subcontract within 30 calendar days of the final execution date of the Commonwealth contract or as specified in the solicitation, the selected offeror must provide written notification to the issuing Agency and BDISBO.

5. The prime contractor must provide a copy of any required subcontract with an SDB to BDISBO or the Agency within ten (10) business days of receiving such a request.

D. Utilization Reports.

1. The prime contractor must submit a Monthly Utilization Report to BDISBO and the contracting officer of the Issuing Office in the format required by BDISBO and within ten (10) business days at the end of each month of the contract term and any subsequent options or renewals. The Monthly Utilization Report must list payments made to each SDB subcontractor and any unpaid invoices over 30 calendar days old received from an SDB subcontractor, and the reason payment has not been made. This information will be used to track and confirm the actual dollar amount paid to SDB subcontractors and suppliers and will serve as a record of fulfillment of the contractual commitment(s). If there was no activity, the form must be completed by stating "No activity". A late fee of $100.00 per day may be assessed against the prime contractor if the Utilization Report is not submitted in accordance with the schedule above.

2. The prime contractor must include in its agreements with its SDB subcontractors a requirement that the SDB subcontractors submit to BDISBO, within the time frame set forth within the solicitation document, a report identifying the prime contract, and listing:

   a. Payments received from the prime contractor within the time frame covered by the report, and

   b. Invoices for which the subcontractor has not been paid.

E. Noncompliance with SDB commitments.

1. Upon BDISBO notifying the contracting Agency that a prime contractor did not comply with the SDB commitments, the contracting Agency shall notify the prime contractor in writing of its findings and shall specify what corrective actions are required. The prime contractor is required to initiate the corrective

actions within 10 business days and complete them within the time specified by the contracting Agency.

2. If a contracting Agency determines that material noncompliance with SDB contract provisions exists and that the prime contractor refuses or fails to take the corrective action required by the contracting Agency, the contracting Agency, in consultation with BDISBO, may impose any and all sanctions and remedies available under the contract as it deems appropriate. Such sanctions or remedies include, but are not limited to, withholding of payments; termination of the contract along with consequential damages; revocation of the prime contractor's SB, SDB, and/or Veteran Business Enterprise (VBE) status; a determination that the Offeror's SDB or VBE participation submittal be deemed non-responsible in future procurements; and/or any actions under the Commonwealth's Contractor Responsibility Program, up to and including suspension or debarment from future contracting opportunities with the Commonwealth.

SDB-1
INSTRUCTIONS FOR COMPLETING THE SMALL DIVERSE BUSINESS (SDB) PARTICIPATION SUBMITTAL AND SDB UTILIZATION SCHEDULE.

PLEASE READ BEFORE COMPLETING THESE DOCUMENTS
Bidders/Offerors do not need to return SDB-1 with their SDB Participation Submittal

The following instructions include details for completing the SDB Participation Submittal (SDB-2) which Bidders or Offerors must submit in order to be considered responsive.

The following instructions also include details for completing the SDB Utilization Schedule (SDB-3), which Bidders or Offerors must submit for any portion of the SDB participation goal the Bidder or Offeror commits to meeting.

A Bidder/Offeror's failure to meet the SDB participation goal in full or their failure to receive an approved Good Faith Efforts waiver for any unmet portion of the SDB participation goal will result in the rejection of the Bid or Proposal as nonresponsive.

I. **SDB Participation Goal:** The SDB participation goal is set forth in the **Solicitation**. The Bidder/Offeror is encouraged to use a diverse group of subcontractors and suppliers from the SDB classifications to meet the SDB participation goal.

II. **SDB Eligibility**:

1. Finding SDB firms: Offerors can access the directory of **DGS-verified** SDB firms from the DGS Supplier Search directory at: http://www.dgs.internet.state.pa.us/suppliersearch.

2. **Only SDBs verified by DGS** and as defined herein may be counted for purposes of achieving the SDB participation goal. In order to be counted for purposes of achieving the SDB participation goal, the SDB firm, including an SDB prime, must be DGS-verified for the services, materials or supplies that it has committed to perform on the **SDB Utilization Schedule (SDB-3)**. A firm whose SDB verification is pending or incomplete as of the bid or proposal due date and time shall not be counted towards the SDB participation goal. Offerors cannot use self-certified SBs that do not have their SDB verification as of the bid or proposal due date and time to meet the SDB participation goal.

3. SDB Requirements: To be considered an SDB, a firm must be a **DGS-verified** small minority business enterprise (MBE); woman business enterprise (WBE); LGBT business enterprise (LGBTBE); Disability-owned business enterprise (DOBE); Service-Disabled Veteran-Owned Small Business Enterprise (SDVBE); or otherwise deemed disadvantaged by the Uniform Certification Program.

   Additional information on the DGS verification process can be found at: https://www.dgs.pa.gov/Small%20Diverse%20Business%20Program/Pages/default.aspx

4. Dually verified firms. If a DGS-verified SDB is dually verified as a VBE, the firm may receive credit towards both the SDB participation goal and the VBE participation goal as set forth on the SDB and VBE Participation Summary Sheet.

   Example: The SDB participation goal is 10% and the VBE participation goal is 5%. A subcontractor is DGS-verified as both an SDB and a VBE and will perform 10% of the contract work. The prime contractor can satisfy both the SDB participation goal and the VBE participation goal through that subcontractor's performance of 10% of the contract work., unless otherwise agreed to by the parties in writing and approved by BDISBO and the Issuing Office. However, an SDB firm verified as both a WBE and MBE may not be double counted toward satisfying the SDB participation goal.

5. Participation by SDB firms as prime bidders/offerors or subcontractors. A Bidder/Offeror that qualifies as an SDB and submits a bid or proposal as a prime contractor is not prohibited from being included as a subcontractor in separate proposals submitted by other Bidders/Offerors. An SDB may be included as a subcontractor with as many prime contractors as it chooses in separate bids or proposals and a prime contractor may not prohibit an SDB from committing to any other prime contractor.

6. Questions about SDB verification. Questions regarding the SDB program, including questions about the self-certification and verification processes can be directed to:

   Department of General Services
   Bureau of Diversity, Inclusion and Small Business Opportunities (BDISBO)
   Room 611, North Office Building
   Harrisburg, PA 17125
   Phone: (717) 783-3119
   Fax: (717) 787-7052
   Email: RA-BDISBOVerification@pa.gov
   Website: www.dgs.pa.gov

III. Guidelines Regarding SDB Prime Self-Performance.

1. An SDB firm participating as a prime bidder or offeror on a procurement may receive credit towards the SDB Participation goal established for the procurement through their own self-performance.

   Example: A solicitation has a 15% SDB participation goal. An SDB prime offeror self-performing contract work valued at only 10% of contract costs (if permitted by the solicitation documents) must still satisfy the remaining 5% SDB participation goal through subcontracting or must request a Good Faith Efforts Waiver for the unmet SDB participation goal. Failure to satisfy the remining 5% SDB participation goal or failure to obtain a Good Faith Efforts waiver for the

unmet portion of the SDB participation goal will result in rejection of that SDB prime's bid or proposal as nonresponsive.

2. For an SDB prime bidder or offeror to receive credit for self-performance, the SDB prime bidder or offeror must list itself in the **SDB Utilization Schedule (SDB-3)**.

3. The SDB prime bidder or offeror must also include the classification category (MBE, WBE, LGBTBE, DOBE, and/or SDVBE) under which it is self-performing and include information regarding the work it will self-perform. For any portion of the SDB participation goal not met through the SDB prime bidder or offeror's self-performance, the SDB bidder or offeror must also identify on the **SDB Utilization Schedule (SDB-3)** the other SDB subcontractors it will use to meet the unmet portion of the goal or must request and receive a Good Faith Efforts waiver.

IV. **Calculating SDB participation**

1. The selected Bidder or Offeror may only count dollar amounts actually paid to an SDB for performance of a Commercially Useful Function (the performance of a distinct element of work required for the Contract, with the requisite skill and expertise) towards satisfying its SDB participation commitments. In addition, the SDB subcontractor, through its own employees, must perform at least 50% of the amount of the subcontract.

V. Additional Required Documentation.

1. The Bidder or Offeror must submit along with its SDB Participation Submittal (SDB-2) a letter of commitment (LOC) (SDB-3-1) for each subcontractor included in its SDB Utilization Schedule (SDB-3). At a minimum, each LOC must contain the following unless otherwise specified by the solicitation documents:

    a. The fixed numerical percentage commitment and associated estimated gross dollar value of the commitment made to the SDB; and

    b. A description of the services or supplies the SDB will provide; and

    c. The timeframe during the initial contract term and any extensions, options and renewals when the SDB will perform or provide the services and/or supplies; and

    d. The name and telephone number of the Bidder or Offeror's point of contact for SDB participation; and

    e. The name, address, and telephone number of the primary contact person for the SDB; and

    f. Signatures of representatives of both the Bidder/Offeror and the SDB subcontractor who are authorized to contractually bind their firm.

VI. Document Submittal Errors.

1. **Fatal errors.** The following errors will result in rejection of a bid or proposal as non-responsive**:**

   a. Failure to submit a completed **SDB Participation Submittal (SDB-2)**;

   b. Failure to submit an **SDB Utilization Schedule (SDB-3),** unless the bidder or offer is seeking a complete Good Faith Efforts waiver;

   c. Failure to make commitments to and list **DGS-verified** SDBs that will be used to meet the SDB participation goal, unless the bidder or offeror's commitments to other DGS-verified SDBs meet or exceed the SDB Participation goal;

   d. Failure to submit a Good Faith Efforts waiver request when not fully meeting the SDB participation goal.

   Example: A bidder/offeror lists a subcontractor that possesses a third-party certificate issued by one of the DGS-approved third party certifying entities; however, the subcontractor did not complete its DGS SDB verification as of the bid or proposal due date and time. The bidder/offeror does not receive credit for any commitments made to the subcontractor and has therefore not met the SDB participation goal. The bidder/offeror cannot cure this error. Therefore, the bid or proposal must be rejected as non-responsive.

2. **Potentially curable errors.** The Issuing Office and BDISBO may provide Bidders or Offerors the opportunity to provide clarifications or to correct errors not listed as fatal errors above. If the additionally submitted information does not adequately address the or clarify the submittal, the bid or proposal may be rejected. **Bidders or Offerors are not permitted to add additional SDBs or make material changes as part of its clarifications or corrections in order to meet the SDB participation goal.**

3. **Solicitations with Multiple Lots or Base Bids**. If the Bid or Proposal contains separate Lots or multiple Base Bids, an Offeror must complete and submit a separate **SDB Participation Submittal (SDB-2)** and accompanying required documentation for EACH Lot or Base Bid for which it is submitting a bid or proposal. Each separate **SDB Participation Submittal** and accompanying required documentation must be labeled to identify the corresponding Lot or Base Bid. Failure to submit an **SDB Participation Submittal** and accompanying required documentation for each Lot or Base Bid will result in the rejection of the bid or proposal for each Lot or Base Bid for which an **SDB Participation Submittal** was not submitted.

SDB-2
SDB PARTICIPATION SUBMITTAL

CHECK ONE, AND ONLY ONE, BOX. FAILURE TO COMPLY WILL RESULT IN REJECTION OF YOUR BID/PROPOSAL.
Click on bold titles to navigate to that specific page.

☐ **I agree to meet the SDB participation goal in full.**

I have completed and am submitting with my bid or proposal an **SDB Utilization Schedule (SDB-3)**, which is required in order to be considered for award.

☐ **I am requesting a partial waiver of the SDB participation goal.**

After making good faith outreach efforts as more fully described in the **Guidance for Documenting Good Faith Efforts to Meet the SDB Participation Goal**, I am unable to achieve the total SDB participation goal for this solicitation and am requesting a partial waiver of the SDB participation goal.

I have completed and am submitting with my bid or proposal both of the following, which are required in order to be considered for award:

1. an **SDB Utilization Schedule (SDB-3)** for that portion of the SDB participation goal that I will meet; AND

2. a **Good Faith Efforts Waiver Request** for the portion of the SDB participation goals that I am unable to meet.

☐ **I am requesting a full waiver of the SDB participation goal**

After making good faith outreach efforts as more fully described in the **Guidance for Documenting Good Faith Efforts to Meet the SDB Participation Goal**, I am unable to achieve any part of the SDB participation goal for this solicitation and am requesting a full waiver of the SDB participation goal.

I have completed and am submitting with my bid or proposal a **Good Faith Efforts Waiver Request** for the complete SDB participation goal, which is required in order to be considered for award.

NOTE: SDB primes who are submitting as bidders or offerors must complete an **SDB Utilization Schedule (SDB-3)** identifying any self-performance towards the SDB participation goal.

SDB-3
SDB UTILIZATION SCHEDULE

List in the chart below SDBs (including where applicable a prime bidder or offeror is self-performing a portion of the work) that will be used to meet the SDB participation goal (add additional pages if necessary). Submit a **Letter of Commitment (SDB-3-1)** for each SDB subcontractor (add additional Letters of Commitment as necessary).

SDB Name **SAP Vendor Number** **(6-digit number provided by SDB)** **SDB Verification Number** **(located on DGS SDB verification)**	**Type of SDB** **(check all that apply)**	**Description of Work to be Performed** **(Statement of Work/Specification reference)**	**% Commitment** **(or % of work to be self-performed by SDB bidder/offeror)**	**Associated Dollar Value of Commitment**
Name: ABC IT Solutions **SAP Vendor Number:** 123456 **SDB Verification Number:** 123456-2016-09-SB-M	MBE	IT staffing resources	%	$
Name: **SAP Vendor Number:** **SDB Verification Number:**	___ MBE ___ WBE ___ LGBTBE ___ DOBE ___ SDVBE		%	
Name: **SAP Vendor Number:** **SDB Verification Number:**	☐ MBE ☐ WBE ☐ LGBTBE ☐ DOBE ☐ SDVBE		%	
Name: **SAP Vendor Number:** **SDB Verification Number:**	☐ MBE ☐ WBE ☐ LGBTBE ☐ DOBE ☐ SDVBE		%	
Name: **SAP Vendor Number:** **SDB Verification Number:**	☐ MBE ☐ WBE ☐ LGBTBE ☐ DOBE ☐ SDVBE		%	
Attach additional sheets if necessary			Total % SDB commitment: 0	Total $ amount: _____

SDB-3-1
LETTER OF COMMITMENT

This Letter of Commitment serves as confirmation of the commitment by the prime Bidder or Offeror to utilize the Small Diverse Business (SDB) on the below-referenced Solicitation/Project.

Solicitation Number: _____

Solicitation Name: _____

	Bidder/Offeror Information	SDB Information
Name		
Address		
Point of Contact		
Telephone number		
Email address		

Services/Supplies and Time Frame. If Bidder/Offeror is the successful vendor, the SDB shall perform or provide the following services or supplies during the initial term of the prime contract and during any extensions, options or renewal periods of the prime contract exercised by the Commonwealth, as more specifically set forth below:

Services or supplies the SDB will provide:

Specific Time Frame the SDB will provide the services or supplies:

Percentage Commitment. These services or supplies represent _____% of the total cost of the Bidder/Offeror's cost submittal for the initial term of the contract. Depending on actual contract usage or volume, it is expected the SDB will receive $_____ during the initial contract term.

SDB verified. By signing below, the SDB represents that it meets the SDB requirements set forth in the Solicitation and all required documentation has been provided to the Bidder/Offeror for its SDB submission.

Sincerely,	Acknowledged
_____	_____
Printed name	Printed name
_____	_____
Signature Bidder/Offeror Point of Contact Name	Signature SDB Point of Contact Name

** For purposes of monitoring compliance with SDB and VBE commitments, the work performed by a firm that is both an SDB and a VBE will be counted by BDISBO towards fulfilling both the SDB and VBE commitments unless otherwise agreed to by the parties in writing and approved by BDISBO and the Issuing Office.*

SDB-4
GUIDANCE FOR DOCUMENTING GOOD FAITH EFFORTS TO MEET THE SMALL DIVERSE BUSINESS (SDB) PARTICIPATION GOAL

Bidders/Offerors do not need to return SDB-4 with their SDB Participation Submittal

In order for its bid or proposal to be responsive, the Bidder or Offeror must either (1) meet the SDB participation goal and document its commitments for participation of SDB firms, or (2) when it does not meet the SDB participation goal, submit a Good Faith Efforts waiver request as set forth in Section IV below and the **Good Faith Efforts Documentation to Support Waiver Request (SDB-5)** of the SDB Participation Goal.

I. Definitions

SDB participation goal – "SDB participation goal" refers to the SDB participation goal set for a procurement for MBE, WBE, LGBTBE, DOBE, and SDVBE utilization.

Good Faith Efforts - The "Good Faith Efforts" requirement means that when requesting a waiver, the Offeror must demonstrate that it took all necessary and reasonable steps to achieve the SDB participation goal. Those steps are considered necessary and reasonable when their scope, intensity, and relevance could reasonably be expected to obtain sufficient SDB participation, even if those steps were not fully successful. The Issuing Agency and Department of General Services' Bureau of Diversity, Inclusion and Small Business Opportunities (BDISBO) will determine whether or not the Offeror requesting a Good Faith Efforts waiver made adequate Good Faith Efforts by considering the quality, quantity, and intensity of the Offeror's efforts. Mere *pro forma* efforts are not Good Faith Efforts to meet the SDB participation requirements. The determination concerning the sufficiency of the Offeror's Good Faith Efforts is subjective; meeting quantitative formulas is not required.

Identified Items of Work – all reasonably identifiable subcontractable work opportunities under a resulting contract for performance by subcontractors.

Identified SDBs– all of the SDBs the Offeror has identified as available to perform the Identified Items of Work and should include all DGS-verified SDBs that are reasonably identifiable.

Offeror – for purposes of this **Good Faith Efforts Documentation to Support Waiver Request**, the term "Offeror" includes any entity responding to a solicitation, including invitations for bids, requests for proposals, and other types of best value solicitations.

SDB – "SDB" refers to Minority Business Enterprises (MBE), Women Business Enterprises (WBE), Disability-Owned Business Enterprises (DOBE), LGBT-Owned Business Enterprises (LGBTBE), Service-Disabled Veteran-Owned Small Business Enterprise (SDVBE) verified by BDISBO, or otherwise deemed disadvantaged by the Uniform Certification Program.

II. Types of Actions Agency and BDISBO will Consider

The following is a list of types of actions the procuring agency and BDISBO will consider as part of the Offeror's Good Faith Efforts when the Offeror is unable to meet, in full, the SDB

participation goal. This list is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

A. Identify Proposal Items as Work for SDBs

1. Identified Items of Work

   (a) Offerors should reasonably identify sufficient items of work to be performed by SDBs.

   (b) Where appropriate, Offerors should break out contract work items into economically feasible units to facilitate SDB participation, rather than perform these work items with their own forces. **The ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the Offeror of the responsibility to make Good Faith Efforts to meet the SDB participation goal.**

B. Identify SDBs to Solicit

1. Identified SDBs

   (a) Offerors must reasonably identify the SDBs that are available to perform the Identified Items of Work.

   (b) Any SDBs identified as available by the Offeror should be certified to perform the Identified Items of Work.

C. Solicit SDBs

1. Offerors must solicit a reasonable number of identified SDBs for all Identified Items of Work by providing written notice. The Offeror must:

   (a) provide the written solicitation to the Identified SDBs at least 10 days prior to Bid or Proposal due date to allow sufficient time for the Identified SDB to respond;

   (b) send the written solicitation by first-class mail, facsimile, or e-mail using contact information in the BDISBO Directory, unless the Offeror has a valid basis for using different contact information; and

   (c) provide adequate information about the plans, specifications, anticipated time schedule for portions of the work to be performed by the Identified SDB, and other requirements of the contract to assist Identified SDBs in responding. (This information may be provided by including hard copies in the written solicitation or by electronic means as described in C.3 below.)

2. "All" Identified SDBs includes any SDB Firms the Offeror identifies as potentially available to perform the Identified Items of Work, but it does not include Identified SDBs who are no longer certified to perform the work as of the date the Offeror provides written solicitations.

3. "Electronic Means" includes, for example, information provided *via* a website or file transfer protocol (FTP) site containing the plans, specifications, and other requirements of the contract. If an interested SDB cannot access the information provided by electronic means, the Offeror must make the information available in a manner that is accessible to the interested SDB.

4. Offerors must follow up on initial written solicitations by contacting Identified SDBs to determine their interest in bidding. The follow up contact may be made:

   (a) by telephone using the contact information in BDISBO's Directory, unless the Offeror has a valid basis for using different contact information; or

   (b) in writing *via* a method that differs from the method used for the initial written solicitation.

5. In addition to the written solicitation set forth in C.1 and the follow up required in C.4, offerors must use all other reasonable and available means to solicit the interest of Identified SDBs certified to perform the work of the contract. Examples of other means include:

   (a) attending any Supplier Forums, or Pre-Proposal or Pre-Bid conferences at which SDBs could be informed of contracting and subcontracting opportunities; and

   (b) if recommended by the procurement, advertising with or effectively using the services of at least two diversity-focused entities or media, including trade associations, minority/women/disability/LGBT community organizations, minority/women/disability/LGBT contractors' groups, and local, state, and federal minority/women/disability/LGBT business assistance offices.

D. Negotiate with Interested SDBs

Offerors must negotiate in good faith with interested SDBs.

1. Evidence of negotiation includes, without limitation, the following:

   (a) the names, addresses, and telephone numbers of SDBs that were considered;

   (b) a description of the information provided regarding the plans and specifications for the work selected for subcontracting and the means used to provide that information; and

(c) evidence as to why additional agreements could not be reached for SDBs to perform the work.

2. In negotiating with subcontractors, the offeror should consider a subcontractor's price and capabilities as well as the SDB participation goal.

3. Additional costs incurred in finding and using SDBs are not sufficient justification for the Offeror's failure to meet the SDB participation goal, as long as such costs are reasonable. Factors to take into consideration when determining whether an SDB's quote is excessive or unreasonable include, without limitation, the following:

   (a) dollar difference between the SDB subcontractor's quote and the average of other subcontractors' quotes received by the Offeror;

   (b) percentage difference between the SDB subcontractor's quote and the average of other subcontractors' quotes received by the Offeror;

   (c) percentage that the SDB subcontractor's quote represents of the total contract cost;

   (d) whether the work described in the SDB and Non-SDB subcontractor quotes (or portions thereof) submitted for review is the same or comparable; and

   (e) number of quotes received by the Offeror for that portion of the work.

4. The factors in paragraph 3 above are not intended to be mandatory, exclusive, or exhaustive, and other evidence of an excessive or unreasonable price may be relevant.

5. The Offeror may not use its price for self-performing work as a basis for rejecting an SDB's quote as excessive or unreasonable.

6. The "average of the other subcontractors' quotes received" by the Offeror refers to the average of the quotes received from all subcontractors. Offeror should attempt to receive quotes from at least three subcontractors, including one quote from an SDB and one quote from a non-SDB.

7. The Offeror shall not reject an SDB as unqualified without sound justification based on a thorough investigation of the SDB's capabilities. For each SDB that is rejected as unqualified or that placed a subcontract quotation or offer that the Offeror concludes is not acceptable, the Offeror must provide a written detailed statement outlining the justification for its conclusion. The Offeror also must document the steps taken to verify the capabilities of the SDB and non-SDB Firms quoting similar work.

(a) The factors to take into consideration when assessing the capabilities of an SDB include, but are not limited to the following: financial capability, physical capacity to perform, available personnel and equipment, existing workload, experience performing the type of work, conduct and performance in previous contracts, and ability to meet reasonable contract requirements.

(b) The SDB's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of Proposals in the efforts to meet the SDB participation goal.

E. Assisting Interested SDBs

When appropriate under the circumstances, the procuring agency and BDISBO will consider whether the Offeror made reasonable efforts to assist interested SDBs in obtaining:

1. The bonding, lines of credit, or insurance required by the procuring agency or the Offeror; and

2. Necessary equipment, supplies, materials, or related assistance or services.

III. Other Considerations

In making a determination of Good Faith Efforts, the procuring agency and BDISBO may consider engineering estimates, catalogue prices, general market availability and availability of certified SDBs in the area in which the work is to be performed, other Proposals or offers and subcontract Proposals or offers substantiating significant variances between SDB and non-SDB costs of participation, and their impact on the overall cost of the contract to the Commonwealth and any other relevant factors.

The procuring agency and BDISBO may consider whether the Offeror decided to self-perform potentially subcontractable work with its own forces. The procuring agency and BDISBO also may consider the performance of other Offerors in meeting the SDB participation goal. For example, when the apparent successful Offeror fails to meet the SDB participation goal, but others meet it, this raises the question of whether, with additional reasonable efforts, the apparent successful Offeror could have met the SDB participation goal. If the apparent successful Offeror fails to meet the SDB participation goal but meets or exceeds the average SDB participation obtained by other Offerors, this, when viewed in conjunction with other factors, could be evidence of the apparent successful Offeror having made Good Faith Efforts.

IV. Documenting Good Faith Efforts

At a minimum, the Offeror seeking a Good Faith Efforts waiver of the SDB participation goal or a portion thereof must provide written documentation of its Good Faith Efforts along with its bid or proposal. The written documentation shall include the following:

SDB-4

GUIDANCE FOR DOCUMENTING GOOD FAITH EFFORTS TO MEET THE SMALL DIVERSE BUSINESS (SDB) PARTICIPATION GOAL

A. Items of Work (complete SDB-5, Part 1 – Identified Items of Work Offeror Made Available to SDBs)

A detailed statement of the efforts made to select portions of the contract work proposed to be performed by SDBs in order to increase the likelihood of achieving the SDB participation goal.

B. Outreach/Solicitation/Negotiation

1. A detailed statement of the efforts made to contact and negotiate with SDBs including:

   (a) the names, addresses, and telephone numbers of the SDBs who were contacted, with the dates and manner of contacts (letter, fax, e-mail, telephone, etc.) (**complete SDB-5, Part 2 – Identified SDB Firms and Records of Solicitations. Include letters, fax cover sheets, e-mails, etc. documenting solicitations**); and

   (b) a description of the information provided to SDBs regarding the plans, specifications, and anticipated time schedule for portions of the contract work to be performed and the means used to provide that information.

2. The record of the Offeror's compliance with the outreach efforts set forth in **SDB-5, Part 3 - Outreach Efforts Compliance Statement.**

C. Rejected SDBs (complete SDB-5, Part 4 - Additional Information Regarding Rejected SDB Quotes)

1. For each SDB that the Offeror concludes is not acceptable or qualified, provide a detailed statement of the reasons for this conclusion, including the steps taken to verify the capabilities of the SDB and non-SDB firms quoting similar work.

2. For each SDB that the Offeror concludes has provided an excessive or unreasonable price, a detailed statement of the reasons for the Offeror’s conclusion, including the quotes received from all SDB and non-SDB firms proposing on the same or comparable work. **(Include copies of all quotes received.)**

D. Unavailable SDBs (complete SDB-5, Part 5 – SDB Subcontractor Unavailability Certificate)

1. **For each SDB that the Offeror contacted but found to be unavailable, submit an SDB Subcontractor Unavailability Certificate** signed by the SDB, an email from the SDB indicating the SDB is unavailable, or a statement from the Offeror that the SDB refused to sign the SDB Subcontractor Unavailability Certificate.

E. Other Documentation

1. Submit any other documentation requested by BDISBO or the Procuring Agency to ascertain the Offeror's Good Faith Efforts.

2. Submit any other documentation the Offeror believes will help BDISBO or the Procuring Agency ascertain its Good Faith Efforts.

SDB-5

GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST OF SDB PARTICIPATION GOAL

Project Description:	
Commonwealth Agency Name:	
Solicitation #:	
Solicitation Due Date and Time:	

Bidder/Offeror Company Name:	
Bidder/Offeror Contact Name:	
Bidder/Offeror Contact Email:	
Bidder/Offeror Contact Phone Number:	

Part 1 – Identified Items of Work Offeror Made Available to SDBs

Identify those items of contract work that the Offeror made available to SDBs. This includes, where appropriate, those items the Offeror identified and subdivided into economically feasible units to facilitate the SDB participation. For each item listed, show the anticipated percentage of the total contract cost. Offeror must demonstrate that enough work to meet the SDB participation goal was made available to SDBs, and the total percentage of the items of work identified for SDB participation met or exceeded the SDB participation goal set for the procurement.

Identified Items of Work	Was this work listed in the solicitation?	Does Offeror normally self-perform this work?	Was this work made available to SDB Firms? If not, explain why.
	____ yes ____ no	____ yes ____ no	____ yes ____ no
	____ yes ____ no	____ yes ____ no	____ yes ____ no
	____ yes ____ no	____ yes ____ no	____ yes ____ no
	____ yes ____ no	____ yes ____ no	____ yes ____ no
	____ yes ____ no	____ yes ____ no	____ yes ____ no

Attach additional sheets if necessary.

SDB-5

GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST OF SDB PARTICIPATION GOAL

Part 2 – Identified SDBs and Record of Solicitations

Identify the SDBs solicited to provide quotes for the Identified Items of Work made available for SDB participation. Include the name of the SDB solicited, items of work for which quotes were solicited, date and manner of initial and follow-up solicitations, whether the SDB provided a quote, and whether the SDB is being used toward meeting the SDB participation goal. SDBs used to meet the SDB participation goal must be listed on the **SDB Utilization Schedule (SDB-2)**.

Note: Copies of all written solicitations and documentation of follow-up calls to SDBs must be attached to this form. For each Identified SDB listed below, Offeror should submit an SDB Subcontractor Unavailability Certificate signed by the SDB or a statement from the Offeror that the SDB refused to sign the SDB Subcontractor Unavailability Certificate.

Name of Identified SDB and Classification	**Describe Item of Work Solicited**	**Initial Solicitation Date & Method**	**Follow-up Solicitation Date & Method**	**Details for Follow-up Calls**	**Quote Received?**	**Quote Used?**	**Reason Quote Rejected**
SDB Name: __ MBE __ WBE __ LGBTBE ☐ DOBE ☐ SDVBE		Date: __ mail __ email __ fax	Date: __ mail __ email __ fax	Date and Time of Call: Spoke with: Left Message:	__ yes __ no	__ yes __ no	__ Used other SDB __ Used non-SDB __ Self performing
SDB Name: __ MBE __ WBE __ LGBTBE __ DOBE __ SDVBE		Date: __ mail __ email __ fax	Date: __ mail __ email __ fax	Date and Time of Call: Spoke with: Left Message:	__ yes __ no	__ yes __ no	__ Used other SDB __ Used non-SDB __ Self performing

Attach additional sheets as necessary.

SDB-5
GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST OF SDB PARTICIPATION GOAL

Part 3 – SDB Outreach Compliance Statement

1. **List the Identified Items of Work for subcontracting opportunities for the solicitation along with specific work categories:**

2. **Attach to this form copies of written solicitations (with Bid or Proposal instructions) used to solicit Identified SDBs for these subcontract opportunities.**

3. **Offeror made the following attempts to contact the Identified SDBs:**

4. **Bonding Requirements (Please Check One):**

_____ This project does not involve bonding requirements.

_____ Offeror assisted Identified SDBs to fulfill or seek waiver of bonding requirements. (DESCRIBE EFFORTS):

5. **Pre-Bid/Proposal Conference or Supplier Forum (Please Check One):**

_____ Offeror did attend the pre-Bid/Proposal conference or Supplier Forum

_____ No pre-Bid/Proposal conference or Supplier Forum was held

_____ Offeror did not attend the pre-Bid/Proposal conference or Supplier Forum

SDB-5
GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST OF SDB PARTICIPATION GOAL

Part 4 – Additional Information Regarding Rejected SDB Quotes

This form must be completed if Part 2 indicates that an SDB quote was rejected because the Offeror is using a non-SDB or is self-performing the Identified Items of Work. List the Identified Items of Work, state whether the work will be self-performed or performed by a non-SDB, and if applicable, state the name of the non-SDB firm. Also include the names of all SDBs and non-SDB firms that provided a quote and the amount of each quote.

Describe Identified Items of Work not being performed by SDBs (include specific section from bid or proposal)	**Self-performing or using non-SDB (provide name of non-SDB if applicable)**	**Amount of non-SDB quote $**	**Name of other firms that provided quotes and whether they are SDB**	**Amount quoted $**	**Reason why SDB quote was rejected along with brief explanation**
	__ self-performing __ using Non-SDB Name:		__ SDB __ Non-SDB Name:		__ price __ capabilities __ other
	__ self-performing __ using Non-SDB Name:		__ SDB __ Non-SDB Name:		__ price __ capabilities __ other
	__ self-performing __ using Non-SDB Name:		__ SDB __ Non-SDB Name:		__ price __ capabilities __ other
	__ self-performing __ using Non-SDB Name:		__ SDB __ Non-SDB Name:		__ price __ capabilities __ other
	__ self-performing __ using Non-SDB Name:		__ SDB __ Non-SDB Name:		__ price __ capabilities __ other

Attach additional sheets as necessary.

SDB-5
GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST OF SDB PARTICIPATION GOAL

Part 5 – SDB Subcontractor Unavailability Certificate

1. It is hereby certified that the firm of _____
(Name of SDB)

located at_____
(Number) (Street)

_____
(City) (State) (Zip)

was offered an opportunity to bid on Solicitation No. _____

by _____
(Name of Prime Contractor's Firm)

****

2. _____(SDB), is either unavailable for the work/service or unable to prepare a Proposal for this project for the following reason(s):

_____
(Signature of SDB's Representative) (Title) (Date)

_____
(DGS SDB Certification #) (Telephone #)

****

3. If the SDB does not complete this form, the prime contractor must complete the following:

To the best of my knowledge and belief, the above-listed SDB is either unavailable for the work/service for this project, is unable to prepare a Proposal, or did not respond to a request for a price Proposal and has not completed the above portion of this submittal.

_____
(Signature of Bidder/Offeror) (Title) (Date)

VETERAN BUSINESS ENTERPRISE PARTICIPATION INFORMATION

1. **VBE Participation Goals.** The Issuing Office and BDISBO have set an VBE Participation Goal for this RFP which is listed on the VBE Participation Summary Sheet. The VBE Participation Goal was calculated based upon the market availability of VBEs for work scopes identified for this solicitation and an assessment of past performance under the prior contract.

   This is a significant programmatic change from the SDB and SB Participation program contained in prior RFPs issued by the Commonwealth. Offerors now must agree to meet the VBE Participation Goal in full or demonstrate they have made Good Faith Efforts to meet the Goal.

2. **Veteran Business Enterprise (VBE) Participation Submittal Packet (Forms VBE-1, VBE-2, VBE-3, VBE-3.1, VBE-4, VBE-5)**. The VBE Participation Submittal Packet and associated required documentation shall be submitted in accordance with the Instructions for Completing VBE Participation Submittal and VBE Utilization Schedule and shall be submitted electronically in accordance with VBE Participation Question No. 1.2.2.

   NOTE: Equal employment opportunity and contract compliance statements referring to company equal employment opportunity policies or past contract compliance practices do not constitute proof of VBE Status or entitle an Offeror to receive credit towards the VBE participation goal.

3. **Contract Requirements—VBE Participation.**

   A. VBE Participation Documents. All documents completed and submitted by the selected Offeror in connection with its VBE Participation Submittal (including the VBE Participation Submittal, VBE Utilization Schedule, and any Good Faith Efforts Documentation to Support Waiver Request of VBE Participation Goal) shall be considered a part of the Contract and are hereby expressly incorporated into the Contract by reference thereto.

   B. Required contract terms. All contracts containing VBE participation must contain the following contract provisions to be maintained through the initial contract term and any subsequent options or renewals:

      1. Each VBE participation commitment which was credited by BDISBO and the total percentage of the VBE participation commitments made at the time of proposal submittal or contract negotiations, as applicable, become contractual obligations of the selected Offeror upon execution of its contract with the Commonwealth.

      2. For purposes of monitoring compliance with the selected Offeror's VBE participation commitments, the contract cost is the total amount paid to the selected Offeror throughout the initial contract term and all renewal option terms.

3. The selected Offeror cannot alter its overall VBE commitment or commitments made to individual VBE subcontractors without written approval from the Issuing Officer and BDISBO.

4. Both the overall percentage VBE commitment and individual VBE commitments must be maintained in the event the contract is assigned to another prime contractor.

C. Subcontract requirements.

1. The selected Offeror and each VBE listed on the VBE Utilization Schedule must enter into a final, definitive subcontract agreement signed by the selected offeror and the VBE within 30 calendar days of the final execution date of the Commonwealth contract. A Model Form of Small Diverse Business/Veteran Business Enterprise Subcontractor Agreement which may be used to satisfy this requirement – is available in Group 1.2 of the RFP Questions.

2. In addition to any requirements in the selected Offeror's contract documents, the subcontract must contain:

   a. The specific work, supplies or services the VBE will perform; location for work performed; how the work, supplies or services relate to the contract; and the specific timeframe during the initial term and any extensions, options and renewals of the prime contract when the work, supplies or services will be provided or performed;

   b. The fixed percentage commitment and/or associated estimated dollar value that each VBE will receive based on the final negotiated cost for the initial term of the prime contract and any renewal option terms;

   c. Payment terms indicating that the VBE will be paid for work satisfactorily completed within 14 calendar days of the selected offeror's receipt of payment from the Commonwealth for such work. Subcontractors are encouraged to utilize electronic payment methods;

   d. Commercially reasonable terms for the applicable business/industry that are no less favorable than the terms of the selected offeror's contract with the Commonwealth and that do not place disproportionate risk on the VBE relative to the nature and level of the VBE's participation in the contract; and

   e. The requirement that the VBE submit to BDISBO utilization reports.

3. If the subcontract terms omit any of the information required in subparagraph 2 but that information is otherwise reflected within the selected offeror's VBE Participation Submittal or associated documents (VBE Utilization Schedule and Letters of Commitment), the information listed in the VBE Participation Submittal

or associated documents is incorporated into the subcontract agreement. To the extent that any subcontract terms conflict with the requirements of paragraph (2) or information contained within the selected offeror's VBE Participation Submittal and associated documents, the order of precedence is as follows: 1) the requirements of paragraph 2, 2) the selected offeror's VBE Participation Submittal and associated documents; and 3) the terms of the subcontract agreement.

4. If the selected offeror and a VBE listed on the VBE Utilization Schedule cannot agree upon a definitive subcontract within 30 calendar days of the final execution date of the Commonwealth contract or as specified in the solicitation, the selected offeror must provide written notification to the issuing Agency and BDISBO.

5. The prime contractor must provide a copy of any required subcontract with an VBE to BDISBO or the Agency within ten (10) business days of receiving such a request.

D. Utilization Reports.

1. The prime contractor must submit a Monthly Utilization Report to BDISBO and the contracting officer of the Issuing Office in the format required by BDISBO and within ten (10) business days at the end of each month of the contract term and any subsequent options or renewals. The Monthly Utilization Report must list payments made to each VBE subcontractor and any unpaid invoices over 30 calendar days old received from an VBE subcontractor, and the reason payment has not been made. This information will be used to track and confirm the actual dollar amount paid to VBE subcontractors and suppliers and will serve as a record of fulfillment of the contractual commitment(s). If there was no activity, the form must be completed by stating "No activity". A late fee of $100.00 per day may be assessed against the prime contractor if the Utilization Report is not submitted in accordance with the schedule above.

2. The prime contractor must include in its agreements with its VBE subcontractors a requirement that the VBE subcontractors submit to BDISBO, within the time frame set forth within the solicitation document, a report identifying the prime contract, and listing:

   a. Payments received from the prime contractor within the time frame covered by the report, and

   b. Invoices for which the subcontractor has not been paid.

E. Noncompliance with VBE commitments.

1. Upon BDISBO notifying the contracting Agency that a prime contractor did not comply with the VBE commitments, the contracting Agency shall notify the prime contractor in writing of its findings and shall specify what corrective actions are required. The prime contractor is required to initiate the corrective

actions within 10 business days and complete them within the time specified by the contracting Agency.

2. If a contracting Agency determines that material noncompliance with VBE contract provisions exists and that the prime contractor refuses or fails to take the corrective action required by the contracting Agency, the contracting Agency, in consultation with BDISBO, may impose any and all sanctions and remedies available under the contract as it deems appropriate. Such sanctions or remedies include, but are not limited to, withholding of payments; termination of the contract along with consequential damages; revocation of the prime contractor's SB, Small Diverse Business (SDB), and/or VBE status; a determination that the Offeror's SDB or VBE participation submittal be deemed non-responsible in future procurements; and/or any actions under the Commonwealth's Contractor Responsibility Program, up to and including suspension or debarment from future contracting opportunities with the Commonwealth.

VBE-1
INSTRUCTIONS FOR COMPLETING THE VETERAN BUSINESS ENTERPRISE (VBE) PARTICIPATION SUBMITTAL AND VBE UTILIZATION SCHEDULE.

PLEASE READ BEFORE COMPLETING THESE DOCUMENTS
Bidders/Offerors do not need to return VBE-1 with their VBE Participation Submittal

The following instructions include details for completing the VBE Participation Submittal (VBE-2) which Bidders or Offerors must submit in order to be considered responsive.

The following instructions also include details for completing the VBE Utilization Schedule (VBE-3), which Bidders or Offerors must submit for any portion of the VBE participation goal the Bidder or Offeror commits to meeting.

A Bidder/Offeror's failure to meet the VBE participation goal in full or their failure to receive an approved Good Faith Efforts waiver for any unmet portion of the VBE participation goal will result in the rejection of the Bid or Proposal as nonresponsive.

I. **VBE Participation Goal:** The VBE participation goal is set forth in the solicitation. The Bidder/Offeror is encouraged to use a diverse group of subcontractors and suppliers from the VBE classifications to meet the VBE participation goal.

II. **VBE Eligibility**:

1. Finding VBE firms: Offerors can access the directory of **DGS-verified** VBE firms from the DGS Supplier Search directory at: http://www.dgs.internet.state.pa.us/suppliersearch.

2. **Only VBEs verified by DGS** and as defined herein may be counted for purposes of achieving the VBE participation goal. In order to be counted for purposes of achieving the VBE participation goal, the VBE firm, including an VBE prime, must be DGS-verified for the services, materials or supplies that it has committed to perform on the **VBE Utilization Schedule (VBE-3)**. A firm whose VBE verification is pending or incomplete as of the bid or proposal due date and time shall not be counted towards the VBE participation goal. Offerors cannot use self-certified SBs that do not have their VBE verification as of the bid or proposal due date and time to meet the VBE participation goal.

3. VBE Requirements: To be considered an VBE, a firm must be a **DGS-verified** Veteran-Owned Small Business Enterprise or Service-Disabled Veteran-Owned Small Business Enterprise.

   Additional information on the DGS verification process can be found at: https://www.dgs.pa.gov/Small%20Diverse%20Business%20Program/Pages/default.aspx

4. Dually verified firms. If a DGS-verified SDB is dually verified as a VBE, the firm may receive credit towards both the SDB participation goal and the VBE participation goal as identified for the solicitation.

   Example: The SDB participation goal is 10% and the VBE participation goal is 5%. A subcontractor is DGS-verified as both an SDB and a VBE and will perform 10% of the contract work. The prime contractor can satisfy both the SDB participation goal and the VBE participation goal through that subcontractor's performance of 10% of the contract work., unless otherwise agreed to by the parties in writing and approved by BDISBO and the Issuing Office.

5. Participation by VBE firms as prime bidders/offerors or subcontractors. A Bidder/Offeror that qualifies as an VBE and submits a bid or proposal as a prime contractor is not prohibited from being included as a subcontractor in separate proposals submitted by other Bidders/Offerors. An VBE may be included as a subcontractor with as many prime contractors as it chooses in separate bids or proposals and a prime contractor may not prohibit an VBE from committing to any other prime contractor.

6. Questions about VBE verification. Questions regarding the VBE program, including questions about the self-certification and verification processes can be directed to:

   Department of General Services
   Bureau of Diversity, Inclusion and Small Business Opportunities (BDISBO)
   Room 611, North Office Building
   Harrisburg, PA 17125
   Phone: (717) 783-3119
   Fax: (717) 787-7052
   Email: RA-BDISBOVerification@pa.gov
   Website: www.dgs.pa.gov

III. Guidelines Regarding VBE Prime Self-Performance.

1. An VBE firm participating as a prime bidder or offeror on a procurement may receive credit towards the VBE Participation goal established for the procurement through their own self-performance.

   Example: A solicitation has a 15% VBE participation goal. An VBE prime offeror self-performing contract work valued at only 10% of contract costs (if permitted by the solicitation documents) must still satisfy the remaining 5% VBE participation goal through subcontracting or must request a Good Faith Efforts Waiver for the unmet VBE participation goal. Failure to satisfy the remining 5% VBE participation goal or failure to obtain a Good Faith Efforts waiver for the unmet portion of the VBE participation goal will result in rejection of that VBE prime's bid or proposal as nonresponsive.

2. For an VBE prime bidder or offeror to receive credit for self-performance, the VBE prime bidder or offeror must list itself in the **VBE Utilization Schedule (VBE-3)**.

3. The VBE prime bidder or offeror must also include the classification category (Veteran-Owned Small Business Enterprise or Service-Disabled Veteran-Owned Small Business Enterprise) under which it is self-performing and include information regarding the work it will self-perform. For any portion of the VBE participation goal not met through the VBE prime bidder or offeror's self-performance, the VBE bidder or offeror must also identify on the **VBE Utilization Schedule (VBE-3)** the other VBE subcontractors it will use to meet the unmet portion of the goal or must request and receive a Good Faith Efforts waiver.

IV. Calculating VBE participation

1. The selected Bidder or Offeror may only count dollar amounts actually paid to an VBE for performance of a Commercially Useful Function (the performance of a distinct element of work required for the Contract, with the requisite skill and expertise) towards satisfying its VBE participation commitments. In addition, the VBE subcontractor, through its own employees, must perform at least 50% of the amount of the subcontract.

V. Additional Required Documentation.

1. The Bidder or Offeror must submit along with its VBE Participation Submittal (VBE-2) a letter of commitment (LOC) (VBE-3-1) for each subcontractor included in its VBE Utilization Schedule (VBE-3). At a minimum, each LOC must contain the following unless otherwise specified by the solicitation documents:

    a. The fixed numerical percentage commitment and associated estimated gross dollar value of the commitment made to the VBE; and

    b. A description of the services or supplies the VBE will provide; and

    c. The timeframe during the initial contract term and any extensions, options and renewals when the VBE will perform or provide the services and/or supplies; and

    d. The name and telephone number of the Bidder or Offeror's point of contact for VBE participation; and

    e. The name, address, and telephone number of the primary contact person for the VBE; and

    f. Signatures of representatives of both the Bidder/Offeror and the VBE subcontractor who are authorized to contractually bind their firm.

VBE-1
INSTRUCTIONS FOR COMPLETING THE SMALL DIVERSE BUSINESS (VBE) PARTICIPATION SUBMITTAL AND VBE UTILIZATION SCHEDULE.

VI. Document Submittal Errors.

1. **Fatal errors.** The following errors will result in rejection of a bid or proposal as non-responsive**:**

   a. Failure to submit a completed **VBE Participation Submittal (VBE-2)**;

   b. Failure to submit an **VBE Utilization Schedule (VBE-3),** unless the bidder or offer is seeking a complete Good Faith Efforts waiver;

   c. Failure to make commitments to and list **DGS-verified** VBEs that will be used to meet the VBE participation goal, unless the bidder or offeror's commitments to other DGS-verified VBEs meet or exceed the VBE Participation goal;

   d. Failure to submit a Good Faith Efforts waiver request when not fully meeting the VBE participation goal.

   Example: A bidder/offeror lists a subcontractor that possesses a third-party certificate issued by one of the DGS-approved third party certifying entities; however, the subcontractor did not complete its DGS VBE verification as of the bid or proposal due date and time. The bidder/offeror does not receive credit for any commitments made to the subcontractor and has therefore not met the VBE participation goal. The bidder/offeror cannot cure this error. Therefore, the bid or proposal must be rejected as non-responsive.

2. **Potentially curable errors.** The Issuing Office and BDISBO may provide Bidders or Offerors the opportunity to provide clarifications or to correct errors not listed as fatal errors above. If the additionally submitted information does not adequately address the or clarify the submittal, the bid or proposal may be rejected. **Bidders or Offerors are not permitted to add additional VBEs or make material changes as part of its clarifications or corrections in order to meet the VBE participation goal.**

3. **Solicitations with Multiple Lots or Base Bids**. If the Bid or Proposal contains separate Lots or multiple Base Bids, an Offeror must complete and submit a separate **VBE Participation Submittal (VBE-2)** and accompanying required documentation for EACH Lot or Base Bid for which it is submitting a bid or proposal. Each separate **VBE Participation Submittal** and accompanying required documentation must be labeled to identify the corresponding Lot or Base Bid. Failure to submit an **VBE Participation Submittal** and accompanying required documentation for each Lot or Base Bid will result in the rejection of the bid or proposal for each Lot or Base Bid for which an **VBE Participation Submittal** was not submitted.

VBE-2
VBE PARTICIPATION SUBMITTAL

CHECK ONE, AND ONLY ONE, BOX. FAILURE TO COMPLY WILL RESULT IN REJECTION OF YOUR BID/PROPOSAL.
Click on bold titles to navigate to that specific page.

☐ **I agree to meet the VBE participation goal in full.**

I have completed and am submitting with my bid or proposal an **VBE Utilization Schedule (VBE-3)**, which is required in order to be considered for award.

☐ **I am requesting a partial waiver of the VBE participation goal.**

After making good faith outreach efforts as more fully described in the **Guidance for Documenting Good Faith Efforts to Meet the VBE Participation Goal**, I am unable to achieve the total VBE participation goal for this solicitation and am requesting a partial waiver of the VBE participation goal.

I have completed and am submitting with my bid or proposal both of the following, which are required in order to be considered for award:

1. an **VBE Utilization Schedule (VBE-3)** for that portion of the VBE participation goal that I will meet; AND

2. a **Good Faith Efforts Waiver Request** for the portion of the VBE participation goals that I am unable to meet.

☐ **I am requesting a full waiver of the VBE participation goal**

After making good faith outreach efforts as more fully described in the **Guidance for Documenting Good Faith Efforts to Meet the VBE Participation Goal**, I am unable to achieve any part of the VBE participation goal for this solicitation and am requesting a full waiver of the VBE participation goal.

I have completed and am submitting with my bid or proposal a **Good Faith Efforts Waiver Request** for the complete VBE participation goal, which is required in order to be considered for award.

NOTE: VBE primes who are submitting as bidders or offerors must complete an **VBE Utilization Schedule (VBE-3)** identifying any self-performance towards the VBE participation goal.

VBE-3
VBE UTILIZATION SCHEDULE

List in the chart below VBEs (including where applicable a prime bidder or offeror is self-performing a portion of the work) that will be used to meet the VBE participation goal (add additional pages if necessary). Submit a **Letter of Commitment (VBE-3-1)** for each VBE subcontractor (add additional Letters of Commitment as necessary).

VBE Name **SAP Vendor Number** **(6-digit number provided by VBE)** **VBE Verification Number** **(located on DGS VBE verification)**	**Type of VBE** **(check all that apply)**	**Description of Work to be Performed** **(Statement of Work/Specification reference)**	**% Commitment** **(or % of work to be self-performed by VBE bidder/offeror)**	**Associated Dollar Value of Commitment**
Name: ABC IT Solutions **SAP Vendor Number:** 123456 **VBE Verification Number:** 123456-2016-09-SB-M	MBE	IT staffing resources	%	$
Name: **SAP Vendor Number:** **VBE Verification Number:**	☐ VBE ☐ SDVBE		%	
Name: **SAP Vendor Number:** **VBE Verification Number:**	☐ VBE ☐ SDVBE		%	
Name: **SAP Vendor Number:** **VBE Verification Number:**	☐ VBE ___ SDVBE		%	
Name: **SAP Vendor Number:** **VBE Verification Number:**	___ VBE ___ SDVBE		%	
Attach additional sheets if necessary			Total % VBE commitment: 0	Total $ amount: _____

VBE-3-1
LETTER OF COMMITMENT

This Letter of Commitment serves as confirmation of the commitment by the prime Bidder or Offeror to utilize the Small Diverse Business (VBE) on the below-referenced Solicitation/Project.

Solicitation Number: _____

Solicitation Name: _____

	Bidder/Offeror Information	VBE Information
Name		
Address		
Point of Contact		
Telephone number		
Email address		

Services/Supplies and Time Frame. If Bidder/Offeror is the successful vendor, the VBE shall perform or provide the following services or supplies during the initial term of the prime contract and during any extensions, options or renewal periods of the prime contract exercised by the Commonwealth, as more specifically set forth below:

Services or supplies the VBE will provide:

Specific Time Frame the VBE will provide the services or supplies:

Percentage Commitment. These services or supplies represent _____% of the total cost of the Bidder/Offeror's cost submittal for the initial term of the contract. Depending on actual contract usage or volume, it is expected the VBE will receive $_____ during the initial contract term.

VBE verified. By signing below, the VBE represents that it meets the VBE requirements set forth in the Solicitation and all required documentation has been provided to the Bidder/Offeror for its VBE submission.

Sincerely,	Acknowledged
_____	_____
Printed name	Printed name
_____	_____
Signature Bidder/Offeror Point of Contact Name	Signature VBE Point of Contact Name

** For purposes of monitoring compliance with SDB and VBE commitments, the work performed by a firm that is both an SDB and a VBE will be counted by BDISBO towards fulfilling both the SDB and VBE commitments unless otherwise agreed to by the parties in writing and approved by BDISBO and the Issuing Office.*

VBE-4
GUIDANCE FOR DOCUMENTING GOOD FAITH EFFORTS TO MEET THE SMALL DIVERSE BUSINESS (VBE) PARTICIPATION GOAL

Bidders/Offerors do not need to return VBE-4 with their VBE Participation Submittal

In order for its bid or proposal to be responsive, the Bidder or Offeror must either (1) meet the VBE participation goal and document its commitments for participation of VBE firms, or (2) when it does not meet the VBE participation goal, submit a Good Faith Efforts waiver request as set forth in Section IV below and the **Good Faith Efforts Documentation to Support Waiver Request (VBE-5)** of the VBE Participation Goal.

I. Definitions

Good Faith Efforts - The "Good Faith Efforts" requirement means that when requesting a waiver, the Offeror must demonstrate that it took all necessary and reasonable steps to achieve the VBE participation goal. Those steps are considered necessary and reasonable when their scope, intensity, and relevance could reasonably be expected to obtain sufficient VBE participation, even if those steps were not fully successful. The Issuing Agency and Department of General Services' Bureau of Diversity, Inclusion and Small Business Opportunities (BDISBO) will determine whether or not the Offeror requesting a Good Faith Efforts waiver made adequate Good Faith Efforts by considering the quality, quantity, and intensity of the Offeror's efforts. Mere *pro forma* efforts are not Good Faith Efforts to meet the VBE participation requirements. The determination concerning the sufficiency of the Offeror's Good Faith Efforts is subjective; meeting quantitative formulas is not required.

Identified Items of Work – all reasonably identifiable subcontractable work opportunities under a resulting contract for performance by subcontractors.

Identified VBEs– all of the VBEs the Offeror has identified as available to perform the Identified Items of Work and should include all DGS-verified VBEs that are reasonably identifiable.

Offeror – for purposes of this **Good Faith Efforts Documentation to Support Waiver Request**, the term "Offeror" includes any entity responding to a solicitation, including invitations for bids, requests for proposals, and other types of best value solicitations.

VBE – "VBE" refers to Veteran-Owned Small Business Enterprises or Service-Disabled Veteran-Owned Small Business Enterprise verified by BDISBO.

VBE participation goal – "VBE participation goal" refers to the VBE participation goal set for a procurement for Veteran-Owned Small Businesses and Service-Disabled Veteran-Owned Small Businesses.

II. Types of Actions Agency and BDISBO will Consider

The following is a list of types of actions the procuring agency and BDISBO will consider as part of the Offeror's Good Faith Efforts when the Offeror is unable to meet, in full, the VBE

participation goal. This list is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

A. Identify Proposal Items as Work for VBEs

1. Identified Items of Work

   (a) Offerors should reasonably identify sufficient items of work to be performed by VBEs.

   (b) Where appropriate, Offerors should break out contract work items into economically feasible units to facilitate VBE participation, rather than perform these work items with their own forces. **The ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the Offeror of the responsibility to make Good Faith Efforts to meet the VBE participation goal.**

B. Identify VBEs to Solicit

1. Identified VBEs

   (a) Offerors must reasonably identify the VBEs that are available to perform the Identified Items of Work.

   (b) Any VBEs identified as available by the Offeror should be certified to perform the Identified Items of Work.

C. Solicit VBEs

1. Offerors must solicit a reasonable number of identified VBEs for all Identified Items of Work by providing written notice. The Offeror must:

   (a) provide the written solicitation to the Identified VBEs at least 10 days prior to Bid or Proposal due date to allow sufficient time for the Identified VBE to respond;

   (b) send the written solicitation by first-class mail, facsimile, or e-mail using contact information in the BDISBO Directory, unless the Offeror has a valid basis for using different contact information; and

   (c) provide adequate information about the plans, specifications, anticipated time schedule for portions of the work to be performed by the Identified VBE, and other requirements of the contract to assist Identified VBEs in responding. (This information may be provided by including hard copies in the written solicitation or by electronic means as described in C.3 below.)

2. "All" Identified VBEs includes any VBE Firms the Offeror identifies as potentially available to perform the Identified Items of Work, but it does not include Identified VBEs who are no longer certified to perform the work as of the date the Offeror provides written solicitations.

3. "Electronic Means" includes, for example, information provided *via* a website or file transfer protocol (FTP) site containing the plans, specifications, and other requirements of the contract. If an interested VBE cannot access the information provided by electronic means, the Offeror must make the information available in a manner that is accessible to the interested VBE.

4. Offerors must follow up on initial written solicitations by contacting Identified VBEs to determine their interest in bidding. The follow up contact may be made:

   (a) by telephone using the contact information in BDISBO's Directory, unless the Offeror has a valid basis for using different contact information; or

   (b) in writing *via* a method that differs from the method used for the initial written solicitation.

5. In addition to the written solicitation set forth in C.1 and the follow up required in C.4, offerors must use all other reasonable and available means to solicit the interest of Identified VBEs certified to perform the work of the contract. Examples of other means include:

   (a) attending any Supplier Forums, or Pre-Proposal or Pre-Bid conferences at which VBEs could be informed of contracting and subcontracting opportunities; and

   (b) if recommended by the procurement, advertising with or effectively using the services of at least two veteran-focused entities or media, including trade associations, veteran community organizations, veteran contractors' groups, and local, state, and federal veteran business assistance offices.

D. Negotiate with Interested VBEs

Offerors must negotiate in good faith with interested VBEs.

1. Evidence of negotiation includes, without limitation, the following:

   (a) the names, addresses, and telephone numbers of VBEs that were considered;

   (b) a description of the information provided regarding the plans and specifications for the work selected for subcontracting and the means used to provide that information; and

(c) evidence as to why additional agreements could not be reached for VBEs to perform the work.

2. In negotiating with subcontractors, the offeror should consider a subcontractor's price and capabilities as well as the VBE participation goal.

3. Additional costs incurred in finding and using VBEs are not sufficient justification for the Offeror's failure to meet the VBE participation goal, as long as such costs are reasonable. Factors to take into consideration when determining whether an VBE's quote is excessive or unreasonable include, without limitation, the following:

   (a) dollar difference between the VBE subcontractor's quote and the average of other subcontractors' quotes received by the Offeror;

   (b) percentage difference between the VBE subcontractor's quote and the average of other subcontractors' quotes received by the Offeror;

   (c) percentage that the VBE subcontractor's quote represents of the total contract cost;

   (d) whether the work described in the VBE and Non-VBE subcontractor quotes (or portions thereof) submitted for review is the same or comparable; and

   (e) number of quotes received by the Offeror for that portion of the work.

4. The factors in paragraph 3 above are not intended to be mandatory, exclusive, or exhaustive, and other evidence of an excessive or unreasonable price may be relevant.

5. The Offeror may not use its price for self-performing work as a basis for rejecting an VBE's quote as excessive or unreasonable.

6. The "average of the other subcontractors' quotes received" by the Offeror refers to the average of the quotes received from all subcontractors. Offeror should attempt to receive quotes from at least three subcontractors, including one quote from an VBE and one quote from a non-VBE.

7. The Offeror shall not reject an VBE as unqualified without sound justification based on a thorough investigation of the VBE's capabilities. For each VBE that is rejected as unqualified or that placed a subcontract quotation or offer that the Offeror concludes is not acceptable, the Offeror must provide a written detailed statement outlining the justification for its conclusion. The Offeror also must document the steps taken to verify the capabilities of the VBE and non-VBE Firms quoting similar work.

(a) The factors to take into consideration when assessing the capabilities of an VBE include, but are not limited to the following: financial capability, physical capacity to perform, available personnel and equipment, existing workload, experience performing the type of work, conduct and performance in previous contracts, and ability to meet reasonable contract requirements.

(b) The VBE's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of Proposals in the efforts to meet the VBE participation goal.

E. Assisting Interested VBEs

When appropriate under the circumstances, the procuring agency and BDISBO will consider whether the Offeror made reasonable efforts to assist interested VBEs in obtaining:

1. The bonding, lines of credit, or insurance required by the procuring agency or the Offeror; and

2. Necessary equipment, supplies, materials, or related assistance or services.

III. Other Considerations

In making a determination of Good Faith Efforts, the procuring agency and BDISBO may consider engineering estimates, catalogue prices, general market availability and availability of certified VBEs in the area in which the work is to be performed, other Proposals or offers and subcontract Proposals or offers substantiating significant variances between VBE and non-VBE costs of participation, and their impact on the overall cost of the contract to the Commonwealth and any other relevant factors.

The procuring agency and BDISBO may consider whether the Offeror decided to self-perform potentially subcontractable work with its own forces. The procuring agency and BDISBO also may consider the performance of other Offerors in meeting the VBE participation goal. For example, when the apparent successful Offeror fails to meet the VBE participation goal, but others meet it, this raises the question of whether, with additional reasonable efforts, the apparent successful Offeror could have met the VBE participation goal. If the apparent successful Offeror fails to meet the VBE participation goal but meets or exceeds the average VBE participation obtained by other Offerors, this, when viewed in conjunction with other factors, could be evidence of the apparent successful Offeror having made Good Faith Efforts.

IV. Documenting Good Faith Efforts

At a minimum, the Offeror seeking a Good Faith Efforts waiver of the VBE participation goal or a portion thereof must provide written documentation of its Good Faith Efforts along with its bid or proposal. The written documentation shall include the following:

VBE-4

GUIDANCE FOR DOCUMENTING GOOD FAITH EFFORTS TO MEET THE SMALL DIVERSE BUSINESS (VBE) PARTICIPATION GOAL

A. Items of Work (complete VBE-5, Part 1 – Identified Items of Work Offeror Made Available to VBEs)

A detailed statement of the efforts made to select portions of the contract work proposed to be performed by VBEs in order to increase the likelihood of achieving the VBE participation goal.

B. Outreach/Solicitation/Negotiation

1. A detailed statement of the efforts made to contact and negotiate with VBEs including:

   (a) the names, addresses, and telephone numbers of the VBEs who were contacted, with the dates and manner of contacts (letter, fax, e-mail, telephone, etc.) (**complete VBE-5, Part 2 – Identified VBE Firms and Records of Solicitations. Include letters, fax cover sheets, e-mails, etc. documenting solicitations**); and

   (b) a description of the information provided to VBEs regarding the plans, specifications, and anticipated time schedule for portions of the contract work to be performed and the means used to provide that information.

2. The record of the Offeror's compliance with the outreach efforts set forth in **VBE-5, Part 3 - Outreach Efforts Compliance Statement.**

C. Rejected VBEs (complete VBE-5, Part 4 - Additional Information Regarding Rejected VBE Quotes)

1. For each VBE that the Offeror concludes is not acceptable or qualified, provide a detailed statement of the reasons for this conclusion, including the steps taken to verify the capabilities of the VBE and non-VBE firms quoting similar work.

2. For each VBE that the Offeror concludes has provided an excessive or unreasonable price, a detailed statement of the reasons for the Offeror’s conclusion, including the quotes received from all VBE and non-VBE firms proposing on the same or comparable work. **(Include copies of all quotes received.)**

D. Unavailable VBEs (complete VBE-5, Part 5 – VBE Subcontractor Unavailability Certificate)

1. **For each VBE that the Offeror contacted but found to be unavailable, submit an VBE Subcontractor Unavailability Certificate** signed by the VBE, an email from the VBE indicating the VBE is unavailable, or a statement from the Offeror that the VBE refused to sign the VBE Subcontractor Unavailability Certificate.

E. Other Documentation

1. Submit any other documentation requested by BDISBO or the Procuring Agency to ascertain the Offeror's Good Faith Efforts.

2. Submit any other documentation the Offeror believes will help BDISBO or the Procuring Agency ascertain its Good Faith Efforts.

VBE-5

GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST OF VBE PARTICIPATION GOAL

Project Description:	
Commonwealth Agency Name:	
Solicitation #:	
Solicitation Due Date and Time:	

Bidder/Offeror Company Name:	
Bidder/Offeror Contact Name:	
Bidder/Offeror Contact Email:	
Bidder/Offeror Contact Phone Number:	

Part 1 – Identified Items of Work Offeror Made Available to VBEs

Identify those items of contract work that the Offeror made available to VBEs. This includes, where appropriate, those items the Offeror identified and subdivided into economically feasible units to facilitate the VBE participation. For each item listed, show the anticipated percentage of the total contract cost. Offeror must demonstrate that enough work to meet the VBE participation goal was made available to VBEs, and the total percentage of the items of work identified for VBE participation met or exceeded the VBE participation goal set for the procurement.

Identified Items of Work	Was this work listed in the solicitation?	Does Offeror normally self-perform this work?	Was this work made available to VBE Firms? If not, explain why.
	yes no	yes no	yes no
	yes no	yes no	yes no
	yes no	yes no	yes no
	yes no	yes no	yes no
	yes no	yes no	yes no

Attach additional sheets if necessary.

VBE-5

GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST OF VBE PARTICIPATION GOAL

Part 2 – Identified VBEs and Record of Solicitations

Identify the VBEs solicited to provide quotes for the Identified Items of Work made available for VBE participation. Include the name of the VBE solicited, items of work for which quotes were solicited, date and manner of initial and follow-up solicitations, whether the VBE provided a quote, and whether the VBE is being used toward meeting the VBE participation goal. VBEs used to meet the VBE participation goal must be listed on the **VBE Utilization Schedule (VBE-2)**.

Note: Copies of all written solicitations and documentation of follow-up calls to VBEs must be attached to this form. For each Identified VBE listed below, Offeror should submit an VBE Subcontractor Unavailability Certificate signed by the VBE or a statement from the Offeror that the VBE refused to sign the VBE Subcontractor Unavailability Certificate.

Name of Identified VBE and Classification	**Describe Item of Work Solicited**	**Initial Solicitation Date & Method**	**Follow-up Solicitation Date & Method**	**Details for Follow-up Calls**	**Quote Received?**	**Quote Used?**	**Reason Quote Rejected**
VBE Name: __ VBE __ SDVBE		Date: __ mail __ email __ fax	Date: __ mail __ email __ fax	Date and Time of Call: Spoke with: Left Message:	__ yes __ no	__ yes __ no	__ Used other VBE __ Used non-VBE __ Self performing
VBE Name: __ VBE __ SDVBE		Date: __ mail __ email __ fax	Date: __ mail __ email __ fax	Date and Time of Call: Spoke with: Left Message:	__ yes __ no	__ yes __ no	__ Used other VBE __ Used non-VBE __ Self performing

Attach additional sheets as necessary.

VBE-5
GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST OF VBE PARTICIPATION GOAL

Part 3 – VBE Outreach Compliance Statement

1. **List the Identified Items of Work for subcontracting opportunities for the solicitation along with specific work categories:**

2. **Attach to this form copies of written solicitations (with Bid or Proposal instructions) used to solicit Identified VBEs for these subcontract opportunities.**

3. **Offeror made the following attempts to contact the Identified VBEs:**

4. **Bonding Requirements (Please Check One):**

_____ This project does not involve bonding requirements.

_____ Offeror assisted Identified VBEs to fulfill or seek waiver of bonding requirements. (DESCRIBE EFFORTS):

5. **Pre-Bid/Proposal Conference or Supplier Forum (Please Check One):**

_____ Offeror did attend the pre-Bid/Proposal conference or Supplier Forum

_____ No pre-Bid/Proposal conference or Supplier Forum was held

_____ Offeror did not attend the pre-Bid/Proposal conference or Supplier Forum

VBE-5

GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST OF VBE PARTICIPATION GOAL

Part 4 – Additional Information Regarding Rejected VBE Quotes

This form must be completed if Part 2 indicates that an VBE quote was rejected because the Offeror is using a non-VBE or is self-performing the Identified Items of Work. List the Identified Items of Work, state whether the work will be self-performed or performed by a non-VBE, and if applicable, state the name of the non-VBE firm. Also include the names of all VBEs and non-VBE firms that provided a quote and the amount of each quote.

Describe Identified Items of Work not being performed by VBEs (include specific section from bid or proposal)	**Self-performing or using non-VBE (provide name of non-VBE if applicable)**	**Amount of non-VBE quote $**	**Name of other firms that provided quotes and whether they are VBE**	**Amount quoted $**	**Reason why VBE quote was rejected along with brief explanation**
	__ self-performing __ using Non-VBE Name:		__ VBE __ Non-VBE Name:		__ price __ capabilities __ other
	__ self-performing __ using Non-VBE Name:		__ VBE __ Non-VBE Name:		__ price __ capabilities __ other
	__ self-performing __ using Non-VBE Name:		__ VBE __ Non-VBE Name:		__ price __ capabilities __ other
	__ self-performing __ using Non-VBE Name:		__ VBE __ Non-VBE Name:		__ price __ capabilities __ other
	☐ self-performing __ using Non-VBE Name:		__ VBE __ Non-VBE Name:		__ price __ capabilities __ other

Attach additional sheets as necessary.

VBE-5
GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST OF VBE PARTICIPATION GOAL

Part 5 – VBE Subcontractor Unavailability Certificate

1. It is hereby certified that the firm of _____
(Name of VBE)

located at_____
(Number) (Street)

_____
(City) (State) (Zip)

was offered an opportunity to bid on Solicitation No. _____

by _____
(Name of Prime Contractor's Firm)

****

2. _____(VBE), is either unavailable for the work/service or unable to prepare a Proposal for this project for the following reason(s):

_____
(Signature of VBE's Representative) (Title) (Date)

_____
(DGS VBE Certification #) (Telephone #)

****

3. If the VBE does not complete this form, the prime contractor must complete the following:

To the best of my knowledge and belief, the above-listed VBE is either unavailable for the work/service for this project, is unable to prepare a Proposal, or did not respond to a request for a price Proposal and has not completed the above portion of this submittal.

_____
(Signature of Bidder/Offeror) (Title) (Date)

EXHIBIT E

Environmental Remediation Services 6100052061

TECHNICAL SUBMITTAL

TECHNICAL SUBMITTAL

I-1. Statement of the Project. State in succinct terms your understanding of the project presented or the service required by this RFP.

Offeror Response

I-2. Qualifications.

A. Company Overview.

1. Offeror must have a minimum of five (5) years experience in the field of environmental remediation services. Documentation to substantiate (e.g. Articles of Incorporation, Income Tax Return and/or Dunn & Bradstreet report, etc.) an entities validity may be requested prior to an award or at any time.

2. Offeror and all affected Subcontractors must possess and maintain throughout the life of this Contract all applicable registrations, certifications, and licenses in connection with work required under this Contract.

3. Certifications, Accreditations and Training:

a. Valid copy of the following professional certifications for individuals performing work under this Contract:

- Pennsylvania Department of State Licensed Professional Geologist
- Pennsylvania Department of State Licensed Professional Engineer
- Board of Certified Safety Professionals Certified Safety Professional
- American Board of Industrial Hygiene Certified Industrial Hygienist
- Valid copy of Hazardous Waste Operations and Emergency Response (HAZWOPER) training for key individuals to perform field investigative and remedial efforts at contaminated sites.
- Pennsylvania Department of Labor and Industry (L&I) Lead-Based Paint Inspector-Technician certification. (Note: PA L&I Lead-Based Paint Risk Assessor certification will satisfy this requirement.)

b. Valid copy of the following Pennsylvania Department of Environmental Protection (DEP) issued certifications. 25 Pa. Code § 245 Administration of the Storage Tank and Spill Prevention Program.

- Underground Manufactured Storage Tank Removal (UMR)
- Underground Storage Tank Installation and Modification (UMX)
- Aboveground Manufactured Storage Tank Removal (AMR)
- Aboveground Manufactured Metallic Storage Tank Installation and Modification (AMMX)
- Aboveground Non-metallic Storage Tank Installation and Modification (AMNX)

c. Valid copy of the following PA L&I Asbestos Abatement Certifications/copies of photo licenses:

- Supplier/Contractor
- Supervisor
- Worker
- Project Designer
- Management Planner

d. Proof of analytical laboratory's bulk and airborne asbestos analysis accreditation (NVLAP accreditation) issued by the United States Department of Commerce National Institute of Standards and Technology.

e. Valid copy of analytical laboratory's PA DEP drinking water certification, encompassing the following suites of compounds: SVOCs, VOCs, Metals, PCBs, Pesticides/Herbicides and Microbiology.

f. Proof of analytical laboratory's PA DEP environmental laboratory registration in accordance with the Environmental Laboratory Accreditation Act (submit a document with the Act 25 registration number).

g. Health and Safety Program - Copy of the Offeror's Company/Corporate Health and Safety Program.

Offeror Response

B. Prior Experience. Include experience in the field of environmental remediation. Experience shown should be work done by individuals who will be assigned to this project as well as that of your company. Studies or projects referred to must be identified and the name of the customer shown, including the name, address, and telephone number of the responsible official of the customer, company, or agency who may be contacted.

1. Supply three (3) quality client references from either large (100 or more employees) organizations or state entities for which the company is currently providing environmental remediation services. The supplied references must meet the following requirements:

a. Each client should reference various projects that demonstrate the Suppliers ability to perform a full range of environmental remediation and investigative services.
b. Each client reference must provide the project title, a description detailing the project scope and size, the organization for whom the work was performed, and a point of contact at that organization.

Offeror Response

C. Personnel. Describe in narrative form the number of executive and professional personnel who will be engaged in the work and indicate where these personnel will be physically located during the time they are engaged in the Project. For key personnel, an outline of the management and operational structure, including senior staff professionals, project staff professionals and assistant staff professionals (titles can be found on **Appendix A – Cost Submittal)** include the employee's name, and through a resume or similar document, the Project personnel's education and experience in the fields outlined in the Company Overview above. Indicate the responsibilities each individual will have in this Project and how long each has been with your company. The Pennsylvania Department of General Services (DGS) and/or the Pennsylvania Department of Transportation (PennDOT) reserves the right to request resumes of senior staff professionals and project staff professionals performing service and to request replacement of any staff found unsuitable to perform the work under the scope of services for this Contract.

Offeror Response

D. Subcontractors. Provide a subcontracting plan for all subcontractors, including small diverse business and small business subcontractors, who will be assigned to the Project. The selected Offeror is prohibited from subcontracting or outsourcing any part of this Project without the express written approval from the Commonwealth. Upon award of the contract resulting from this RFP, subcontractors included in the proposal submission are deemed approved. For each position included in your subcontracting plan provide:

1. Name of subcontractor;
2. Primary contact name and email;
3. Address of subcontractor;
4. Description of services to be performed;
5. Number of employees by job category assigned to this project; and
6. Resumes (if appropriate and available).

Offeror Response

I-3. Training. If appropriate, indicate recommended training of agency personnel. Include agency personnel to be trained, the number to be trained, duration of the program, place of training, curricula, training materials to be used, number and frequency of sessions, and number and level of instructors.

Offeror Response

I-4. Financial Capability. Describe your company's financial stability and economic capability to perform the contract requirements. The Commonwealth reserves the right to request additional information to evaluate an Offeror's financial capability.

Offeror Response

I-5. Requirements.

A. Emergency Preparedness. To support continuity of operations during an emergency, including a pandemic, the Commonwealth needs a strategy for maintaining operations for an extended period of time. One part of this strategy is to ensure that essential contracts that provide critical business services to the Commonwealth have planned for such an emergency and put contingencies in place to provide needed goods and services.

1. Describe how you anticipate such a crisis will impact your operations.

Offeror Response

2. Describe your emergency response continuity of operations plan. Please attach a copy of your plan, or at a minimum, summarize how your plan addresses the following aspects of pandemic preparedness:

a. Employee training (describe your organization's training plan, and how frequently your plan will be shared with employees);

Offeror Response

b. Identified essential business functions and key employees (within your organization) necessary to carry them out;

Offeror Response

c. Contingency plans for:

i. How your organization will handle staffing issues when a portion of key employees are incapacitated due to illness; and.

ii. How employees in your organization will carry out the essential functions if contagion control measures prevent them from coming to the primary workplace.

Offeror Response

3. How your organization will communicate with staff and suppliers when primary communications systems are overloaded or otherwise fail, including key contacts, chain of communications (including suppliers), etc. and;

Offeror Response

4. How and when your emergency plan will be tested, and if the plan will be tested by a third-party.

Offeror Response

I-6. **Tasks.** Describe in narrative form your technical plan for accomplishing the work using the task descriptions set forth below as your reference point. Modifications of the task descriptions are permitted; however, reasons for changes should be fully explained. Indicate the number of person or man hours allocated to each task. Include a Program Evaluation and Review Technique (PERT) or similar type display, time related, showing each event. If more than one approach is apparent, comment on why you chose this approach.

The offeror will provide Environmental Remediation Services at those locations as determined by PennDOT for Normal and Rapid Responses based on the following:

A. Service Specifications: The awarded Supplier will be expected to provide all labor, materials, tools, equipment, and incidentals necessary to perform environmental remediation on an as-needed basis for which the Supplier has been awarded. The Supplier must comply with all applicable Federal, State, and local government laws, regulations, ordinances and agreements (e.g. Memorandums of Understanding) by the jurisdiction where the services are to be performed. The Supplier is responsible for any fines or citations levied, as a result of their non-compliance with any applicable Federal, State, and/or local government laws, regulations, ordinances, and/or agreements.

Supplier shall staff a sufficient amount of personnel to perform services under this Contract, such as senior staff professionals, project staff professionals and Assistant Staff Professionals (titles can be found on **Appendix A – Cost Submittal**. In addition, all Key Professional Personnel must possess and maintain all applicable professional licenses throughout the term of this Contract.

Offeror Response

Services under this Contract may include, but are not limited to the following:

1. **Aboveground Storage Tank (AST) System Removal.** Removal of tank and appurtenances (i.e. pedestal, containment structure, and footer, etc.), disposal of the tank and appurtenances, and completion of closure sampling, analysis, and documentation (including PA DEP notifications and reporting, if required). Closure, closure reporting, and corrective actions shall follow the PA DEP Storage Tank and Spill Prevention Act, Corrective Action Regulations format. For the purposes of solicitation this service does NOT include remediation or follow-up investigation.

   Suppliers and Subcontractor(s), if any, must possess and maintain, as per services needed, AMR, AMMX, and AMNX certification issued by the PA DEP for any services performed pertaining to AST systems removal and/or installation and modification.

If it is determined that aboveground storage tank replacement services are necessary, and services are approved by PennDOT, the awarded Supplier rates/prices must be submitted as "Cost No Mark-Up" Items. Any necessary costs for equipment, tools, materials, labor and permits for the installation of tank and appurtenances (i.e. pedestal, containment structure, and footer, etc.), can only be charged for the time used during the installation portion of the process, as these items are already included in the cost of AST system removal services (Line Items 263 through 265). ASTs, particularly ASTs that contain heated product, may be wrapped with an insulating material. During the work order scoping for an AST system removal, the vendor is responsible for determining whether any AST system components are wrapped with an insulating material. If so, the work order scope should include an asbestos inspection of the insulating material, followed by the abatement of any asbestos containing material that will be disturbed during AST system removal. Asbestos inspection and abatement work are not included in AST removal line items and should be contracted using the appropriate asbestos inspection, abatement and waste disposal line items as appropriate.

Offeror Response

2. **Underground Storage Tank (UST) System Removal.** Excavation and removal of the tank system, disposal of the tank and appurtenances, and performance of the PA DEP UST closure sampling, analysis, and documentation (i.e., PA DEP, PA L&I notifications and reporting). UST system removal line item costs are to include all required sampling and analysis costs. For the purpose of this service remediation or follow-up investigation is not included.

   Supplier and Subcontractor(s), if any, must possess and maintain, as per services needed, UMR and UMX certification issued by the PA DEP for any services performed pertaining to UST systems removal and/or installation and modification.

   If it is determined that underground storage tank replacement services are necessary, and services are approved by PennDOT, the awarded Supplier rates/prices must be submitted as "Cost No Mark-Up" Items. Any necessary costs for equipment, tools, materials, labor and permits for the installation of tank and appurtenances (i.e. pedestal, containment structure, and footer, etc.), can only be charged for the time used during the installation portion of the process, as these items are already included in the cost of UST system removal services (Line Items 266 through 270).

   Closure, closure reporting, and corrective actions shall follow the PA DEP Storage Tank and Spill Prevention Act, Corrective Action Regulations format for site characterization. Supplier shall follow the API Recommended Practice 1604: Removal and disposal of used underground storage tanks and PennDOT Publication 694/694A, the *Storage Tank Management Manual*. Confirmatory soil sampling shall be conducted in accordance with PennDOT Publication 281, the

Waste Site Evaluation Procedures Handbook, which requires the use of systematic random sampling rather than biased sampling.

Offeror Response

3. **Excavation.** Excavation Services may include but not limited to the following:

   a. Excavation of contaminated media and waste.

   b. Excavation and temporary on/off-site staging of contaminated media and waste.

   c. Excavation and selective placement (in accordance with PennDOT Publication 408, current edition) of contaminated media on-site, such that the effected work area is returned to a Level D health and safety condition.

   d. The limits of excavation for UST system removal(s) shall include only the necessary excavation required to remove the tank system(s) (tank and appurtenances) and the reinforced concrete hold-down pad. AST demolition/removals shall include the tank system (tank and appurtenances), secondary containment structure, and tank support structure (i.e. concrete pad, pedestal, footer, etc.).

   e. Supplier shall provide barricades around any open excavations that will be unoccupied for any length of time. Supplier shall also take necessary steps to prevent precipitation run-off from entering the excavation. All water entering excavation(s), due to the Supplier's inadequate securing of the excavation from run-off shall be pumped and treated at the Supplier's expense.

   f. All excavated materials deemed to be contaminated shall be segregated from uncontaminated or less contaminated debris to minimize all required off-site disposal.

      Awarded Supplier and Subcontractor(s) who will be performing excavation and grading work must be prequalified through PennDOT's Bureau of Construction in accordance with Pennsylvania Code, Title 67, Chapter 457, Prequalification of Bidders regulations for the following:

Work	**Code**	**Classification**
Earthwork	C	Roadway Excavating and Grading, or
	C1	Non-Roadway Excavating

      In order to become pre-qualified in one or both of the above areas, Supplier must first be registered as a "Business Partner" through PennDOT's ECMS system at: https://www.ecms.penndot.gov/ECMS/ . Generally the process

requires two (2) weeks to register in ECMS as a business partner and thirty (30) to forty-five (45) calendar days concurrently to apply for prequalification. Any questions concerning the PennDOT ECMS system should be directed to the ECMS help desk at (717) 783-7711. Any questions on the Business Partner Registration may be directed to (717) 783-8330.

Offeror Response

4. Soil and Groundwater Remediation.

a. Site characterization, treatability studies, and Act 2 attainment sampling in support of soil and groundwater remediation. Remediation for a regulated storage tank corrective action shall follow the PA DEP Storage Tank and Spill Prevention Act, Corrective Action Regulations format.

b. Extraction and treatment of contaminated groundwater, including construction of treatment systems.

c. Treatment of contaminated soil, including construction of soil treatment systems and earthmoving activities.

d. Supplier and Subcontractor(s), if any, must possess and maintain, as per services needed, current PA Licensed Geologist for any services performed pertaining to soil and groundwater remediation.

Offeror Response

5. Asbestos Inspection/Abatement. Asbestos building inspections and abatement for structures, such as buildings and bridges, prior to demolition or renovation. **Demolition and renovation of said structures are <u>not</u> included under the scope of this Contract.**

a. **Asbestos Inspection.** The Supplier shall perform inspections and provide reports necessary for sample collection and determination of ACM within the structure. All friable and non-friable suspected ACM shall be sampled, analyzed, and reported in order to verify the presence, or absence of asbestos. Sampling protocols and reporting format shall be consistent with 40 CFR § 763, Subpart E (AHERA) for building inspections. In addition, all reports shall include copies of sample analysis. Report preparation may be performed and billed under labor classification line items; not asbestos inspection line items.

Supplier and Subcontractor(s), if any, must possess and maintain, as per services needed, current PA L&I Certified Asbestos Building Inspector certification/copy of photo license and NVLAP laboratory certification, for any services performed pertaining to asbestos inspection work.

i. **Up to 25 structures:** Mobilization charges shall be determined by inspector's actual travel time, based on the shortest distance to the project site, times the hourly rate (Line Item 258, Asbestos Facility Inspection). The awarded Supplier shall be allowed or paid per diem expenses for asbestos survey work assignments that involve less than twenty-five (25) structures (Line Item 258, Asbestos Facility Inspection).

ii. **Greater than 25 structures:** Mobilization charges and per diem expenses shall be in accordance with Cost No Mark-Up Items (Subsistence, Lodging, Travel, Mileage, and Cost No Mark-Up Items services and equipment).

Offeror Response

b. **Asbestos Abatement.** Asbestos abatement services shall include all necessary equipment, labor, materials, incidentals, notifications, documentation, and certification fees for the abatement of ACM/PACM within the structure. All asbestos abatement will be in accordance with all applicable federal, state and local laws and regulations. The cost to have inspectors receive and maintain any Supplier safety and/or training necessary to access rail lines, etc. shall be incidental to the Contract and borne by the Supplier at no cost to PennDOT. At least one (1) PA L&I certified Supervisor shall be on-site and act as the OSHA competent person at all times. Asbestos abatement shall be performed so as not to cause asbestos contamination in adjacent areas. PCM clearance air testing shall be performed in work areas. Onsite asbestos air clearance sampling shall be performed by a NIOSH 582 certified asbestos analyst. PCM clearance criteria is <0.01 f/cc (fibers/cubic centimeter).

Supplier and Subcontractor(s), if any, must possess and maintain, as per services needed, the following current PA L&I certifications/copy of photo licenses for any services performed pertaining to asbestos abatement work:

- Supplier/Contractor
- Supervisor
- Worker
- Project Designer
- Management Planner

Upon completion of asbestos abatement projects that will be followed by structure re-occupancy, the Supplier shall provide written certification to PennDOT that a post-abatement visual inspection has been performed, and no asbestos-containing dust, debris, or residue remains in the structure.

Offeror Response

6. **Lead-Based Paint Inspection.** Lead-based paint inspection for structures such as bridges, prior to demolition or renovation. **Lead-based paint abatement and the demolition and renovation of bridges are <u>not</u> included under the scope of this Contract.**

   Lead-based paint inspections shall include the analysis of paint chip samples for total lead, cadmium, chromium, and arsenic. Lead-based paint inspectors shall possess current Lead-Based Paint Inspector-Technician or Risk Assessor certification with the PA L&I, and inspection reports shall provide a photocopy of the inspector's certificate.

   PennDOT may require additional specifications from the awarded Supplier as part of the work proposal for an individual project.

Offeror Response

7. **Waste Survey.** Inspection of properties or structures for the purpose of identifying substances of potential environmental concern. Common examples are bridge paint sampling for lead prior to bridge replacement and waste inspections of properties to be taken for right-of-way expansion for a transportation development project. Waste surveys are often performed in combination with an asbestos inspection. Waste surveys shall only be performed by individuals who are compliant with the training requirements (initial and annual refresher) of 29 CFR § 1910.120, the Hazardous Waste Operations and Emergency Response (HAZWOPER) Standard.

Offeror Response

8. **Laboratory Sampling and Analysis.** Sample collection of Level 1 data consisting of sample analysis results, including method detection limits, appropriate QA/QC results, and chain of custody forms. Lab analysis line items shall include the disposal of unused portions of sample(s). All laboratory analysis shall be in accordance with PA DEP guidance and regulations, as applicable under the Storage Tank and Spill Prevention Act and the Land Recycling and Environmental Remediation Standards Act (Act 2). For dissolved metals analysis, sample filtration shall be performed in the field. Lab analysis results for each item shall be reported only for the compounds on the PA DEP Short List. As a reference, the most recent PA DEP Short List of Petroleum Products is attached to this RFP as **Appendix C – Short List of Petroleum Products.**

   Sampling and analysis shall be performed by the Supplier to sufficiently characterize and properly classify the material, and shall be performed only to the degree necessary to identify the waste to be disposed of. Waste capable of identification through process knowledge shall be used in lieu of testing when applicable. All laboratories used for the Contract, except for asbestos and physical parameters analysis, must have accreditation required by PA DEP for drinking water analysis and, if applicable, for environmental sampling analysis.

All laboratories used during the Contract should reference the PA DEP Short List of Petroleum Products for specifications for the analytical method to be used for each petroleum product constituent on the "Short List." A copy of the most recent "Short List" is attached to this RFP as **Appendix C – Short List of Petroleum Products**.

Lab analysis results for each item shall be reported only for the compounds on the PA DEP Short List as per PennDOT's request on a case-by-case basis.

Supplier and Subcontractor(s), if any, must possess and maintain, as per services needed, the following current PA DEP documents for any services performed pertaining to laboratory analysis work:

- Environmental laboratory registration
- Drinking water certification, encompassing the following suites of compounds: SVOCs, VOCs, Metals, PCBs, Pesticides/Herbicides and Microbiology.

If the cost of an analysis has increased due to a required regulatory or policy change in testing methodology, the Supplier must provide documentation providing proof that the sample analysis costs have increased and will affect the Supplier's cost of doing business. The documentation shall be provided to the PA DGS Commodity Specialist forty-five (45) days prior to the effective date of the proposed rate change for approval.

Normal Turn-around-Time for sample analysis and reporting shall be defined as ten (10) to fifteen (15) calendar days from the day the sample is delivered to the laboratory.

Expedited Laboratory Analysis Premium (Turn-around-Time) for sample analysis and reporting shall be defined as twenty-four (24) hours to forty-eight (48) hours, or one (1) week from the day the sample is delivered to the laboratory.

Offeror Response

Lab analysis shall include, but not limited to:

a. Soil/Sediment/Debris.

i. **Short List Volatile Organic Compounds (VOCs) – Soil**: Volatile Organic Compounds (VOCs), Parameters to be Tested in Soil, as specified in PA DEP's Short List of Petroleum Products, presently consisting of Benzene, Toluene, Ethyl Benzene, Xylenes (total), Cumene (Isopropylbenzene), Naphthalene, Trimethylbenzene, 1,2,4-, Trimethylbenzene, 1,3,5-, Dichloroethane, 1,2- (EDC), Dibromoethane, 1,2- (EDB), and Methyl tert-butyl ether (MTBE). The line item for Short List VOC's, soil will include

any future additions by PA DEP to the VOC Short List for soil. If analysis for the additional VOC's will directly result in additional costs charged by the laboratory, then the Supplier must provide documentation providing proof that the sample analysis costs have increased and will affect the Supplier's cost of doing business. The documentation shall be provided to the PA DGS Commodity Specialist forty-five (45) days prior to the effective date of the proposed rate change for approval.

ii. **Short List Semi Volatile Organic Compounds (SVOCs) – Soil**: Semi Volatile Organic Compounds (SVOC's), Parameters to be Tested in Soil, found in PA DEP's Short List of Petroleum Products, presently consisting of Fluorene, Anthracene, Phenanthrene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene and Benzo(g,h,i)perylene. The line item for Short List SVOC's, soil will include any future additions by PA DEP to the SVOC Short List for soil. If analysis for the additional SVOC's will directly result in additional costs charged by the laboratory, then the Supplier must provide documentation providing proof that the sample analysis costs have increased and will affect the Supplier's cost of doing business. The documentation shall be provided to the PA DGS Commodity Specialist forty-five (45) days prior to the effective date of the proposed rate change for approval.

Offeror Response

b. Liquids.

i. **Short List Volatile Organic Compounds (VOCs) – Liquids**: Volatile Organic Compounds (VOCs), Parameters to be Tested in Water, as specified in PA DEP's Short List of Petroleum Products, presently consisting of Benzene, Toluene, Ethyl Benzene, Xylenes (total), Cumene (Isopropylbenzene), Naphthalene, Trimethylbenzene, 1,2,4-, Trimethylbenzene, 1,3,5-, Dichloroethane, 1,2- (EDC), and Methyl tert-butyl ether (MTBE). Dibromoethane, 1,2- (EDB) in water requires a different analytical method than other Short List VOC's in water, and is therefore addressed under a different line item. The line item for Short List VOC's, liquids will include any future additions by PA DEP to the VOC Short List for water. If analysis for the additional VOC's will directly result in additional costs charged by the laboratory, then the Supplier must provide documentation providing proof that the sample analysis costs have increased and will affect the Supplier's cost of doing business. The documentation shall be provided to the PA DGS Commodity Specialist forty-five (45) days prior to the effective date of the proposed rate change for approval.

ii. **Short List Semi Volatile Organic Compounds (SVOCs) – Liquids:** Semi Volatile Organic Compounds (SVOC's), Parameters to be Tested in Water,

found in PA DEP's Short List of Petroleum Products, presently consisting of Fluorene, Anthracene, Phenanthrene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-c,d) pyrene, and Benzo(g,h,i)perylene. The line item for Short List SVOC's, liquids will include any future additions by PA DEP to the SVOC Short List for water. If analysis for the additional SVOC's will directly result in additional costs charged by the laboratory, then the Supplier must provide documentation providing proof that the sample analysis costs have increased and will affect the Supplier's cost of doing business. The documentation shall be provided to the PA DGS Commodity Specialist forty-five (45) days prior to the effective date of the proposed rate change for approval.

Offeror Response

c. Air. Includes airborne asbestos testing as specified below, work site air emissions testing, and soil gas sample analysis**.**

Asbestos. Supplier and Subcontractor(s), if any, must possess and maintain, as per services needed, current NVLAP laboratory certification, for any services performed pertaining to asbestos related laboratory analysis work in the following manner:

Laboratories performing asbestos or airborne fiber analysis under this Contract shall adhere to NIST standards in the following manner:

i. PCM (air) – Proficiency Analytical Testing Program with Proficient status
NIST Handbook 150-13:2006

ii. TEM (air) – NVLAP
NIST Handbook 150-13:2006

iii. PLM (bulk) – NVLAP
NIST Handbook 150-3:2006

Offeror Response

9. Waste Disposal Services. Temporary (on-site) storage, containers, loading, transportation, preparation of waste disposal documents, and off-site disposal of hazardous and non-hazardous wastes at a properly permitted facility. Services may include waste identification (characterization), excavation, containment and selective placement (in accordance with PennDOT Publication 408, current edition) of contaminated media on-site, such that the effected work area is returned to a Level D health and safety condition.

The awarded Supplier shall prepare and provide a completed copy of the Pennsylvania Hazardous Waste Manifest and Land Ban Notification for hazardous

wastes and all applicable documents required for non-hazardous wastes (e.g. PA DEP Forms "U" and "FC-1"). Waste disposal cannot be performed until the applicable signed forms have been submitted to the proper regulatory agencies. For residual and municipal waste disposal, Supplier may sign Bills of Lading, but PennDOT will sign PA DEP Form 26R and Form U for submission to PA DEP, as applicable. For hazardous waste manifests, PennDOT will sign as the Generator, and Supplier will sign as the Offeror, as required by state and federal regulations.

PennDOT must receive, within ten (10) calendar days after disposal, detailed and legible uniform manifests (hazardous waste) or bills of lading (non-hazardous waste), as appropriate, that have been prepared, signed, and dated by an authorized person of the disposal/treatment facility certifying receipt of (and quantifying) the types of wastes to be disposed.

All waste transporters used under the Contract must provide, upon request, copies of valid permits appropriate for transportation for the types of wastes to be disposed.

All waste testing and analysis required by Federal and State laws for the proper disposal of wastes, shall be the responsibility of the Supplier, and shall be included in the unit costs for waste disposal.

All contaminated soil must be properly stored while awaiting sample analysis results. Drummed media, including site investigation derived waste, must be properly labeled and stored. Supplier must remove from the site, all contaminated soil requiring off-site treatment or disposal within fifteen (15) calendar days of receipt of sample analysis results.

Offeror Response

10. **Health and Safety.** The Supplier and Subcontractor's applicable personnel must have the appropriate Health and Safety training and medical monitoring, as specified by the following OSHA regulations:

    a. 29 CFR § 1910.120 (Hazardous Waste Operations & Emergency Response)
    b. 29 CFR § 1926.1101 (Asbestos Abatement)

    The Supplier shall prepare, maintain, and implement project-specific Health & Safety Plans (HASP), which shall comply with the appropriate OSHA regulations. The HASP shall include, at a minimum, personnel protection equipment, worker training and medical surveillance requirements, air and personnel monitoring, site control measures, decontamination procedures, confined space procedures (if applicable), emergency response plan, and hazard communication plan. The supplier may utilize their company/corporate health and safety Program as a base plan with site-specific addenda.

The Supplier shall provide a copy of the site-specific health and safety plan upon request by PennDOT. The development of the Supplier's site-specific health and safety plan is considered incidental to the work and shall be provided at no extra cost.

All personnel shall adhere to OSHA Standard 1910.120, App B, General Description and Discussion of the Levels of Protection and Protective Equipment.

The Supplier will not be reimbursed for any personal protective clothing and equipment required for performing work under this Contract.

Offeror Response

11. **Mobilization and Response Times.** The awarded Supplier must be prepared to provide the services of this Contract twenty-four (24) hours per day, seven (7) days per week, including holidays. An eight (8) hour day includes normal work breaks, but does not include lunch.

    PennDOT will contact the awarded Supplier to request new services. All known information of the situation will be provided to the Supplier. Upon notification by PennDOT, or within two (2) hours after arrival at the site, the awarded Supplier must accept the assignment, unless the Supplier can demonstrate that they do not have the necessary personnel or equipment to adequately respond, or complete the proposed work. Refusal of two (2) consecutive services or consistent failure to respond within the allowable time frames (non-emergency or rapid responses) may, at the discretion of PA DGS, place the Supplier in default and cancel the contract. Consistent failure shall be defined as "not responding within the allowed response time on two occasions."

    There are two different types of response times within the scope of services under this Contract: Normal Response (non-emergency) and Rapid Response (emergency). **All services shall be deemed Normal Response unless otherwise indicated.** If the services required are deemed Rapid Response, the Supplier shall respond in accordance with the Rapid Response guidelines listed herein. In the past, approximately sixty percent (60%) of purchase orders were for Rapid Response.

Offeror Response

i. **Normal Response.** The Supplier must report to the site to conduct a preliminary assessment of the situation within seventy-two (72) hours of notification or as otherwise directed by the PennDOT designated representative.

    a. **Technical Proposal & Cost Estimate.** After the preliminary assessment, the Supplier must prepare a Technical Proposal and Cost Estimate. Development of the proposal & estimate will often require PennDOT to

provide the Supplier with state and federal prevailing wage data beforehand and such rates shall be included in any resulting purchase orders.

b. The Technical Proposal and Cost Estimate shall include:

i. All labor, equipment, materials, incidentals, and disposal/treatment cost required to address the identified problem and return the site to an accepted health and safety condition, as per 1910.120, App B, General Description and Discussion of the Levels of Protection and Protective Equipment;

ii. A description of the work to be completed, by task.

iii. A site-specific health and safety plan;

iv. The total estimated costs to complete the work, in accordance with the awarded line item prices; and

v. A project schedule.

c. For projects involving highway construction, the Supplier must prepare a work schedule, which must indicate the areas within the construction project limits that will be affected by the Supplier's testing, monitoring, or remediation of waste(s), and the estimated dates and duration of the required activities, in order to determine the effect upon the construction work schedule.

d. Upon receipt and evaluation of the Technical Proposal and Cost Estimate, PennDOT will issue a Purchase Order based upon the proposal & estimate for the requested services. The Purchase Order shall be the Supplier's "notice to proceed" for services.

e. For all Normal Responses, unless otherwise directed by PennDOT, Supplier will coordinate field activities with the facility or project manager at least forty-eight (48) hours before the start of field activities.

f. Following completion of the work, the Supplier submits an invoice to the Comptroller and simultaneously submits a Confirmation of Services Form (COSF), [which shall be an agreed upon format to be determined upon contract award], as well as any supporting documentation, to the agency purchaser in order to make any adjustments to the Purchase Order items and/or quantities and initiate payment.

The awarded Supplier shall be allowed paid travel and/or per diem expenses for Normal Reponses as applicable per Commonwealth Management Directive 230.10.

Offeror Response

ii. **Rapid Response.** The Supplier must initiate mobilization to the work site within two (2) hours or as otherwise directed by the PennDOT designated representative upon notification of the need for a "rapid response." "Mobilize to the work site within two (2) hours" means the Supplier must be en route to the site with personnel, materials, and/or equipment necessary to conduct any adequate response determined by the PennDOT designated representative. The Supplier must arrive at the site within five (5) hours or as otherwise directed by the PennDOT designated representative of the initial notification.

a. There is no preliminary assessment and/or Technical Proposal & Cost Estimate to be submitted with rapid response projects.

b. The Supplier cannot proceed with mobilization until a Purchase Order marked *"Draft Copy – Not For Issue"* is received by the Supplier, which shall serve as the "Notice to Proceed".

c. Under extenuating circumstances, such as an emergency response occurring on a weekend and/or in cases where a draft purchase order cannot be created, a verbal notice to proceed will be permitted. Agency user must create the *"Draft Copy – Not For Issue*" of the purchase order within forty-eight (48) hours after verbal notice.

d. The PennDOT designated representative will determine and notify the Supplier's on-site representative, if the rapid response situation is warranted beyond the initial 5-hour period. When the PennDOT designated representative determines a rapid response situation no longer exists, Supplier shall cease all work. If it is determined that additional work of a non-emergency nature is required, "Technical Proposal and Cost Estimate" development procedures for a Normal Response must be followed.

e. For projects involving highway construction, the Supplier shall prepare a work schedule, which shall indicate the areas within the construction project limits that will be affected by the Supplier's testing, monitoring, or remediation of waste(s), and the estimated dates and duration of the required activities, in order to determine the effect on the construction work schedule.

f. Following completion of the work, the Supplier will submit a Confirmation of Services Form, as well as any supporting documentation to the agency purchaser for review.

g. Upon verification of the Confirmation of Services Form, the agency purchaser will complete the draft copy of the purchase order. After the

purchase order is fully executed, the Supplier will submit an invoice to Comptroller. The Supplier will be compensated at the Rapid Response "emergency" labor rate(s). The Supplier will be compensated for all non-labor items at the applicable established contract price**. The awarded Supplier shall be allowed paid travel and/or per diem expenses for Rapid Responses as applicable per Commonwealth Management Directive 230.10.**

h. Rapid Response POs have a limited life cycle of forty-five (45) calendar days from the response date in which all work shall be completed. If during this forty-five (45) calendar day life cycle it is determined that work covered for this rapid response will exceed forty-five (45) calendar days the supplier shall notify the Material Services Management Division Chief or designee for approval to extend the PO.

i. Additional Work outside the Scope of the previous Rapid Response PO, not receiving approval to exceed the forty-five (45) calendar day life cycle shall follow the requirements of a Normal Response PO.

Offeror Response

I-7. Monthly Status Reports. The Offeror/awarded Supplier will furnish an electronic report no later than the fifteenth (15th) calendar day after the end of each month. The awarded Supplier shall e-mail the reports to Commonwealth individual(s) to be determined upon Contract award. On each report, Supplier must include the below project status information for each month covered by the report:

- Purchase Order Number
- Supplier's project number (if applicable)
- County in which work is being performed
- Project Name
- Project Type
- PennDOT District (see **Appendix B – Regional District Map**)
- Confirmation of Services Form (COSF) Recipient individual(s) within PennDOT who should receive copie(s) of COSF's.
- Original Work Order Amount
- Total Amount Contracted
- Number of Invoices to Date
- Amount Invoiced to Date
- Percentage of Work Complete
- Bond Number
- Project Validity Start Date
- Project Validity End Date
- Comments

Offeror Response

I-8. Objections and Additions to Standard Contract Terms and Conditions. The Offeror will identify which, if any, of the terms and conditions contained in the **Buyer Attachments** section that it would like to negotiate and what additional terms and conditions the Offeror would like to add to the standard contract terms and conditions. The Offeror's failure to make a submission under this paragraph will result in its waiving its right to do so later, but the Issuing Office may consider late objections and requests for additions if to do so, in the Issuing Office's sole discretion, would be in the best interest of the Commonwealth. The Issuing Office may, in its sole discretion, accept or reject any requested changes to the standard contract terms and conditions. The Offeror shall not request changes to the other provisions of the RFP, nor shall the Offeror request to completely substitute its own terms and conditions for this RFP. All terms and conditions must appear in one integrated contract. The Issuing Office will not accept references to the Offeror's, or any other, online guides or online terms and conditions contained in any proposal.

Regardless of any objections set out in its proposal, the Offeror must submit its proposal, including the cost proposal, on the basis of the terms and conditions set out in the **Terms and Conditions** contained in the **Buyer Attachment** section. The Issuing Office will reject any proposal that is conditioned on the negotiation of the terms and conditions set out in the **Terms and Conditions** contained in the **Buyer Attachment** section or to other provisions of the RFP.

Offeror Response

EXHIBIT E

Environmental Remediation Services 6100052061

TERMS & CONDITIONS

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PART V - CONTRACT TERMS and CONDITIONS

V.1 CONTRACT-001.1a Contract Terms and Conditions (Nov 30 2006)

The Contract with the selected offeror (who shall become the "Contractor") shall include the following terms and conditions:

V.2 CONTRACT-002.1d Term of Contract – Contract (May 2012)

The initial term of the Contract shall be 03 year(s) and 00 month(s).

The term of the Contract shall commence on the Effective Date (as defined below) and shall end on the Expiration Date identified in the Contract, subject to the other provisions of the Contract.

The Effective Date shall be: a) the Effective Date printed on the Contract after the Contract has been fully executed by the Contractor and the Commonwealth (signed and approved as required by Commonwealth contracting procedures) or b) the "Valid from" date printed on the Contract, whichever is later.

V.3 CONTRACT-002.2d Renewal of Contract Term; Adjusted Prices - Fixed Percentage (Oct 2013)

The Contract may be renewed for a maximum of 2 additional 1 year term(s), so long as Commonwealth provides written notice to Contractor of its intention to extend the Contract by letter prior to the expiration of the term of the agreement, or any extension thereof. The Commonwealth may exercise the renewal as individual year or multiple year term(s). Any renewal will be under the same terms, covenants and conditions, provided, however, that the rates under the contract may be increased up to 4.00% during each renewal term. No further document is required to be executed to renew the term of the contract.

V.4 CONTRACT-002.3 Extension of Contract Term (Nov 30 2006)

The Commonwealth reserves the right, upon notice to the Contractor, to extend any single term of the Contract for up to three (3) months upon the same terms and conditions.

V.5 CONTRACT-003.1b Signatures – Contract (July 2015)

The Contract shall not be a legally binding contract until the fully-executed Contract has been sent to the Contractor. No Commonwealth employee has the authority to verbally direct the commencement of any work or delivery of any supply under this Contract prior to the Effective Date. The Contractor hereby waives any claim or cause of action for any service or work performed prior to the Effective Date.

The Contract may be signed in counterparts. The Contractor shall sign the Contract and return it to the Commonwealth. After the Contract is signed by the Contractor and returned to the Commonwealth, it will be processed for Commonwealth signatures and approvals. When the Contract has been signed and approved by the Commonwealth as required by Commonwealth contracting procedures, the Commonwealth shall create a Contract output form which shall: 1) clearly indicate "Fully executed" at the top of the form; 2) include a printed Effective Date and 3) include the printed name of the Purchasing Agent indicating that the document has been electronically signed and approved by the Commonwealth. Until the Contractor receives the Contract output form with this information on the Contract output form, there is no legally binding contract between the parties.

The fully-executed Contract may be sent to the Contractor electronically or through facsimile equipment. The electronic transmission of the Contract shall require acknowledgement of receipt of the transmission by the Contractor. Receipt of the electronic or facsimile transmission of the Contract shall constitute receipt of the fully-executed Contract.

The Commonwealth and the Contractor specifically agree as follows:

a. No handwritten signature shall be required in order for the Contract to be legally enforceable.

b. The parties agree that no writing shall be required in order to make the Contract legally binding, notwithstanding contrary requirements in any law. The parties hereby agree not to contest the validity or enforceability of a genuine Contract or acknowledgement issued electronically under the provisions of a statute of frauds or any other applicable law relating to whether certain agreements be in writing and signed by the party bound thereby. Any genuine Contract or acknowledgement issued electronically, if introduced as evidence on paper in any judicial, arbitration, mediation, or administrative proceedings, will be admissible as between the parties to the same extent and under the same conditions as other business records originated and maintained in documentary form. Neither party shall contest the admissibility of copies of a genuine Contract or acknowledgements under either the business records exception to the hearsay rule or the best evidence rule on the basis that the Contract or acknowledgement were not in writing or signed by the parties. A Contract or acknowledgment shall be deemed to be genuine for all purposes if it is transmitted to the location designated for such documents.

c. Each party will immediately take steps to verify any document that appears to be obviously garbled in transmission or improperly formatted to include re-transmission of any such document if necessary.

V.6 CONTRACT-004.1a Definitions (Oct 2013)

As used in this Contract, these words shall have the following meanings:

a. Agency: The department, board, commission or other agency of the Commonwealth of Pennsylvania listed as the Purchasing Agency. If a COSTARS entity or external procurement activity has issued an order against this contract, that entity shall also be identified as "Agency".

b. Contracting Officer: The person authorized to administer this Contract for the Commonwealth and to make written determinations with respect to the Contract.

c. Days: Unless specifically indicated otherwise, days mean calendar days.

d. Developed Works or Developed Materials: All documents, sketches, drawings, designs, works, papers, files, reports, computer programs, computer documentation, data, records, software, samples or any other tangible material without limitation authored or prepared by Contractor as the work product covered in the scope of work for the Project.

e. Documentation: All materials required to support and convey information about the services required by this Contract. It includes, but is not necessarily restricted to, written reports and analyses, diagrams, maps, logical and physical designs, system designs, computer programs, flow charts, disks, and/or other machine-readable storage media.

f. Services: All Contractor activity necessary to satisfy the Contract.

V.7 CONTRACT-005.1d Purchase Orders (July 2015)

Commonwealth agencies may issue Purchase Orders against the Contract. These orders constitute the Contractor's authority to make delivery. All Purchase Orders received by the Contractor up to and including the expiration date of the Contract are acceptable and must be performed in accordance with the Contract. Each Purchase Order will be deemed to incorporate the terms and conditions set forth in the Contract.

Purchase Orders may be electronically signed by the Agency. The electronically-printed name of the purchaser represents the signature of that individual who has the authority, on behalf of the Commonwealth, to authorize the Contractor to proceed.

Purchase Orders may be issued electronically or through facsimile equipment. The electronic transmission of a purchase order shall require acknowledgement of receipt of the transmission by the Contractor. Receipt of the electronic or facsimile transmission of the Purchase Order shall constitute receipt of an order. Orders received by the Contractor after 4:00 p.m. will be considered received the following business day.

a. No handwritten signature shall be required in order for the Contract or Purchase Order to be legally enforceable.

b. The parties agree that no writing shall be required in order to make the Purchase Order legally binding. The parties hereby agree not to contest the validity or enforceability of a Purchase Order or acknowledgement issued electronically under the provisions of a statute of frauds or any other applicable law relating to whether certain agreements be in writing and signed by the party bound thereby. Any Purchase Order or acknowledgement issued electronically, if introduced as evidence on paper in any judicial, arbitration, mediation, or administrative proceedings, will be admissible as between the parties to the same extent and under the same conditions as other business records originated and maintained in documentary form. Neither party shall contest the admissibility of copies of Purchase Orders or acknowledgements under either the business records exception to the hearsay rule or the best evidence rule on the basis that the Purchase Order or acknowledgement were not in writing or signed by the parties. A Purchase Order or acknowledgment shall be deemed to be genuine for all purposes if it is transmitted to the location designated for such documents.

c. Each party will immediately take steps to verify any document that appears to be obviously garbled in transmission or improperly formatted to include re-transmission of any such document if necessary.

Purchase Orders under ten thousand dollars ($10,000) in total amount may also be made in person or by telephone using a Commonwealth Purchasing Card. When an order is placed by telephone, the Commonwealth agency shall provide the agency name, employee name, credit card number, and expiration date of the card. Contractors agree to accept payment through the use of the Commonwealth Purchasing Card.

V.8 CONTRACT-006.1 Independent Prime Contractor (Oct 2006)

In performing its obligations under the Contract, the Contractor will act as an independent contractor and not as an employee or agent of the Commonwealth. The Contractor will be responsible for all services in this Contract whether or not Contractor provides them directly. Further, the Contractor is the sole point of contact with regard to all contractual matters, including payment of any and all charges resulting from the Contract.

V.9 CONTRACT-007.01b Delivery of Services (Nov 30 2006)

The Contractor shall proceed with all due diligence in the performance of the services with qualified personnel, in accordance with the completion criteria set forth in the Contract.

V.10 CONTRACT-007.02 Estimated Quantities (Nov 30 2006)

It shall be understood and agreed that any quantities listed in the Contract are estimated only and may be increased or decreased in accordance with the actual requirements of the Commonwealth and that the Commonwealth in accepting any bid or portion thereof, contracts only and agrees to purchase only the materials and services in such quantities as represent the actual requirements of the Commonwealth. The Commonwealth reserves the right to purchase materials and services covered under the Contract through a separate competitive procurement procedure, whenever Commonwealth deems it to be in its best interest.

V.11 CONTRACT-008.1a Warranty (Oct 2006)

The Contractor warrants that all items furnished and all services performed by the Contractor, its agents and subcontractors shall be free and clear of any defects in workmanship or materials. Unless otherwise stated in the Contract, all items are warranted for a period of one year following delivery by the Contractor and acceptance by the Commonwealth. The Contractor shall repair, replace or otherwise correct any problem with the delivered item. When an item is replaced, it shall be replaced with an item of equivalent or superior quality without any additional cost to the Commonwealth.

V.12 CONTRACT-009.1c Patent, Copyright, and Trademark Indemnity (Oct 2013)

The Contractor warrants that it is the sole owner or author of, or has entered into a suitable legal agreement concerning either: a) the design of any product or process provided or used in the performance of the Contract which is covered by a patent, copyright, or trademark registration or other right duly authorized by state or federal law or

b) any copyrighted matter in any report, document or other material provided to the Commonwealth under the contract.

The Contractor shall defend any suit or proceeding brought against the Commonwealth on account of any alleged patent, copyright or trademark infringement in the United States of any of the products provided or used in the performance of the Contract.

This is upon condition that the Commonwealth shall provide prompt notification in writing of such suit or proceeding; full right, authorization and opportunity to conduct the defense thereof; and full information and all reasonable cooperation for the defense of same.

As principles of governmental or public law are involved, the Commonwealth may participate in or choose to conduct, in its sole discretion, the defense of any such action.

If information and assistance are furnished by the Commonwealth at the Contractor's written request, it shall be at the Contractor's expense, but the responsibility for such expense shall be only that within the Contractor's written authorization.

The Contractor shall indemnify and hold the Commonwealth harmless from all damages, costs, and expenses, including attorney's fees that the Contractor or the Commonwealth may pay or incur by reason of any infringement or violation of the rights occurring to any holder of copyright, trademark, or patent interests and rights in any products provided or used in the performance of the Contract.

If any of the products provided by the Contractor in such suit or proceeding are held to constitute infringement and the use is enjoined, the Contractor shall, at its own expense and at its option, either procure the right to continue use of such infringement products, replace them with non-infringement equal performance products or modify them so that they are no longer infringing.

If the Contractor is unable to do any of the preceding, the Contractor agrees to remove all the equipment or software which are obtained contemporaneously with the infringing product, or, at the option of the Commonwealth, only those items of equipment or software which are held to be infringing, and to pay the Commonwealth: 1) any amounts paid by the Commonwealth towards the purchase of the product, less straight line depreciation; 2) any license fee paid by the Commonwealth for the use of any software, less an amount for the period of usage; and 3) the pro rata portion of any maintenance fee representing the time remaining in any period of maintenance paid for. The obligations of the

Contractor under this paragraph continue without time limit. No costs or expenses shall be incurred for the account of the Contractor without its written consent.

V.13 CONTRACT-009.1d Ownership Rights (Oct 2006)

The Commonwealth shall have unrestricted authority to reproduce, distribute, and use any submitted report, data, or material, and any software or modifications and any associated documentation that is designed or developed and delivered to the Commonwealth as part of the performance of the Contract.

V.14 CONTRACT-010.1a Acceptance (Oct 2006)

No item(s) received by the Commonwealth shall be deemed accepted until the Commonwealth has had a reasonable opportunity to inspect the item(s). Any item(s) which is discovered to be defective or fails to conform to the specifications may be rejected upon initial inspection or at any later time if the defects contained in the item(s) or the noncompliance with the specifications were not reasonably ascertainable upon the initial inspection. It shall thereupon become the duty of the Contractor to remove rejected item(s) from the premises without expense to the Commonwealth within fifteen (15) days after notification. Rejected item(s) left longer than fifteen (15) days will be regarded as abandoned, and the Commonwealth shall have the right to dispose of them as its own property and shall retain that portion of the proceeds of any sale which represents the Commonwealth's costs and expenses in regard to the storage and sale of the item(s). Upon notice of rejection, the Contractor shall immediately replace all such rejected item(s) with others conforming to the specifications and which are not defective. If the Contractor fails, neglects or refuses to do so, the Commonwealth shall then have the right to procure a corresponding quantity of such item(s), and deduct from any monies due or that may thereafter become due to the Contractor, the difference between the price stated in the Contract and the cost thereof to the Commonwealth.

V.15 CONTRACT-011.1a Compliance With Law (Oct 2006)

The Contractor shall comply with all applicable federal and state laws and regulations and local ordinances in the performance of the Contract.

V.16 CONTRACT-013.1 Environmental Provisions (Oct 2006)

In the performance of the Contract, the Contractor shall minimize pollution and shall strictly comply with all applicable environmental laws and regulations, including, but not limited to: the Clean Streams Law Act of June 22, 1937 (P.L. 1987, No. 394), as amended 35 P.S. Section 691.601 et seq.; the Pennsylvania Solid Waste

Management Act, Act of July 7, 1980 (P.L. 380, No. 97), as amended, 35 P.S. Section 6018.101 et seq.; and the Dam Safety and Encroachment Act, Act of November 26, 1978 (P.L. 1375, No. 325), as amended, 32 P.S. Section 693.1.

V.17 CONTRACT-014.1 Post-Consumer Recycled Content (June 2016)

Except as specifically waived by the Department of General Services in writing, any products which are provided to the Commonwealth as a part of the performance of the Contract must meet the minimum percentage levels for total recycled content as specified by the Environmental Protection Agency in its Comprehensive Procurement Guidelines, which can be found at https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program.

V.18 CONTRACT-014.3 Recycled Content Enforcement (Feb 2009)

The Contractor may be required, after delivery of the Contract item(s), to provide the Commonwealth with documentary evidence that the item(s) was in fact produced with the required minimum percentage of post-consumer and recovered material content.

V.19 CONTRACT-015.1A Compensation/Expenses (May 2008)

The Contractor shall be required to perform the specified services at the price(s) quoted in the Contract. All services shall be performed within the time period(s) specified in the Contract. The Contractor shall be compensated only for work performed to the satisfaction of the Commonwealth. The Contractor shall not be allowed or paid travel or per diem expenses except as specifically set forth in the Contract.

V.20 CONTRACT-015.2 Billing Requirements (February 2012)

Unless the Contractor has been authorized by the Commonwealth for Evaluated Receipt Settlement or Vendor Self-Invoicing , the Contractor shall include in all of its invoices the following minimum information:

- Vendor name and "Remit to" address, including SAP Vendor number;
- Bank routing information, if ACH;
- SAP Purchase Order number;
- Delivery Address, including name of Commonwealth agency;
- Description of the supplies/services delivered in accordance with SAP Purchase Order (include purchase order line number if possible);
- Quantity provided;
- Unit price;
- Price extension;
- Total price; and
- Delivery date of supplies or services.

If an invoice does not contain the minimum information set forth in this paragraph, the Commonwealth may return the invoice as improper. If the Commonwealth returns an invoice as improper, the time for processing a payment will be suspended until the Commonwealth receives a correct invoice. The Contractor may not receive payment until the Commonwealth has received a correct invoice.

Contractors are required to establish separate billing accounts with each using agency and invoice them directly. Each invoice shall be itemized with adequate detail and match the line item on the Purchase Order. In no instance shall any payment be made for services to the Contractor that are not in accordance with the prices on the Purchase Order, the Contract, updated price lists or any discounts negotiated by the purchasing agency.

V.21 CONTRACT-015.5 Price Adjustment - Maximum Percentage (Nov 30 2006)

The Contractor may increase the rates to be paid by the Commonwealth under the contract by no more than 4.00 % on a/an AT RENEWAL basis. The Contractor shall give at least 000 days prior notice of a price increase.

V.22 CONTRACT-016.1 Payment (Oct 2006)

a. The Commonwealth shall put forth reasonable efforts to make payment by the required payment date. The required payment date is: (a) the date on which payment is due under the terms of the Contract; (b) thirty (30) days after a proper invoice actually is received at the "Bill To" address if a date on which payment is due is not specified in the Contract (a "proper" invoice is not received until the Commonwealth accepts the service as satisfactorily performed); or (c) the payment date specified on the invoice if later than the dates established by (a) and (b) above. Payment may be delayed if the payment amount on an invoice is not based upon the price(s) as stated in the Contract. If any payment is not made within fifteen (15) days after the required payment date, the Commonwealth may pay interest as determined by the Secretary of Budget in accordance with Act No. 266 of 1982 and regulations promulgated pursuant thereto. Payment should not be construed by the Contractor as acceptance of the service performed by the Contractor. The Commonwealth reserves the right to conduct further testing and inspection after payment, but within a reasonable time after performance, and to reject the service if such post payment testing or inspection discloses a defect or a failure to meet specifications. The Contractor agrees that the Commonwealth may set off the amount of any state tax liability or other obligation of the Contractor or its subsidiaries to the Commonwealth against any payments due the Contractor under any contract with the Commonwealth.

b. The Commonwealth shall have the option of using the Commonwealth purchasing card to make purchases under the Contract or Purchase Order. The Commonwealth's purchasing card is similar to a credit card in that there will be a small fee which the Contractor will be required to pay and the Contractor will receive payment directly from the card issuer rather than the Commonwealth. Any and all fees related to this type of payment are the responsibility of the Contractor. In no case will the Commonwealth allow increases in prices to offset credit card fees paid by the Contractor or any other charges incurred by the Contractor, unless specifically stated in the terms of the Contract or Purchase Order.

V.23 CONTRACT-016.2 Payment – Electronic Funds Transfer (February 2014)

a. The Commonwealth will make contract payments through the Automated Clearing House (ACH). Within 10days of award of the contract or purchase order, the contractor must submit or must have already submitted their ACH information within their user profile in the Commonwealth's procurement system (SRM).

b. The contractor must submit a unique invoice number with each invoice submitted. The unique invoice number will be listed on the Commonwealth of Pennsylvania's ACH remittance advice to enable the contractor to properly apply the state agency's payment to the invoice submitted.

c. It is the responsibility of the contractor to ensure that the ACH information contained in SRM is accurate and complete. Failure to maintain accurate and complete information may result in delays in payments.

V.24 CONTRACT-017.1 Taxes (Dec 5 2006)

The Commonwealth is exempt from all excise taxes imposed by the Internal Revenue Service and has accordingly registered with the Internal Revenue Service to make tax free purchases under Registration No. 23-23740001-K.

With the exception of purchases of the following items, no exemption certificates are required and none will be issued: undyed diesel fuel, tires, trucks, gas guzzler emergency vehicles, and sports fishing equipment. The Commonwealth is also exempt from Pennsylvania state sales tax, local sales tax, public transportation assistance taxes and fees and vehicle rental tax. The Department of Revenue regulations provide that exemption certificates are not required for sales made to governmental entities and none will be issued. Nothing in this paragraph is meant to exempt a construction contractor from the payment of any of these taxes or fees which are required to be paid with respect to the purchase, use, rental, or lease of tangible personal property or taxable services used or transferred in connection with the performance of a construction contract.

V.25 CONTRACT-018.1 Assignment of Antitrust Claims (Oct 2006)

The Contractor and the Commonwealth recognize that in actual economic practice, overcharges by the Contractor's suppliers resulting from violations of state or federal antitrust laws are in fact borne by the Commonwealth. As part of the consideration for the award of the Contract, and intending to be legally bound, the Contractor assigns to the Commonwealth all right, title and interest in and to any claims the Contractor now has, or may acquire, under state or federal antitrust laws relating to the products and services which are the subject of this Contract.

V.26 CONTRACT-019.1 Hold Harmless Provision (Nov 30 2006)

a. The Contractor shall hold the Commonwealth harmless from and indemnify the Commonwealth against any and all third party claims, demands and actions based upon or arising out of any activities performed by the Contractor and its employees and agents under this Contract, provided the Commonwealth gives Contractor prompt notice of any such claim of which it learns. Pursuant to the Commonwealth Attorneys Act (71 P.S. Section 732-101, et seq.), the Office of Attorney General (OAG) has the sole authority to represent the Commonwealth in actions brought against the Commonwealth. The OAG may, however, in its sole discretion and under such terms as it deems appropriate, delegate its right of defense. If OAG delegates the defense to the Contractor, the Commonwealth will cooperate with all reasonable requests of Contractor made in the defense of such suits.

b. Notwithstanding the above, neither party shall enter into any settlement without the other party's written consent, which shall not be unreasonably withheld. The Commonwealth may, in its sole discretion, allow the Contractor to control the defense and any related settlement negotiations.

V.27 CONTRACT-020.1 Audit Provisions (Oct 2006)

The Commonwealth shall have the right, at reasonable times and at a site designated by the Commonwealth, to audit the books, documents and records of the Contractor to the extent that the books, documents and records relate to costs or pricing data for the Contract. The Contractor agrees to maintain records which will support the prices charged and costs incurred for the Contract. The Contract shall preserve books, documents and records that relate to costs or pricing data for the Contract for a period of three (3) years from the date of final payment. The Contractor shall give full and free access to all records to the Commonwealth and/or their authorized representatives.

V.28 CONTRACT-021.1 Default (Oct 2013)

a. The Commonwealth may, subject to the Force Majeure provisions of this Contract, and in addition to its other rights under the Contract, declare the Contractor in default by written notice thereof to the Contractor, and terminate (as provided in the Termination Provisions of this Contract) the whole or any part of this Contract or any Purchase Order for any of the following reasons:

1) Failure to begin work within the time specified in the Contract or Purchase Order or as otherwise specified;

2) Failure to perform the work with sufficient labor, equipment, or material to ensure the completion of the specified work in accordance with the Contract or Purchase Order terms;

3) Unsatisfactory performance of the work;

4) Failure to deliver the awarded item(s) within the time specified in the Contract or Purchase Order or as otherwise specified;

5) Improper delivery;

6) Failure to provide an item(s) which is in conformance with the specifications referenced in the Contract or Purchase Order;

7) Delivery of a defective item;

8) Failure or refusal to remove material, or remove and replace any work rejected as defective or unsatisfactory;

9) Discontinuance of work without approval;

10) Failure to resume work, which has been discontinued, within a reasonable time after notice to do so;

11) Insolvency or bankruptcy;

12) Assignment made for the benefit of creditors;

13) Failure or refusal within 10 days after written notice by the Contracting Officer, to make payment or show cause why payment should not be made, of any amounts due for materials furnished, labor supplied or performed, for equipment rentals, or for utility services rendered;

14) Failure to protect, to repair, or to make good any damage or injury to property;

15) Breach of any provision of the Contract;

16) Failure to comply with representations made in the Contractor's bid/proposal; or

17) Failure to comply with applicable industry standards, customs, and practice.

b. In the event that the Commonwealth terminates this Contract or any Purchase Order in whole or in part as provided in Subparagraph a. above, the Commonwealth may procure, upon such terms and in such manner as it determines, items similar or identical to those so terminated, and the Contractor shall be liable to the Commonwealth for any reasonable excess costs for such similar or identical items included within the terminated part of the Contract or Purchase Order.

c. If the Contract or a Purchase Order is terminated as provided in Subparagraph a. above, the Commonwealth, in addition to any other rights provided in this paragraph, may require the Contractor to transfer title and deliver immediately to the Commonwealth in the manner and to the extent directed by the Contracting Officer, such partially completed items, including, where applicable, reports, working papers and other documentation, as the Contractor has specifically produced or specifically acquired for the performance of such part of the Contract or Purchase Order as has been terminated. Except as provided below, payment for completed work accepted by the Commonwealth shall be

at the Contract price. Except as provided below, payment for partially completed items including, where applicable, reports and working papers, delivered to and accepted by the Commonwealth shall be in an amount agreed upon by the Contractor and Contracting Officer. The Commonwealth may withhold from amounts otherwise due the Contractor for such completed or partially completed works, such sum as the Contracting Officer determines to be necessary to protect the Commonwealth against loss.

d. The rights and remedies of the Commonwealth provided in this paragraph shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Contract.

e. The Commonwealth's failure to exercise any rights or remedies provided in this paragraph shall not be construed to be a waiver by the Commonwealth of its rights and remedies in regard to the event of default or any succeeding event of default.

f. Following exhaustion of the Contractor's administrative remedies as set forth in the Contract Controversies Provision of the Contract, the Contractor's exclusive remedy shall be to seek damages in the Board of Claims.

V.29 CONTRACT-022.1 Force Majeure (Oct 2006)

Neither party will incur any liability to the other if its performance of any obligation under this Contract is prevented or delayed by causes beyond its control and without the fault or negligence of either party. Causes beyond a party's control may include, but aren't limited to, acts of God or war, changes in controlling law, regulations, orders or the requirements of any governmental entity, severe weather conditions, civil disorders, natural disasters, fire, epidemics and quarantines, general strikes throughout the trade, and freight embargoes.

The Contractor shall notify the Commonwealth orally within five (5) days and in writing within ten (10) days of the date on which the Contractor becomes aware, or should have reasonably become aware, that such cause would prevent or delay its performance. Such notification shall (i) describe fully such cause(s) and its effect on performance, (ii) state whether performance under the contract is prevented or delayed and (iii) if performance is delayed, state a reasonable estimate of the duration of the delay. The Contractor shall have the burden of proving that such cause(s) delayed or prevented its performance despite its diligent efforts to perform and shall produce such supporting documentation as the Commonwealth may reasonably request. After receipt of such notification, the Commonwealth may elect to cancel the Contract, cancel the Purchase Order, or to extend the time for performance as reasonably necessary to compensate for the Contractor's delay.

In the event of a declared emergency by competent governmental authorities, the Commonwealth by notice to the Contractor, may suspend all or a portion of the Contract or Purchase Order.

V.30 CONTRACT-023.1a Termination Provisions (Oct 2013)

The Commonwealth has the right to terminate this Contract or any Purchase Order for any of the following reasons. Termination shall be effective upon written notice to the Contractor.

a. **TERMINATION FOR CONVENIENCE**: The Commonwealth shall have the right to terminate the Contract or a Purchase Order for its convenience if the Commonwealth determines termination to be in its best interest. The Contractor shall be paid for work satisfactorily completed prior to the effective date of the termination, but in no event shall the Contractor be entitled to recover loss of profits.

b. **NON-APPROPRIATION**: The Commonwealth's obligation to make payments during any Commonwealth fiscal year succeeding the current fiscal year shall be subject to availability and appropriation of funds. When funds (state and/or federal) are not appropriated or otherwise made available to support continuation of performance in a subsequent fiscal year period, the Commonwealth shall have the right to terminate the Contract or a Purchase Order. The Contractor shall be reimbursed for the reasonable value of any nonrecurring costs incurred but not amortized in the price of the supplies or services delivered under the Contract. Such reimbursement shall not include loss of profit, loss of use of money, or administrative or overhead costs. The reimbursement amount may be paid from any appropriations available for that purpose.

c. **TERMINATION FOR CAUSE**: The Commonwealth shall have the right to terminate the Contract or a Purchase Order for Contractor default under the Default Clause upon written notice to the Contractor. The Commonwealth shall

also have the right, upon written notice to the Contractor, to terminate the Contract or a Purchase Order for other cause as specified in the Contract or by law. If it is later determined that the Commonwealth erred in terminating the Contract or a Purchase Order for cause, then, at the Commonwealth's discretion, the Contract or Purchase Order shall be deemed to have been terminated for convenience under the Subparagraph a.

V.31 CONTRACT-024.1 Contract Controversies (Oct 2011)

a. In the event of a controversy or claim arising from the Contract, the Contractor must, within six months afterthe cause of action accrues, file a written claim with the contracting officer for a determination. The claim shall state all grounds upon which the Contractor asserts a controversy exists. If the Contractor fails to file a claim or files an untimely claim, the Contractor is deemed to have waived its right to assert a claim in any forum. At the time the claim is filed, or within sixty (60) days thereafter, either party may request mediation through the Commonwealth Office of General Counsel Dispute Resolution Program.

b. If the Contractor or the contracting officer requests mediation and the other party agrees, the contracting officer shall promptly make arrangements for mediation. Mediation shall be scheduled so as to not delay the issuance of the final determination beyond the required 120 days after receipt of the claim if mediation is unsuccessful. If mediation is not agreed to or if resolution is not reached through mediation, the contracting officer shall review timely-filed claims and issue a final determination, in writing, regarding the claim. The final determination shall be issued within 120 days of the receipt of the claim, unless extended by consent of the contracting officer and the Contractor. The contracting officer shall send his/her written determination to the Contractor. If the contracting officer fails to issue a final determination within the 120 days (unless extended by consent of the parties), the claim shall be deemed denied. The contracting officer's determination shall be the final order of the purchasing agency.

c. Within fifteen (15) days of the mailing date of the determination denying a claim or within 135 days of filing a claim if, no extension is agreed to by the parties, whichever occurs first, the Contractor may file a statement of claim with the Commonwealth Board of Claims. Pending a final judicial resolution of a controversy or claim, the Contractor shall proceed diligently with the performance of the Contract in a manner consistent with the determination of the contracting officer and the Commonwealth shall compensate the Contractor pursuant to the terms of the Contract.

V.32 CONTRACT-025.1 Assignability and Subcontracting (Oct 2013)

a. Subject to the terms and conditions of this paragraph, this Contract shall be binding upon the parties and their respective successors and assigns.

b. The Contractor shall not subcontract with any person or entity to perform all or any part of the work to be performed under this Contract without the prior written consent of the Contracting Officer, which consent may be withheld at the sole and absolute discretion of the Contracting Officer.

c. The Contractor may not assign, in whole or in part, this Contract or its rights, duties, obligations, or responsibilities hereunder without the prior written consent of the Contracting Officer, which consent may be withheld at the sole and absolute discretion of the Contracting Officer.

d. Notwithstanding the foregoing, the Contractor may, without the consent of the Contracting Officer, assign its rights to payment to be received under the Contract, provided that the Contractor provides written notice of such assignment to the Contracting Officer together with a written acknowledgement from the assignee that any such payments are subject to all of the terms and conditions of this Contract.

e. For the purposes of this Contract, the term "assign" shall include, but shall not be limited to, the sale, gift, assignment, pledge, or other transfer of any ownership interest in the Contractor provided, however, that the term shall not apply to the sale or other transfer of stock of a publicly traded company.

f . Any assignment consented to by the Contracting Officer shall be evidenced by a written assignment agreement executed by the Contractor and its assignee in which the assignee agrees to be legally bound by all of the terms and conditions of the Contract and to assume the duties, obligations, and responsibilities being assigned.

g. A change of name by the Contractor, following which the Contractor's federal identification number remains unchanged, shall not be considered to be an assignment hereunder. The Contractor shall give the Contracting Officer written notice of any such change of name.

V.33 CONTRACT-026.1 Other Contractors (Oct 2006)

The Commonwealth may undertake or award other contracts for additional or related work, and the Contractor shall fully cooperate with other contractors and Commonwealth employees, and coordinate its work with such additional work as may be required. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by Commonwealth employees. This paragraph shall be included in the Contracts of all contractors with which this Contractor will be required to cooperate. The Commonwealth shall equitably enforce this paragraph as to all contractors to prevent the imposition of unreasonable burdens on any contractor.

V.34 CONTRACT-027.1 Nondiscrimination/Sexual Harassment Clause (August 2018)

The Contractor agrees:

1. In the hiring of any employee(s) for the manufacture of supplies, performance of work, or any other activity required under the contract or any subcontract, the Contractor, each subcontractor, or any person acting on behalf of the Contractor or subcontractor shall not discriminate by reason of race, gender, creed, color, sexual orientation, gender identity or expression, or in violation of the *Pennsylvania Human Relations Act* (PHRA) and applicable federal laws, against any citizen of this Commonwealth who is qualified and available to perform the work to which the employment relates.

2. Neither the Contractor nor any subcontractor nor any person on their behalf shall in any manner discriminate by reason of race, gender, creed, color, sexual orientation, gender identity or expression, or in violation of the PHRA and applicable federal laws, against or intimidate any employee involved in the manufacture of supplies, the performance of work, or any other activity required under the contract.

3. Neither the Contractor nor any subcontractor nor any person on their behalf shall in any manner discriminate by reason of race, gender, creed, color, sexual orientation, gender identity or expression, or in violation of the PHRA and applicable federal laws, in the provision of services under the contract.

4. Neither the Contractor nor any subcontractor nor any person on their behalf shall in any manner discriminate against employees by reason of participation in or decision to refrain from participating in labor activities protected under the *Public Employee Relations Act*, *Pennsylvania Labor Relations Act* or *National Labor Relations Act*, as applicable and to the extent determined by entities charged with such Acts' enforcement, and shall comply with any provision of law establishing organizations as employees' exclusive representatives.

5. The Contractor and each subcontractor shall establish and maintain a written nondiscrimination and sexual harassment policy and shall inform their employees in writing of the policy. The policy must contain a provision that sexual harassment will not be tolerated and employees who practice it will be disciplined. Posting this Nondiscrimination/Sexual Harassment Clause conspicuously in easily-accessible and well-lighted places customarily frequented by employees and at or near where the contracted services are performed shall satisfy this requirement for employees with an established work site.

6. The Contractor and each subcontractor shall not discriminate by reason of race, gender, creed, color, sexual orientation, gender identity or expression, or in violation of PHRA and applicable federal laws, against any subcontractor or supplier who is qualified to perform the work to which the contract relates.

7. The Contractor and each subcontractor represents that it is presently in compliance with and will maintain compliance with all applicable federal, state, and local laws, regulations and policies relating to nondiscrimination and sexual harassment. The Contractor and each subcontractor further represents that it has filed a Standard Form 100 Employer Information Report ("EEO-1") with the U.S. Equal Employment Opportunity Commission ("EEOC") and shall file an annual EEO-1 report with the EEOC as required for employers' subject to *Title VII* of the *Civil Rights Act of 1964*, as amended, that have 100 or more employees and employers that have federal government contracts or first-tier subcontracts and have 50 or more employees. The Contractor and each subcontractor shall, upon request and within the time periods requested by the Commonwealth, furnish all necessary employment documents and records, including EEO-1 reports, and permit access to their books, records, and accounts by the contracting agency and the Bureau of

Diversity, Inclusion and Small Business Opportunities for purpose of ascertaining compliance with provisions of this Nondiscrimination/Sexual Harassment Clause.

8. The Contractor shall include the provisions of this Nondiscrimination/Sexual Harassment Clause in every subcontract so that those provisions applicable to subcontractors will be binding upon each subcontractor.

9. The Contractor's and each subcontractor's obligations pursuant to these provisions are ongoing from and after the effective date of the contract through the termination date thereof. Accordingly, the Contractor and each subcontractor shall have an obligation to inform the Commonwealth if, at any time during the term of the contract, it becomes aware of any actions or occurrences that would result in violation of these provisions.

10. The Commonwealth may cancel or terminate the contract and all money due or to become due under the contract may be forfeited for a violation of the terms and conditions of this Nondiscrimination/Sexual Harassment Clause. In addition, the agency may proceed with debarment or suspension and may place the Contractor in the Contractor Responsibility File.

V.35 CONTRACT-028.1 Contractor Integrity Provisions (Jan 2015)

It is essential that those who seek to contract with the Commonwealth of Pennsylvania ("Commonwealth") observe high standards of honesty and integrity. They must conduct themselves in a manner that fosters public confidence in the integrity of the Commonwealth contracting and procurement process.

1. DEFINITIONS. For purposes of these Contractor Integrity Provisions, the following terms shall have the meanings found in this Section:

a. "Affiliate" means two or more entities where (a) a parent entity owns more than fifty percent of the voting stock of each of the entities; or (b) a common shareholder or group of shareholders owns more than fifty percent of the voting stock of each of the entities; or (c) the entities have a common proprietor or general partner.

b. "Consent" means written permission signed by a duly authorized officer or employee of the Commonwealth, provided that where the material facts have been disclosed, in writing, by prequalification, bid, proposal, or contractual terms, the Commonwealth shall be deemed to have consented by virtue of the execution of this contract.

c. "Contractor" means the individual or entity, that has entered into this contract with the Commonwealth.

d. "Contractor Related Parties" means any affliates of the Contractor and the Contractor's executive officers, Pennsylvania officers and directors, or owners of 5 percent or more interest in the Contractor.

e. "Financial Interest" means either:

(1) Ownership of more than a five percent interest in any business; or

(2) Holding a position as an officer, director, trustee, partner, employee, or holding any position of management.

f. "Gratuity" means tendering, giving, or providing anything of more than nominal monetary value including, but not limited to, cash, travel, entertainment, gifts, meals, lodging, loans, subscriptions, advances, deposits of money, services, employment, or contracts of any kind. The exceptions set forth in the *Governor's Code of Conduct, Executive Order 1980-18*, the *4 Pa. Code §7.153(b)*, shall apply.

g. "Non-bid Basis" means a contract awarded or executed by the Commonwealth with Contractor without seeking bids or proposals from any other potential bidder or offeror.

2. In furtherance of this policy, Contractor agrees to the following:

a. Contractor shall maintain the highest standards of honesty and integrity during the performance of this contract and shall take no action in violation of state or federal laws or regulations or any other applicable laws or regulations, or other requirements applicable to Contractor or that govern contracting or procurement with the Commonwealth.

b. Contractor shall establish and implement a written business integrity policy, which includes, at a minimum, the requirements of these provisions as they relate to the Contractor activity with the Commonwealth and Commonwealth employees and which is made known to all Contractor employees. Posting these Contractor Integrity Provisions conspicuously in easily-accessible and well-lighted places customarily frequented by employees and at or near where the contract services are performed shall satisfy this requirement.

c. Contractor, its affiliates, agents, employees and anyone in privity with Contractor shall not accept, agree to give, offer, confer or agree to confer or promise to confer, directly or indirectly, any gratuity or pecuniary benefit to any person, or to influence or attempt to influence any person in violation of any federal or state law, regulation, executive order of the Governor of Pennsylvania, statement of policy, management directive or any other published standard of the Commonwealth in connection with performance of work under this contract, except as provided in this contract.

d. Contractor shall not have a financial interest in any other contractor, subcontractor, or supplier providing services, labor or material under this contract, unless the financial interest is disclosed to the Commonwealth in writing and the Commonwealth consents to Contractor's financial interest prior to Commonwealth execution of the contract. Contractor shall disclose the financial interest to the Commonwealth at the time of bid or proposal submission, or if no bids or proposals are solicited, no later than the Contractor's submission of the contract signed by Contractor.

e. Contractor certifies to the best of its knowledge and belief that within the last five (5) years Contractor or Contractor Related Parties have not:

(1) been indicted or convicted of a crime involving moral turpitude or business honesty or integrity in any jurisdiction;

(2) been suspended, debarred or otherwise disqualified from entering into any contract with any governmental agency;

(3) had any business license or professional license suspended or revoked;

(4) had any sanction or finding of fact imposed as a result of a judicial or administrative proceeding related to fraud, extortion, bribery, bid rigging, embezzlement, misrepresentation or anti-trust; and

(5) been, and is not currently, the subject of a criminal investigation by any federal, state or local prosecuting or investigative agency and/or civil anti-trust investigation by any federal, state or local prosecuting or investigative agency.

If Contractor cannot so certify to the above, then it must submit along with its bid, proposal or contract a written explanation of why such certification cannot be made and the Commonwealth will determine whether a contract may be entered into with the Contractor. The Contractor's obligation pursuant to this certification is ongoing from and after the effective date of the contract through the termination date thereof. Accordingly, the Contractor shall have an obligation to immediately notify the Commonwealth in writing if at any time during the term of the contract it becomes aware of any event which would cause the Contractor's certification or explanation to change. Contractor acknowledges that the Commonwealth may, in its sole discretion, terminate the contract for cause if it learns that any of the certifications made herein are currently false due to intervening factual circumstances or were false or should have been known to be false when entering into the contract.

f. Contractor shall comply with the requirements of the *Lobbying Disclosure Act (65 Pa.C.S. §13A01 et seq.)* regardless of the method of award. If this contract was awarded on a Non-bid Basis, Contractor must also comply with the requirements of the *Section 1641 of the Pennsylvania Election Code (25 P.S. §3260a).*

g. When contractor has reason to believe that any breach of ethical standards as set forth in law, the Governor's Code of Conduct, or these Contractor Integrity Provisions has occurred or may occur, including but not limited to contact by a Commonwealth officer or employee which, if acted upon, would violate such ethical standards, Contractor shall immediately notify the Commonwealth contracting officer or the Office of the State Inspector General in writing.

h. Contractor, by submission of its bid or proposal and/or execution of this contract and by the submission of any bills, invoices or requests for payment pursuant to the contract, certifies and represents that is has not violated any of these Contractor Integrity Provisions in connection with the submission of the bid or proposal, during any contract negotiations or during the term of the contract, to include any extensions thereof. Contractor shall immediately notify the Commonwealth in writing of any actions for occurrences that would result in a violation of these Contractor

Integrity Provisions. Contractor agrees to reimburse the Commonwealth for the reasonable costs of investigation incurred by the Office of the State Inspector General for investigations of the Contractor's compliance with the terms of this or any other agreement between the Contractor and the Commonwealth that results in the suspension or debarment of the Contractor. Contractor shall not be responsible for investigative costs for investigations that do not result in the Contractor's suspension or debarment.

i. Contractor shall cooperate with the Office of the State Inspector General in its investigation of any alleged Commonwealth agency or employee breach of ethical standards and any alleged Contractor non-compliance with these Contractor Integrity Provisions. Contractor agrees to make identified Contractor employees available for interviews at reasonable times and places. Contractor, upon the inquiry or request of an Inspector General, shall provide, or if appropriate, make promptly available for inspection or copying, any information of any type or form deemed relevant by the Office of the State Inspector General to Contractor's integrity and compliance with these provisions. Such information may include, but shall not be limited to, Contractor's business or financial records, documents or files of any type or form that refer to or concern this contract. Contractor shall incorporate this paragraph in any agreement, contract or subcontract it enters into in the course of the performance of this contract/agreement solely for the purpose of obtaining subcontractor compliance with this provision. The incorporation of this provision in a subcontract shall not create privity of contract between the Commonwealth and any such subcontractor, and no third party beneficiaries shall be created thereby.

j. For violation of any of these Contractor Integrity Provisions, the Commonwealth may terminate this and any other contract with Contractor, claim liquidated damages in an amount equal to the value of anything received in breach of these Provisions, claim damages for all additional costs and expenses incurred in obtaining another contractor to complete performance under this contract, and debar and suspend Contractor from doing business with the Commonwealth. These rights and remedies are cumulative, and the use or non-use of any one shall not preclude the use of all or any other. These rights and remedies are in addition to those the Commonwealth may have under law, statute, regulation or otherwise.

V.36 CONTRACT-029.1 Contractor Responsibility Provisions (Nov 2010)

For the purpose of these provisions, the term contractor is defined as any person, including, but not limited to, a bidder, offeror, loan recipient, grantee or lessor, who has furnished or performed or seeks to furnish or perform, goods, supplies, services, leased space, construction or other activity, under a contract, grant, lease, purchase order or reimbursement agreement with the Commonwealth of Pennsylvania (Commonwealth). The term contractor includes a permittee, licensee, or any agency, political subdivision, instrumentality, public authority, or other public entity in the Commonwealth.

1. The Contractor certifies, in writing, for itself and its subcontractors required to be disclosed or approved by the Commonwealth, that as of the date of its execution of this Bid/Contract, that neither the Contractor, nor any such subcontractors, are under suspension or debarment by the Commonwealth or any governmental entity, instrumentality, or authority and, if the Contractor cannot so certify, then it agrees to submit, along with its Bid/Contract, a written explanation of why such certification cannot be made.

2. The Contractor also certifies, in writing, that as of the date of its execution of this Bid/Contract it has no tax liabilities or other Commonwealth obligations, or has filed a timely administrative or judicial appeal if such liabilities or obligations exist, or is subject to a duly approved deferred payment plan if such liabilities exist.

3. The Contractor's obligations pursuant to these provisions are ongoing from and after the effective date of the Contract through the termination date thereof. Accordingly, the Contractor shall have an obligation to inform the Commonwealth if, at any time during the term of the Contract, it becomes delinquent in the payment of taxes, or other Commonwealth obligations, or if it or, to the best knowledge of the Contractor, any of its subcontractors are suspended or debarred by the Commonwealth, the federal government, or any other state or governmental entity. Such notification shall be made within 15 days of the date of suspension or debarment.

4. The failure of the Contractor to notify the Commonwealth of its suspension or debarment by the Commonwealth, any other state, or the federal government shall constitute an event of default of the Contract with the Commonwealth.

5. The Contractor agrees to reimburse the Commonwealth for the reasonable costs of investigation incurred by the Office of State Inspector General for investigations of the Contractor's compliance with the terms of this or any other

agreement between the Contractor and the Commonwealth that results in the suspension or debarment of the contractor. Such costs shall include, but shall not be limited to, salaries of investigators, including overtime; travel and lodging expenses; and expert witness and documentary fees. The Contractor shall not be responsible for investigative costs for investigations that do not result in the Contractor's suspension or debarment.

6. The Contractor may obtain a current list of suspended and debarred Commonwealth contractors by either searching the Internet at **http://www.dgs.state.pa.us/** or contacting the:

Department of General Services
Office of Chief Counsel
603 North Office Building
Harrisburg, PA 17125
Telephone No: (717) 783-6472
FAX No: (717) 787-9138

V.37 CONTRACT-030.1 Americans with Disabilities Act (April 1, 2010)

a. Pursuant to federal regulations promulgated under the authority of The Americans With Disabilities Act, 28C.F.R. Section 35.101 et seq., the Contractor understands and agrees that it shall not cause any individual with a disability to be excluded from participation in this Contract or from activities provided for under this Contract on the basis of the disability. As a condition of accepting this contract, the Contractor agrees to comply with the "General Prohibitions Against Discrimination," 28 C.F.R. Section 35.130, and all other regulations promulgated under Title II of The Americans With Disabilities Act which are applicable to all benefits, services, programs, and activities provided by the Commonwealth of Pennsylvania through contracts with outside contractors.

b. The Contractor shall be responsible for and agrees to indemnify and hold harmless the Commonwealth of Pennsylvania from all losses, damages, expenses, claims, demands, suits, and actions brought by any party against the Commonwealth of Pennsylvania as a result of the Contractor’s failure to comply with the provisions of Subparagraph a above.

V.38 CONTRACT-032.1 Covenant Against Contingent Fees (Oct 2006)

The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure the Contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty, the Commonwealth shall have the right to terminate the Contract without liability or in its discretion to deduct from the Contract price or consideration, or otherwise recover the full amount of such commission, percentage, brokerage, or contingent fee.

V.39 CONTRACT-033.1 Applicable Law (Oct 2006)

This Contract shall be governed by and interpreted and enforced in accordance with the laws of the Commonwealth of Pennsylvania (without regard to any conflict of laws provisions) and the decisions of the Pennsylvania courts. The Contractor consents to the jurisdiction of any court of the Commonwealth of Pennsylvania and any federal courts in Pennsylvania, waiving any claim or defense that such forum is not convenient or proper. The Contractor agrees that any such court shall have in personam jurisdiction over it, and consents to service of process in any manner authorized by Pennsylvania law.

V.40 CONTRACT-034.1a Integration – RFP (Dec 12 2006)

This Contract, including the Request for Proposals, Contractor's Proposal, Contractor's Best and Final Offer, if any, all referenced documents, and any Purchase Order constitutes the entire agreement between the parties. No agent, representative, employee or officer of either the Commonwealth or the Contractor has authority to make, or has made, any statement, agreement or representation, oral or written, in connection with the Contract, which in any way can be deemed to modify, add to or detract from, or otherwise change or alter its terms and conditions. No negotiations between the parties, nor any custom or usage, shall be permitted to modify or contradict any of the terms and conditions of the Contract. No modifications, alterations, changes, or waiver to the Contract or any of its terms shall be valid or binding unless accomplished by a written amendment signed by both parties.

V.41 CONTRACT-034.2a Order of Precedence - RFP (Dec 12 2006)

In the event there is a conflict among the documents comprising this Contract, the Commonwealth and the Contractor agree on the following order of precedence: the Contract; the RFP, the Best and Final Offer, if any; the Contractor's Proposal in Response to the RFP.

V.42 CONTRACT-034.3 Controlling Terms and Conditions (Aug 2011)

The terms and conditions of this Contract shall be the exclusive terms of agreement between the Contractor and the Commonwealth. All quotations requested and received from the Contractor are for obtaining firm pricing only. Other terms and conditions or additional terms and conditions included or referenced in the Contractor's quotations, invoices, business forms, or other documentation shall not become part of the parties' agreement and shall be disregarded by the parties, unenforceable by the Contractor and not binding on the Commonwealth.

V.43 CONTRACT-035.1a Changes (Oct 2006)

The Commonwealth reserves the right to make changes at any time during the term of the Contract or any renewals or extensions thereof: 1) to increase or decrease the quantities resulting from variations between any estimated quantities in the Contract and actual quantities; 2) to make changes to the services within the scope of the Contract; 3) to notify the Contractor that the Commonwealth is exercising any Contract renewal or extension option; or 4) to modify the time of performance that does not alter the scope of the Contract to extend the completion date beyond the Expiration Date of the Contract or any renewals or extensions thereof. Any such change shall be made by the Contracting Officer by notifying the Contractor in writing. The change shall be effective as of the date of the change, unless the notification of change specifies a later effective date. Such increases, decreases, changes, or modifications will not invalidate the Contract, nor, if performance security is being furnished in conjunction with the Contract, release the security obligation. The Contractor agrees to provide the service in accordance with the change order. Any dispute by the Contractor in regard to the performance required by any notification of change shall be handled through Contract Controversies Provision.

V.44 CONTRACT-036.1 Background Checks (February 2016)

a. The Contractor must, at its expense, arrange for a background check for each of its employees, as well as the employees of any of its subcontractors, who will have access to Commonwealth facilities, either through on-site access or through remote access. Background checks are to be conducted via the Request for Criminal Record Check form and procedure found at http://www.psp.state.pa.us/psp/lib/psp/sp4-164.pdf . The background check must be conducted prior to initial access and on an annual basis thereafter.

b. Before the Commonwealth will permit access to the Contractor, the Contractor must provide written confirmation that the background checks have been conducted. If, at any time, it is discovered that a Contractor employee has a criminal record that includes a felony or misdemeanor involving terroristic behavior, violence, use of a lethal weapon, or breach of trust/fiduciary responsibility or which raises concerns about building, system or personal security or is otherwise job-related, the Contractor shall not assign that employee to any Commonwealth facilities, shall remove any access privileges already given to the employee and shall not permit that employee remote access unless the Commonwealth consents to the access, in writing, prior to the access. The Commonwealth may withhold its consent in its sole discretion. Failure of the Contractor to comply with the terms of this Section on more than one occasion or Contractor's failure to appropriately address any single failure to the satisfaction of the Commonwealth may result in the Contractor being deemed in default of its Contract.

c. The Commonwealth specifically reserves the right of the Commonwealth to conduct background checks over and above that described herein.

d. Access to certain Capitol Complex buildings and other state office buildings is controlled by means of card readers and secured visitors' entrances. Commonwealth contracted personnel who have regular and routine business in Commonwealth worksites may be issued a photo identification or access badge subject to the requirements of the contracting agency and DGS set forth in Enclosure 3 of Commonwealth Management Directive 625.10 (Amended)

Card Reader and Emergency Response Access to Certain Capitol Complex Buildings and Other State Office Buildings. The requirements, policy and procedures include a processing fee payable by the Contractor for contracted personnel photo identification or access badges.

V.45 CONTRACT-037.1a Confidentiality (Oct 2013)

a) The Contractor agrees to protect the confidentiality of the Commonwealth's confidential information. The Commonwealth agrees to protect the confidentiality of Contractor's confidential information. In order for information to be deemed confidential, the party claiming confidentiality must designate the information as "confidential" in such a way as to give notice to the other party (notice may be communicated by describing the information, and the specifications around its use or disclosure, in the SOW).Neither party may assert that information owned by the other party is such party's confidential information. The parties agree that such confidential information shall not be copied, in whole or in part, or used or disclosed except when essential for authorized activities under this Contract and, in the case of disclosure, where the recipient of the confidential information has agreed to be bound by confidentiality requirements no less restrictive than those set forth herein. Each copy of such confidential information shall be marked by the party making the copy with any notices appearing in the original. Upon termination or cancellation of this Contract or any license granted hereunder, the receiving party will return to the disclosing party all copies of the confidential information in the receiving party's possession, other than one copy, which may be maintained for archival purposes only, and which will remain subject to this Contract's security, privacy, data retention/destruction and confidentiality provisions (all of which shall survive the expiration of this Contract). Both parties agree that a material breach of these requirements may, after failure to cure within the time frame specified in this Contract, and at the discretion of the non-breaching party, result in termination for default pursuant to the DEFAULT provision of this Contract, in addition to other remedies available to the non-breaching party.

(b) Insofar as information is not otherwise protected by law or regulation, the obligations stated in this Section do not apply to information:

(1) already known to the recipient at the time of disclosure other than through the contractual relationship;

(2) independently generated by the recipient and not derived by the information supplied by the disclosing party.

(3) known or available to the public , except where such knowledge or availability is the result of unauthorized disclosure by the recipient of the proprietary information;

(4) disclosed to the recipient without a similar restriction by a third party who has the right to make such disclosure; or

(5) required to be disclosed by law , regulation, court order, or other legal process.

There shall be no restriction with respect to the use or disclosure of any ideas, concepts, know-how, or data processing techniques developed alone or jointly with the Commonwealth in connection with services provided to the Commonwealth under this Contract.

(c) The Contractor shall use the following process when submitting information to the Commonwealth it believes to be confidential and/or proprietary information or trade secrets:

(1) Prepare an un-redacted version of the appropriate document, and

(2) Prepare a redacted version of the document that redacts the information that is asserted to be confidential or proprietary information or a trade secret, and

(3) Prepare a signed written statement that states:

(i) the attached document contains confidential or proprietary information or trade secrets;

(ii) the Contractor is submitting the document in both redacted and un-redacted format in accordance with 65 P.S. § 67.707(b); and

(iii) the Contractor is requesting that the document be considered exempt under 65 P.S. § 67.708(b)(11) from public records requests.

(4) Submit the two documents along with the signed written statement to the Commonwealth.

V.46 CONTRACT-041.1 Contract Requirements-Small Diverse Business and Small Business Participation (July 2016)

The provisions contained in the RFP concerning Contract Requirements - Small Diverse Business and Small Business Participation are incorporated by reference herein.

V.47 CONTRACT-045.1 Insurance - General (Dec 12 2006)

The Contractor is required to have in place during the term of the Contract and any renewals or extensions thereof , the following types of insurance, issued by companies acceptable to the Commonwealth and authorized to conduct such business under the laws of the Commonwealth of Pennsylvania:

A. **Worker's Compensation Insurance** for all of the Contractor's employees and those of any subcontractor, engaged in work at the site of the project as required by law.

B. **Public Liability and Property Damage Insurance** to protect the Commonwealth, the Contractor, and any and all subcontractors from claims for damages for personal injury (including bodily injury), sickness or disease, accidental death and damage to property including the loss of use resulting from any property damage, which may arise from the activities performed under the Contract or the failure to perform under the Contract, whether such performance or non-performance be by the Contractor, by any subcontractor, or by anyone directly or indirectly employed by either. The minimum amounts of coverage shall be $250,000 per person and $1,000,000 per occurrence for bodily injury, including death, and $250,000 per person and $1,000,000 per occurrence for property damage. Such policies shall be occurrence rather than claims-made policies and shall not contain any endorsements or any other form designated to limit and restrict any action by the Commonwealth, as an additional insured, against the insurance coverage in regard to work performed for the Commonwealth.

Prior to commencement of the work under the Contract and at each insurance renewal date during the term of the Contract, the Contractor shall provide the Commonwealth with current certificates of insurance. These certificates or policies shall name the Commonwealth as an additional insured and shall contain a provision that the coverage's afforded under the policies will not be cancelled or changed until at least thirty (30) days written notice has been given to the Commonwealth.

The Commonwealth shall be under no obligation to obtain such certificates from the Contractor(s). Failure by the Commonwealth to obtain the certificates shall not be deemed a waiver of the Contractor's obligation to obtain and furnish certificates. The Commonwealth shall have the right to inspect the original insurance policies.

V.48 CONTRACT-051.1 Notice (Dec 2006)

Any written notice to any party under this Contract shall be deemed sufficient if delivered personally, or by facsimile, telecopy, electronic or digital transmission (provided such delivery is confirmed), or by a recognized overnight courier service (e.g., DHL, Federal Express, etc.) with confirmed receipt, or by certified or registered United States mail, postage prepaid, return receipt requested, and sent to following:

a. If to the Contractor: the Contractor's address as recorded in the Commonwealth's Supplier Registration system.

b. If to the Commonwealth: the address of the Issuing Office as set forth on the Contract.

V.49 CONTRACT-052.1 Right to Know Law (Feb 2010)

a. The Pennsylvania Right-to-Know Law, 65 P.S. §§ 67.101-3104, (“RTKL”) applies to this Contract. For the purpose of these provisions, the term “the Commonwealth” shall refer to the contracting Commonwealth agency.

b. If the Commonwealth needs the Contractor's assistance in any matter arising out of the RTKL related to this Contract, it shall notify the Contractor using the legal contact information provided in this Contract. The Contractor, at any time, may designate a different contact for such purpose upon reasonable prior written notice to the Commonwealth.

c. Upon written notification from the Commonwealth that it requires the Contractor's assistance in responding to a request under the RTKL for information related to this Contract that may be in the Contractor's possession, constituting, or alleged to constitute, a public record in accordance with the RTKL ("Requested Information"), the Contractor shall:

1. Provide the Commonwealth, within ten (10) calendar days after receipt of written notification, access to, and copies of, any document or information in the Contractor's possession arising out of this Contract that the Commonwealth reasonably believes is Requested Information and may be a public record under the RTKL; and 2. Provide such other assistance as the Commonwealth may reasonably request, in order to comply with the RTKL with respect to this Contract.

d. If the Contractor considers the Requested Information to include a request for a Trade Secret or Confidential Proprietary Information, as those terms are defined by the RTKL, or other information that the Contractor considers exempt from production under the RTKL, the Contractor must notify the Commonwealth and provide, within seven (7) calendar days of receiving the written notification, a written statement signed by a representative of the Contractor explaining why the requested material is exempt from public disclosure under the RTKL.

e. The Commonwealth will rely upon the written statement from the Contractor in denying a RTKL request for the Requested Information unless the Commonwealth determines that the Requested Information is clearly not protected from disclosure under the RTKL. Should the Commonwealth determine that the Requested Information is clearly not exempt from disclosure, the Contractor shall provide the Requested Information within five (5) business days of receipt of written notification of the Commonwealth's determination.

f. If the Contractor fails to provide the Requested Information within the time period required by these provisions, the Contractor shall indemnify and hold the Commonwealth harmless for any damages, penalties, costs, detriment or harm that the Commonwealth may incur as a result of the Contractor's failure, including any statutory damages assessed against the Commonwealth.

g. The Commonwealth will reimburse the Contractor for any costs associated with complying with these provisions only to the extent allowed under the fee schedule established by the Office of Open Records or as otherwise provided by the RTKL if the fee schedule is inapplicable.

h. The Contractor may file a legal challenge to any Commonwealth decision to release a record to the public with the Office of Open Records, or in the Pennsylvania Courts, however, the Contractor shall indemnify the Commonwealth for any legal expenses incurred by the Commonwealth as a result of such a challenge and shall hold the Commonwealth harmless for any damages, penalties, costs, detriment or harm that the Commonwealth may incur as a result of the Contractor's failure, including any statutory damages assessed against the Commonwealth, regardless of the outcome of such legal challenge. As between the parties, the Contractor agrees to waive all rights or remedies that may be available to it as a result of the Commonwealth's disclosure of Requested Information pursuant to the RTKL.

i. The Contractor's duties relating to the RTKL are continuing duties that survive the expiration of this Contract and shall continue as long as the Contractor has Requested Information in its possession.

V.50 CONTRACT-053.1 Enhanced Minimum Wage Provisions (July 2018)

1. **Enhanced Minimum Wage.** Contractor/Lessor agrees to pay no less than $12.00 per hour to its employees for all hours worked directly performing the services called for in this Contract/Lease, and for an employee's hours performing ancillary services necessary for the performance of the contracted services or lease when such employee spends at least twenty per cent (20%) of their time performing ancillary services in a given work week.

2. **Adjustment.** Beginning July1, 2019, and annually thereafter, the minimum wage rate shall be increased by $0.50 until July 1, 2024, when the minimum wage reaches $15.00. Thereafter, the minimum wage rate would be increased by an annual cost-of-living adjustment using the percentage change in the Consumer Price Index for All Urban Consumers

(CPI-U) for Pennsylvania, New Jersey, Delaware, and Maryland. The applicable adjusted amount shall be published in the Pennsylvania Bulletin by March 1 of each year to be effective the following July 1.

3. **Exceptions.** These Enhanced Minimum Wage Provisions shall not apply to employees:

a. exempt from the minimum wage under the Minimum Wage Act of 1968;

b. covered by a collective bargaining agreement;

c. required to be paid a higher wage under another state or federal law governing the services, including the

Prevailing Wage Act and Davis-Bacon Act; or

d. required to be paid a higher wage under any state or local policy or ordinance.

4. **Notice.** Contractor/Lessor shall post these Enhanced Minimum Wage Provisions for the entire period of the contract conspicuously in easily-accessible and well-lighted places customarily frequented by employees at or near where the contracted services are performed.

5. **Records.** Contractor/Lessor must maintain and, upon request and within the time periods requested by the Commonwealth, furnish all employment and wage records necessary to document compliance with these Enhanced Minimum Wage Provisions.

6. **Sanctions.** Failure to comply with these Enhanced Minimum Wage Provisions may result in the imposition of sanctions, which may include, but shall not be limited to, termination of the contract or lease, nonpayment, debarment or referral to the Office of General Counsel for appropriate civil or criminal referral.

7. **Subcontractors.** Contractor/Lessor shall include the provisions of these Enhanced Minimum Wage Provisions in every subcontract so that these provisions will be binding upon each subcontractor.

EXHIBIT E

Environmental Remediation Services 6100052061

APPENDIX A – COST SUBMITTAL REVISED 02.15.2022

APPENDIX A

COST SUBMITTAL Revised 02.15.2022

OFFEROR NAME: _____ **OFFEROR SUPPLIER NUMBER:** _____

ADDRESS: _____ **EMAIL ADDRESS:** _____

ADDRESS: _____

CONTACT NAME: _____

TELEPHONE: _____

24 HOUR EMERGENCY CONTACT: _____ **24 HOUR EMERGENCY PHONE:** _____

Enter the unit price (highlighted in yellow) for each line item. Pricing must be entered for ALL line items or the submission may be rejected. Pricing must include all taxes, fringe benefits, overhead and profit. **If the Offeror wishes to provide a line item at no cost, "0.00" must be entered for the line item.** A blank line item may be cause for rejection.

"Estimated Quantity" represents the estimated quantity of each service that may be required **each year**. The spreadsheet will automatically calculate the extended price.

All quantities indicate an estimated average for each line item based upon previous contract performance. Line items with the quantity of one "1" represent an item previously not on contract, or a line item previously not paid. The offeror is to use their professional experience to determine what dollar value or percentage to enter in the appropriate cell.

Prevailing Wage Rates. Because Prevailing Wage rates and applicability cannot be determined at the time of submission, Offerors should not include Prevailing Wage rates as part of Appendix A - Cost Submittal.

Recognizing there may be an increase to the awarded Supplier when Prevailing Wage rates do apply, these additional costs should be included in the Technical & Cost Proposal and those additional costs will be reflected on any resulting Purchase Orders as Non-Offered Item(s).

There are five (5) Cost No Mark-Up Items covered under this Contract (Travel, Subsistence, Lodging, Mileage and Miscellaneous Services/Equipment/Tools). Supplier will be reimbursed as per Commonwealth Management Directive 230.10, with the exception of Miscellaneous Services/Equipment/Tools, which shall be invoiced at cost (no mark-up). These items are not included in Appendix A - Cost Submittal.

LABOR (STANDARD RATE) - SENIOR STAFF PROFESSIONALS Note: Emergency Labor Rate(s) under the Contract are not applicable for Senior Staff Professional classifications, except for the Project Manager (Line Item 25) when required to be on site. For Senior Staff required to be on site in emergencies, the Supplier will be compensated at the applicable Regular Senior Staff Labor Rates.

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
1	Contract Administrator	20	Hour		$0.00
2	Project Manager	2,094	Hour		$0.00
3	Sr. Geologist/Hydrogeologist	1,088	Hour		$0.00
4	Sr. Civil/Geotechnical Engineer	1	Hour		$0.00
5	Sr. Environmental/Sanitary Engineers	12	Hour		$0.00
6	Sr. Chemist/Environmental Chemist	1	Hour		$0.00

LABOR (STANDARD RATE) - PROJECT STAFF PROFESSIONALS

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
7	Site Health & Safety Officer	1	Hour		$0.00
8	Geologist/Hydrogeologist	2	Hour		$0.00
9	Technician, Hazardous Materials	540	Hour		$0.00
10	Civil/Geotechnical Engineers	1	Hour		$0.00
11	Environmental/Sanitary Engineers	115	Hour		$0.00
12	Chemist/Environmental Chemist	1	Hour		$0.00
13	Certified Industrial Hygienist/Health Professional	1	Hour		$0.00
14	Environmental Scientist	523	Hour		$0.00

LABOR (STANDARD RATE) - ASSISTANT STAFF PROFESSIONALS

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
15	Clerical/Secretarial Personnel	297	Hour		$0.00
16	Draftsperson/CADD Operator	65	Hour		$0.00
17	Survey Crew: Includes PA Certified Surveyor	7	Hour		$0.00
18	Geologist/Hydrogeologist	1	Hour		$0.00
19	Civil/Geotechnical Engineers	1	Hour		$0.00
20	Environmental/Sanitary Engineers	1	Hour		$0.00
21	Chemist/Environmental Chemist	1	Hour		$0.00
22	Environmental Scientist	635	Hour		$0.00
23	Technician, Hazardous Materials	1	Hour		$0.00
24	Lead-Based Paint Inspector-Technician	3	Hour		$0.00

LABOR (EMERGENCY RATE) - PROJECT STAFF PROFESSIONALS

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
25	Project Manager	1	Hour		$0.00
26	Field Supervisor/Supervisor	1	Hour		$0.00
27	Industrial Hygienist/Health Professional	1	Hour		$0.00
28	Health & Safety Officer	1	Hour		$0.00
29	Technician, Hazardous Materials	1	Hour		$0.00
30	Geologist/Hydrogeologist	1	Hour		$0.00
31	Civil/Geotechnical Engineers	1	Hour		$0.00
32	Environmental/Sanitary Engineers	1	Hour		$0.00
33	Chemist/Environmental Chemist	1	Hour		$0.00
34	Environmental Scientist	894	Hour		$0.00

LABOR (EMERGENCY RATE) - ASSISTANT STAFF PROFESSIONALS

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
35	Geologist/Hydrogeologist	1	Hour		$0.00

36	Civil/Geotechnical Engineers	1	Hour		$0.00
37	Environmental/Sanitary Engineers	1	Hour		$0.00
38	Chemist/Environmental Chemist	1	Hour		$0.00
39	Lead-Based Paint Inspector-Technician	3	Hour		$0.00
40	Environmental Scientist	1,372	Hour		$0.00
41	Technician, Hazardous Materials	1	Hour		$0.00

LABORATORY ANALYSIS - PA DEP SHORT LIST - SOIL/SEDIMENT/DEBRIS: Laboratory line item prices shall be for a Level 1 data package. Level 1 package shall consist of sample analysis results, including method detection limits, appropriate QA/QC results, and chain-of custody forms. Laboratory line item prices shall include disposal fee for all unused portions of sample. All laboratory analyses shall be in accordance with the PA DEP/US EPA methodology accepted at the time of work.

Line items will include any future additions by DEP to the VOC Short List, provided that analysis for the additional short list items may be performed at no additional cost by the laboratory. Soil/sediment/debris sample containers, preservatives, and field filtration equipment, for the purposes of this contract, are considered to be included in the line item prices for laboratory services. Sample analysis costs shall include sample collection labor, sample collection equipment (e.g. sample containers, SUMMA canisters and appurtenances, coolers, filters, ice and chemical preservatives, chain-of-custody forms, etc.), and the laboratory analysis costs.

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
42	PA DEP SHORT LIST - VOLATILE ORGANIC COMPOUNDS (VOC) - SOIL - Turnaround Time: Normal Time	46	Test		$0.00
43	PA DEP SHORT LIST - VOLATILE ORGANIC COMPOUNDS (VOC) - SOIL - Turnaround Time: 1 Week	26	Test		$0.00
44	PA DEP SHORT LIST - VOLATILE ORGANIC COMPOUNDS (VOC) - SOIL - Turnaround Time: 24-48 Hours	11	Test		$0.00
45	PA DEP SHORT LIST - SEMI VOLATILE ORGANIC COMPOUNDS (SVOC) - SOIL - Turnaround Time: Normal Time	13	Test		$0.00
46	PA DEP SHORT LIST - SEMI VOLATILE ORGANIC COMPOUNDS (SVOC) - SOIL - Turnaround Time: 1 Week	6	Test		$0.00
47	PA DEP SHORT LIST - SEMI VOLATILE ORGANIC COMPOUNDS (SVOC) - SOIL - Turnaround Time: 24-48 Hours	4	Test		$0.00
48	Benzene, Toluene, Ethyl Benzene, Xylenes (BTEX) - Soil Test, Normal Time	1	Test		$0.00
49	Benzene, Toluene, Ethyl Benzene, Xylenes (BTEX) - Soil Test, 1 Week	1	Test		$0.00
50	Benzene, Toluene, Ethyl Benzene, Xylenes (BTEX) - Soil Test, 24-48 Hours	1	Test		$0.00
51	Target Compound Volatile Organics - Soil Test, Normal Time	21	Test		$0.00
52	Target Compound Volatile Organics - Soil Test, 1 Week	3	Test		$0.00
53	Target Compound Volatile Organics - Soil Test, 24-48 Hours	1	Test		$0.00
54	Target Compound Semi Volatile Organics - Soil Test, Normal Time	19	Test		$0.00
55	Target Compound Semi Volatile Organics - Soil Test, 1 Week	3	Test		$0.00
56	Target Compound Semi Volatile Organics - Soil Test, 24-48 Hours	1	Test		$0.00
57	Priority Pollutant Metals (Inorganics) - Soil Test, Normal Time	5	Test		$0.00
58	Priority Pollutant Metals (Inorganics) - Soil Test, 1 Week	1	Test		$0.00
59	Priority Pollutant Metals (Inorganics) - Soil Test, 24-48 Hours	1	Test		$0.00
60	Target Analyte List (Inorganics/Metals) - Soil Test, Normal Time	1	Test		$0.00
61	Target Analyte List (Inorganics/Metals) - Soil Test, 1 Week	1	Test		$0.00

62	Target Analyte List (Inorganics/Metals) - Soil Test, 24-48 Hours	1	Test		$0.00
63	Total Lead - Soil Test, Normal Time	22	Test		$0.00
64	Total Lead - Soil Test, 1 Week	17	Test		$0.00
65	Total Lead - Soil Test, 24-48 Hours	10	Test		$0.00
66	Pesticides/Herbicides - Soil Test, Normal Time	6	Test		$0.00
67	Pesticides/Herbicides - Soil Test, 1 Week	1	Test		$0.00
68	Pesticides/Herbicides - Soil Test, 24-48 Hours	1	Test		$0.00
69	PCB Bulk Sample - Soil Test, Normal Time	10	Test		$0.00
70	PCB Bulk Sample - Soil Test, 1 Week	2	Test		$0.00
71	PCB Bulk Sample - Soil Test, 24-48 Hours	1	Test		$0.00
72	Polynuclear Aromatic Hydrocarbons - Soil Test, Normal Time	1	Test		$0.00
73	Polynuclear Aromatic Hydrocarbons - Soil Test, 1 Week	1	Test		$0.00
74	Polynuclear Aromatic Hydrocarbons - Soil Test, 24-48 Hours	1	Test		$0.00
75	Hazardous Characteristics/Ignitability - Soil Test, Normal Time	6	Test		$0.00
76	Hazardous Characteristics/Ignitability - Soil Test, 1 Week	1	Test		$0.00
77	Hazardous Characteristics/Ignitability - Soil Test, 24-48 Hours	1	Test		$0.00
78	Hazardous Characteristics/Reactivity - Soil Test, Normal Time	7	Test		$0.00
79	Hazardous Characteristics/Reactivity - Soil Test, 1 Week	2	Test		$0.00
80	Hazardous Characteristics/Reactivity - Soil Test, 24-48 Hours	1	Test		$0.00
81	Hazardous Characteristics/Corrosivity - Soil Test, Normal Time	4	Test		$0.00
82	Hazardous Characteristics/Corrosivity - Soil Test, 1 Week	1	Test		$0.00
83	Hazardous Characteristics/Corrosivity - Soil Test, 24-48 Hours	1	Test		$0.00
84	TCLP/Metals - Soil Test, Normal Time	3	Test		$0.00
85	TCLP/Metals - Soil Test, 1 Week	2	Test		$0.00
86	TCLP/Volatiles - Soil Test, Normal Time	4	Test		$0.00
87	TCLP/Volatiles - Soil Test, 1 Week	1	Test		$0.00
88	TCLP/Semi Volatiles - Soil Test, Normal Time	2	Test		$0.00
89	TCLP/Semi Volatiles - Soil Test, 1 Week	1	Test		$0.00
90	Full TCLP - Soil Test, Normal Time	6	Test		$0.00
91	Full TCLP - Soil Test, 1 Week	1	Test		$0.00
92	Synthetic Precipitation Leaching Procedure/Method 1312 - Soil Test, Normal Time	1	Test		$0.00
93	Synthetic Precipitation Leaching Procedure/Method 1312 - Soil Test, 1 Week	1	Test		$0.00
94	ASTM Leaching Procedure - Soil Test, Normal Time	1	Test		$0.00
95	ASTM Leaching Procedure - Soil Test, 1 Week	1	Test		$0.00
96	Full Priority Pollutant List - Soil Test, Normal Time	1	Test		$0.00
97	Full Priority Pollutant List - Soil Test, 1 Week	1	Test		$0.00
98	Full Priority Pollutant List - Soil Test, 24-48 Hours	1	Test		$0.00
99	Total Organic Halogens (TOX) - Soil Test, Normal Time	1	Test		$0.00
100	Total Organic Halogens (TOX) - Soil Test, 1 Week	1	Test		$0.00
101	Total Organic Halogens (TOX) - Soil Test, 24-48 Hours	75	Test		$0.00
102	Bulk Asbestos by PLM - ~~Soil~~ Solids Test, Normal Time	1	Test		$0.00
103	Bulk Asbestos by PLM - ~~Soil~~ Solids Test, 1 Week	1305	Test		$0.00
104	Bulk Asbestos by PLM - ~~Soil~~ Solids Test, 24-48 Hours	154	Test		$0.00
105	Total Petroleum Hydrocarbons/Gasoline Range Organics (TPH/GRO) - Soil Test, Normal Time	6	Test		$0.00
106	Total Petroleum Hydrocarbons/Gasoline Range Organics (TPH/GRO) - Soil Test, 1 Week	1	Test		$0.00
107	Total Petroleum Hydrocarbons/Gasoline Range Organics (TPH/GRO) - Soil Test, 24-48 Hours	1	Test		$0.00
108	Total Petroleum Hydrocarbons/Diesel Range Organics (TPH/DRO) - Soil Test, Normal Time	4	Test		$0.00

109	Total Petroleum Hydrocarbons/Diesel Range Organics (TPH/DRO) - Soil Test, 1 Week	1	Test		$0.00
110	Total Petroleum Hydrocarbons/Diesel Range Organics (TPH/DRO) - Soil Test, 24-48 Hours	3	Test		$0.00
111	Total Oil and Grease for Petroleum Hydrocarbons - Soil Test, Normal Time	2	Test		$0.00
112	Total Oil and Grease for Petroleum Hydrocarbons - Soil Test, 1 Week	1	Test		$0.00
113	Total Oil and Grease for Petroleum Hydrocarbons - Soil Test, 24-48 Hours	1	Test		$0.00
114	Road Salt Constituents/Chloride Sodium Magnesium Calcium - Soil Test, Normal Time	1	Test		$0.00
115	Road Salt Constituents/Chloride Sodium Magnesium Calcium - Soil Test, 1 Week	1	Test		$0.00
116	Road Salt Constituents/Chloride Sodium Magnesium Calcium - Soil Test, 24-48 Hours	1	Test		$0.00
117	Total Solids - Soil Test, Normal Time	84	Test		$0.00
118	Total Solids - Soil Test, 1 Week	27	Test		$0.00
119	Total Solids - Soil Test, 24-48 Hours	8	Test		$0.00
120	pH - Soil Test, Normal Time	1	Test		$0.00
121	pH - Soil Test, 1 Week	1	Test		$0.00
122	pH - Soil Test, Soil Test, 24-48 Hours	1	Test		$0.00

LABORATORY ANALYSIS - PA DEP SHORT LIST - LIQUIDS: Laboratory line item prices shall be for a Level 1 data package. Level 1 package shall consist of sample analysis results, including method detection limits, appropriate QA/QC results, and chain-of custody forms. Laboratory line item prices shall include disposal fee for all unused portions of sample. All laboratory analyses shall be in accordance with the PA DEP/US EPA methodology accepted at the time of work.

Line items will include any future additions by DEP to the VOC Short List, provided that analysis for the additional short list items may be performed at no additional cost by the laboratory. Liquid sample containers, preservatives, and field filtration equipment, for the purposes of this contract, are considered to be included in the line item prices for laboratory services. Sample analysis costs shall include sample collection labor, sample collection equipment (e.g. sample containers, SUMMA canisters and appurtenances, coolers, filters, ice and chemical preservatives, chain-of-custody forms, etc.), and the laboratory analysis costs.

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
123	PA DEP SHORT LIST - VOLATILE ORGANIC COMPOUNDS (VOC)- LIQUIDS - Turnaround Time: Normal Time	29	Test		$0.00
124	PA DEP SHORT LIST - VOLATILE ORGANIC COMPOUNDS (VOC)- LIQUIDS - Turnaround Time: 1 Week	25	Test		$0.00
125	PA DEP SHORT LIST - VOLATILE ORGANIC COMPOUNDS (VOC)- LIQUIDS - Turnaround Time: 24-48 Hours	3	Test		$0.00
126	PA DEP SHORT LIST - SEMI VOLATILE ORGANIC COMPOUNDS (SVOC)- LIQUIDS - Turnaround Time: Normal Time	9.2	Test		$0.00
127	PA DEP SHORT LIST - SEMI VOLATILE ORGANIC COMPOUNDS (SVOC) - LIQUIDS - Turnaround Time: 1 Week	1	Test		$0.00
128	PA DEP SHORT LIST - SEMI VOLATILE ORGANIC COMPOUNDS (SVOC)- LIQUIDS - Turnaround Time: 24-48 Hours	1	Test		$0.00
129	PA DEP SHORT LIST - DIBROMOETHANE, 1,2 - (EDB) - LIQUIDS - Turnaround Time: Normal Time	19	Test		$0.00
130	PA DEP SHORT LIST - DIBROMOETHANE, 1,2 - (EDB) - LIQUIDS - Turnaround Time: 1 Week	3	Test		$0.00
131	PA DEP SHORT LIST - DIBROMOETHANE, 1,2 - (EDB) - LIQUIDS - Turnaround Time: 24-48 Hours	1	Test		$0.00
132	Dissolved Lead - Liquid Test, Normal Time	18	Test		$0.00
133	Dissolved Lead - Liquid Test, 1 Week	3	Test		$0.00
134	Dissolved Lead - Liquid Test, 24-48 Hours	13	Test		$0.00
135	Pesticides/Herbicides - Liquid Test, Normal Time	1	Test		$0.00

136	Pesticides/Herbicides - Liquid Test, 1 Week	1	Test		$0.00
137	Pesticides/Herbicides - Liquid Test, 24-48 Hours	1	Test		$0.00
138	Polychlorinated Biphenyls (PCBs) - Liquid Test, Normal Time	1	Test		$0.00
139	Polychlorinated Biphenyls (PCBs) - Liquid Test, 1 Week	1	Test		$0.00
140	Polychlorinated Biphenyls (PCBs) - Liquid Test, 24-48 Hours	1	Test		$0.00
141	Polynuclear Aromatic Hydrocarbons - Liquid Test, Normal Time	1	Test		$0.00
142	Polynuclear Aromatic Hydrocarbons - Liquid Test, 1 Week	1	Test		$0.00
143	Polynuclear Aromatic Hydrocarbons - Liquid Test, 24-48 Hours	1	Test		$0.00
144	Hazardous Characteristics/Ignitability - Liquid Test, Normal Time	1	Test		$0.00
145	Hazardous Characteristics/Ignitability - Liquid Test, 1 Week	1	Test		$0.00
146	Hazardous Characteristics/Ignitability - Liquid Test, 24-48 Hours	1	Test		$0.00
147	Hazardous Characteristics/Reactivity - Liquid Test, Normal Time	1	Test		$0.00
148	Hazardous Characteristics/Reactivity - Liquid Test, 1 Week	1	Test		$0.00
149	Hazardous Characteristics/Reactivity - Liquid Test, 24-48 Hours	1	Test		$0.00
150	Hazardous Characteristics/Corrosivity - Liquid Test, Normal Time	1	Test		$0.00
151	Hazardous Characteristics/Corrosivity - Liquid Test, 1 Week	1	Test		$0.00
152	Hazardous Characteristics/Corrosivity - Liquid Test, 24-48 Hours	1	Test		$0.00
153	Total Organic Halogens (TOX) - Liquid Test, Normal Time	1	Test		$0.00
154	Total Organic Halogens (TOX) - Liquid Test, 1 Week	1	Test		$0.00
155	Total Organic Halogens (TOX) - Liquid Test, 24-48 Hours	1	Test		$0.00
156	Total Petroleum Hydrocarbons/Gasoline Range Organics (TPH-GRO) - Liquid Test, Normal Time	1	Test		$0.00
157	Total Petroleum Hydrocarbons/Gasoline Range Organics (TPH-GRO) - Liquid Test, 1 Week	1	Test		$0.00
158	Total Petroleum Hydrocarbons/Gasoline Range Organics (TPH-GRO) - Liquid Test, 24-48 Hours	1	Test		$0.00
159	Total Petroleum Hydrocarbons/Diesel Range Organics (TPH-DRO) - Liquid Test, Normal Time	1	Test		$0.00
160	Total Petroleum Hydrocarbons/Diesel Range Organics (TPH-DRO) - Liquid Test, 1 Week	1	Test		$0.00
161	Total Petroleum Hydrocarbons/Diesel Range Organics (TPH-DRO) - Liquid Test, 24-48 Hours	1	Test		$0.00
162	Total Oil and Grease for Petroleum Hydrocarbons - Liquid Test, Normal Time	2	Test		$0.00
163	Total Oil and Grease for Petroleum Hydrocarbons - Liquid Test, 1 Week	1	Test		$0.00
164	Total Oil and Grease for Petroleum Hydrocarbons - Liquid Test, 24-48 Hours	1	Test		$0.00
165	Road Salt Constituents/Chloride Sodium Magnesium Calcium - Liquid Test, Normal Time	1	Test		$0.00
166	Road Salt Constituents/Chloride Sodium Magnesium Calcium - Liquid Test, 1 Week	1	Test		$0.00
167	Road Salt Constituents/Chloride Sodium Magnesium Calcium - Liquid Test, 24-48 Hours	1	Test		$0.00
168	pH - Liquid Test, Normal Time	3	Test		$0.00
169	pH - Liquid Test, 1 Week	1	Test		$0.00
170	pH - Liquid Test, 24-48 Hours	1	Test		$0.00

LAB ANALYSIS - Air: Laboratory line item prices shall be for a Level 1 data package. Level 1 package shall consist of sample analysis results, including method detection limits, appropriate QA/QC results, and chain-of custody forms. Laboratory line item prices shall include disposal fee for all unused portions of sample. All laboratory analyses shall be in accordance with the PA DEP/US EPA methodology accepted at the time of work.

Line items will include any future additions by DEP to the VOC Short List, provided that analysis for the additional short list items may be performed at no additional cost by the laboratory. Air sample containers, preservatives, and field filtration equipment, for the purposes of this contract, are considered to be included in the line item prices for laboratory services. Sample analysis costs shall include sample collection labor, sample collection equipment (e.g. sample containers, SUMMA canisters and appurtenances, coolers, filters, ice and chemical preservatives, chain-of-custody forms, etc.), and the laboratory analysis costs.

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
171	Volatile Organic Compounds (TO/15) - Air Test, Normal Time	1	Test		$0.00
172	Volatile Organic Compounds (TO/15) - Air Test, 1 Week	1	Test		$0.00
173	Volatile Organic Compounds (TO/15) - Air Test, 24-48 Hours	1	Test		$0.00
174	Semi/Volatile Organic Compounds (TO/13A) - Air Test, Normal Time	1	Test		$0.00
175	Semi/Volatile Organic Compounds (TO/13A) - Air Test, 1 Week	1	Test		$0.00
176	Semi/Volatile Organic Compounds (TO/13A) - Air Test, 24-48 Hours	1	Test		$0.00
177	Airborne Asbestos by TEM - Air Test, Normal Time	2	Test		$0.00
178	Airborne Asbestos by TEM - Air Test, 1 Week	1	Test		$0.00
179	Airborne Asbestos by TEM - Air Test, 24-48 Hours	7	Test		$0.00
180	Airborne Asbestos by PCM (NIOSH/Method 7400) - Air Test, Normal Time	5	Test		$0.00
181	Airborne Asbestos by PCM (NIOSH/Method 7400) - Air Test, 1 Week	1	Test		$0.00
182	Airborne Asbestos by PCM (NIOSH/Method 7400) - Air Test, 24-48 Hours	298	Test		$0.00

HEALTH AND SAFETY EQUIPMENT:
All personnel shall adhere to OSHA Standard 1910.120, App B, General Description and Discussion of the Levels of Protection and Protective Equipment.
The Supplier will not be reimbursed for any personal protective clothing and equipment required for performing work under this Contract.

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
183	Additional Labor Premium for Level B Work This shall include all necessary PPE (i.e. chemical resistant clothing/Tyvek pressure demand SCBA or airline respirator communications device personal contaminant monitoring devices etc.	1	Hour		$0.00
184	Additional Labor Premium for Level C Work This shall include all necessary PPE (i.e. chemical resistant clothing/Tyvek respirator & cartridges communication device personal contaminant monitoring devices)	5	Hour		$0.00

GENERAL EQUIPMENT: Hand tools and small power tools, for purposes of this contract, are considered to be included in the line item prices for labor classifications. **8 hr. are included in a "day".** Soil/sediment/debris and liquid sample containers, preservatives, and field filtration equipment, for the purposes of this contract, are considered to be included in the line item prices for laboratory services.
Note: Ice for sample storage and transport is considered a preservative, and is not billable under this Contract.

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
185	Explosion Proof Lighting	53	Day		$0.00
186	Photo ionization Detector (PID)	3	Day		$0.00
187	Flame Ionization Detector (FID)	1	Day		$0.00
188	Combustible Gas Indicator/Oxygen Meter (Multi Gas Meter)	3	Day		$0.00

189	Specific Conductance Meter/pH Meter	1	Day		$0.00
190	Water level Meter (Interface Probe)	2	Day		$0.00
191	Multi Parameter Water Quality Meter to support low flow groundwater sampling	3	Day		$0.00
192	Steam Pressure Washer	1	Day		$0.00
193	Data Logger (including Field Computer)	1	Day		$0.00
194	Digital Camera	1	Day		$0.00
195	Decon Trailer	1	Day		$0.00
196	Water Storage Pool with 30 mil thick liner (1000-5000 gallon capacity)	1	Day		$0.00
197	85 gallon overpack (DOT 17H)	1	Each		$0.00
198	110 gallon overpack (DOT 17H)	1	Each		$0.00
199	Generator < 48kW	22	Day		$0.00
200	Generator 48 - 100kW	1	Day		$0.00
201	Generator 100 - 240kW	1	Day		$0.00
202	Generator > 240kW	1	Day		$0.00
203	Soil Core drilling & sampling equipment Geoprobe or equivalent with all necessary tools supplies and labor Truck Mounted Rig (Track mounted rig is Line Item 208)	1	Day		$0.00
204	Soil Core drilling & sampling equipment SonicDrillCorp or equivalent with all necessary tools supplies and labor Truck Mounted Rig (Track mounted rig is Line Item 209)	1	Day		$0.00
205	Soil Core drilling & sampling equipment VTR or equivalent with all necessary tools supplies and labor Truck Mounted Rig (Track mounted rig is Line Item 255)	1	Day		$0.00
206	Soil Core drilling & sampling equipment Simco, or equivalent with all necessary tools supplies and labor Truck Mounted Rig (Track mounted rig is Line Item 256)	1	Day		$0.00
207	Soil Core drilling & sampling equipment AMS, or equivalent with all necessary tools supplies and labor Truck Mounted Rig (Track mounted rig is Line Item 257)	1	Day		$0.00
208	Soil Core drilling & sampling equipment Geoprobe or equivalent with all necessary tools supplies and labor Track Mounted Rig	1	Day		$0.00
209	Soil Core drilling & sampling equipment SonicDrillCorp or equivalent with all necessary tools supplies and labor Track Mounted Rig	1	Day		$0.00
210	GPR & Magnetometer Survey to include all equipment materials labor and documentation Contractor shall assume survey area to be 40000 sq ft	1	Day		$0.00
211	Buried Pipe/Metal Detector	1	Day		$0.00
212	Well Sampling Field Consumables	25	Each		$0.00
213	Diaphragm Pump (4 inch min 6000 gal/hr.)	1	Day		$0.00
214	Submersible Pump (<20 gals/minute)	4	Day		$0.00
215	Submersible Pump (>20 gals/minute)	1	Day		$0.00
216	Bladder Pump (max 20 gals/min)	1	Day		$0.00
217	Oil/Water Separator (<50 gpm)	1	Day		$0.00
218	Oil/Water Separator (>50 gpm)	1	Day		$0.00
219	Vacuum Straight Truck 500 - 1,500 gal. (includes Driver/Operator)	1	Day		$0.00
220	Vacuum Straight Truck 1,501 - 2,999 gal. (includes Driver/Operator)	1	Day		$0.00
221	Vacuum Straight Truck 3,000 - 3,999 gal. (includes Driver/Operator)	1	Day		$0.00
222	Vactors/Cusco/Supersuckers (does not include vacuum excavators) (includes Driver/Operator)	1	Day		$0.00
223	Soft Excavation Hydro Excavation Vacuum Equipment (includes Driver/Operator)	1	Day		$0.00
224	Soft Excavation Air (dry) Excavation Vacuum Equipment (includes Driver/Operator)	1	Day		$0.00
225	Skid Loader < 2,500 lb	1	Day		$0.00
226	Skid Loader > 2,500 lb	1	Day		$0.00
227	Wheel Loader Articulating <2.5 cu. yd.	1	Day		$0.00
228	Wheel Loader Articulating <4 cu. yd.	1	Day		$0.00

229	Wheel Loader Articulating >4 cu. yd.	1	Day		$0.00
230	Bull Dozer <100 hp	1	Day		$0.00
231	Bull Dozer 100 - 149 hp	1	Day		$0.00
232	Bull Dozer >149 hp	1	Day		$0.00
233	Mini Excavator <6 ton	1	Day		$0.00
234	Excavator 6-10 ton	1	Day		$0.00
235	Excavator 10-45 ton	1	Day		$0.00
236	Excavator > 45 ton	1	Day		$0.00
237	Backhoe Loader Mini Backhoe/ Terramite type	1	Day		$0.00
238	Backhoe Loader Standard type/ 310 John Deere/580 Case	1	Day		$0.00
239	Backhoe Loader Large type/ 410 John Deere/ 590 Case	1	Day		$0.00
240	Skip Loader/ Landscape Tractor < 39 hp with attachments	1	Day		$0.00
241	Skip Loader/ Landscape Tractor 40 - 49 hp with attachments	1	Day		$0.00
242	Skip Loader/ Landscape Tractor 65 - 75 hp with attachments	1	Day		$0.00
243	Skip Loader/ Landscape Tractor >75 hp with attachments	1	Day		$0.00
244	Trencher Walk-Behind	1	Day		$0.00
245	Ride-On Trencher 30-39 hp	1	Day		$0.00
246	Ride-On Trencher 90-99 hp	1	Day		$0.00
247	Ride-On Trencher 120-130 hp	1	Day		$0.00
248	Frac Tank rental up to 21,000 gal. (treatment, testing, processing and transportation of tank to and from site are non-invoiced items and are passed through at cost)	1	Day		$0.00
249	Refrigerant Gasses Recovery	1	Pound		$0.00
254	AST/UST Pipe Cleaning (petroleum related)	1	Linear Feet		$0.00
255	Soil Core drilling & sampling equipment VTR or equivalent with all necessary tools supplies and labor Track Mounted Rig	1	Day		$0.00
256	Soil Core drilling & sampling equipment Simco, or equivalent with all necessary tools supplies and labor Track Mounted Rig	1	Day		$0.00
257	Soil Core drilling & sampling equipment AMS, or equivalent with all necessary tools supplies and labor Track Mounted Rig	1	Day		$0.00

ASBESTOS INSPECTION SERVICES: Asbestos Facility Inspections shall include all necessary equipment, labor, materials, incidentals, documentation, and certification fees for inspection reports, necessary for sample collection and determination of ACM within the structure. All asbestos inspectors and Supervisors must have current PA Department of Labor & Industry (L&I) Certification. All friable and non-friable suspected ACM shall be sampled, analyzed, and reported in order to verify the presence, or absence of asbestos. Sampling protocols and reporting format shall be consistent with 40 CFR 763, Subpart E (AHERA) for building inspections. In addition, all reports shall include copies of sample analysis. Report preparation may be performed and invoiced under labor classification line items; not asbestos inspection line items.

For asbestos survey work assignments that involve up to 25 structures: mobilization charges shall be determined by inspector's actual travel time, based on the shortest distance to the project site, times the hourly rate (line Item ~~210~~ 258). The awarded supplier(s) shall be allowed or paid per diem expenses for asbestos survey work assignments that involve less than 25 structures (Line Item ~~210~~ 258).

For work assignments involving greater than 25 structures: mobilization charges and per diem expenses shall be in accordance with Cost No Mark-Up Items (Subsistence, Lodging, Travel, Mileage and Non-Invoice services and equipment).

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
258	Asbestos Facility Inspection	652	Hour		$0.00

ASBESTOS ABATEMENT SERVICES: Asbestos abatement services shall include all necessary equipment, labor, materials, incidentals, notifications, documentation, and certification fees for the abatement of ACM/PACM within the structure. All asbestos abatement will be in accordance with all applicable federal, state and local laws and regulations. The cost to have ~~inspectors~~ Supervisors receive and maintain any contractor safety and/or training necessary to access rail lines, etc. shall be incidental to the Contract and borne by the Supplier at no cost to PennDOT. At least one L&I certified Supervisor shall be on-site and act as the OSHA competent person at all times. Asbestos abatement shall be performed so as not to cause asbestos contamination in adjacent areas. PCM clearance air testing shall be performed in work areas. PCM clearance criteria is <0.01 f/cc (fibers/cubic centimeter). **Asbestos clearance sampling and analyses cost should not be included in the unit price. All individuals performing asbestos abatement services must have current PA Department of Labor & Industry (L&I) Certification.**

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
259	Class I Asbestos Abatement	1,421	Linear Feet		$0.00
260	Class I Asbestos Abatement	6,552	Square Feet		$0.00
261	Class II Asbestos Abatement	6,539	Linear Feet		$0.00
262	Class II Asbestos Abatement	23,738	Square Feet		$0.00

ABOVEGROUND STORAGE TANK SYSTEM REMOVAL: Price shall include all necessary equipment, tools materials, labor and permits for the removal of tank and appurtenances (i.e. pedestal, containment structure and footer, etc.), disposal of the tank and appurtenances, and completion of closure sampling, analysis, and documentation (including PA Department of Environmental Protection (DEP) notifications and reporting, if required). For the purposes of the offerors submission, this service does NOT include remediation or follow-up investigation.

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
263	<1000 Gallon Petroleum AST	5	Each		$0.00
264	1000 - 6000 Gallon Petroleum AST	1	Each		$0.00
265	Liquid Chloride Solution AST	1	Each		$0.00

UNDERGROUND STORAGE TANK SYSTEM REMOVAL: Price shall include all necessary equipment, tools, materials, labor, and permits for the excavation and removal of the tank system, disposal of the tank and appurtenances, and completion of the PA DEP Underground Storage Tank closure sampling, analysis, and documentation (i.e. PA DEP, PA L&I notifications and reporting).

Closure reporting shall follow the PA DEP Storage Tank and Spill Prevention Act, Corrective Action Regulations format for site characterization. Contractor shall follow the American Petroleum Institute (API) Recommended Practice 1604: Removal and disposal of used underground storage tanks.

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
266	<2500 Gallon UST	10	Each		$0.00
267	2500 - 5500 Gallon UST Fiberglass or Single Walled Steel	4	Each		$0.00
268	2500 - 5500 Gallon UST Double Walled Steel	1	Each		$0.00
269	5500 - 11000 Gallon UST Fiberglass or Single Walled Steel	2	Each		$0.00
270	5500 - 11000 Gallon UST Double Walled Steel	1	Each		$0.00

WASTE DISPOSAL SERVICES: Price shall include temporary (on-site) storage, staging, containers, loading, transportation, preparation of waste disposal documents, and waste disposal fee. Services may include waste identification (characterization), excavation, containment and selective placement (in accordance with PennDOT Publication 408, current edition) of contaminated media on-site, such that the effected work area is returned to a Level D health and safety condition.

NOTE: Offerors shall enter the percentage mark-up they will be charging in addition to the actual cost. The COST ESTIMATE COLUMN is the estimated cost and only being used for cost evaluation purposes for this RFP.
All items must have a percentage; an entry of 0.00% shall indicate Offeror will provide service at cost with no mark-up. A blank line item(s) may be cause for rejection.

Because Asphalt Emulsion Waste may be semi-solid in warm weather, but solid in cold weather, the proper line item to use will depend upon the time of the year that an Aboveground Storage Tank will be removed. Therefore, line item 276, Asphalt Emulsion Waste (semisolids), should be used during warm weather while line item 272, Residual Waste, should be used during cold weather.

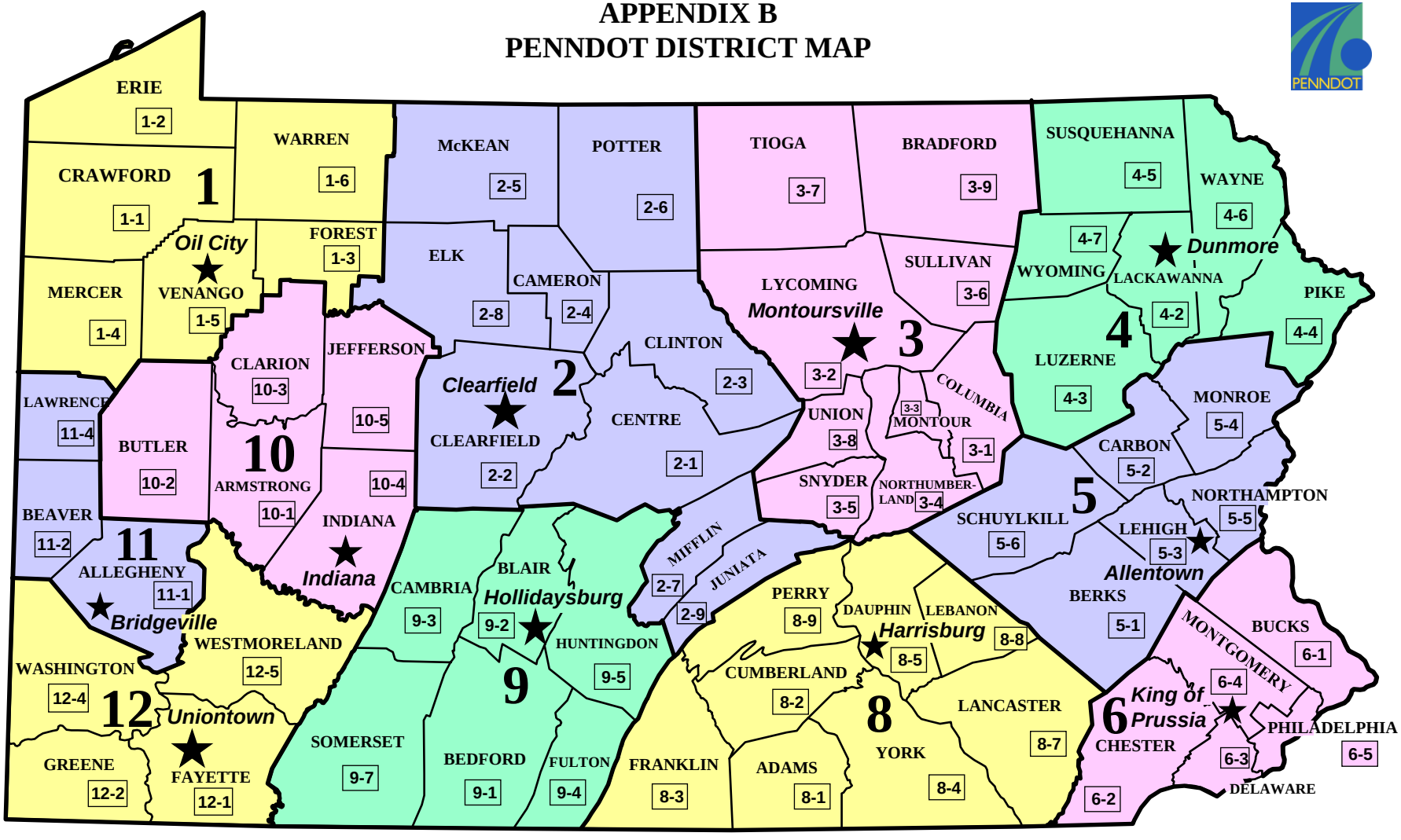
LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED COST	ESTIMATED QUANTITY	UNIT OF MEASURE	Cost + %	EXTENDED PRICE
271	Municipal Waste	$1.15	4,246	Ton		$4,882.90
272	Residual Waste (other than Line Items 275, 276, 280)	$1.10	172,807	Ton		$190,087.70
273	Universal Waste	$80.00	1	Ton		$80.00
274	Hazardous Waste	$80.00	1	Ton		$80.00
275	Petroleum Contaminated Media & Debris	$1.10	371,299	Ton		$408,428.90
276	Asphalt Emulsion Waste (semisolids)	$1.10	238	Gallon		$261.80
277	Asbestos Containing Waste	$1.10	17,268	Cubic Yard		$18,994.80
278	Asbestos Containing Waste	$75.00	1	Ton		$75.00
279	PCB Waste (PCB waste greater than 2 ppm but less than 50 ppm)	$50.00	1	Ton		$50.00
280	Contaminated Liquids (Residual)	$1.10	22,492	Gallon		$24,741.20
281	Petroleum Contaminated Liquids (Hazardous)	$1.10	16,129	Gallon		$17,741.90
282	Septic waste water (Septic Tank Clean-Out)	$0.035	1	Gallon		$0.04
				TOTAL COST =		**$665,424.24**

EXHIBIT E

Environmental Remediation Services 6100052061

APPENDIX B REGIONAL DISTRICT MAP

APPENDIX B
PENNDOT DISTRICT MAP



LEGEND

★ – District Office

☐ – Maintenance District Number

EXHIBIT E

Environmental Remediation Services 6100052061

APPENDIX C – SHORT LIST OF PETROLEUM PRODUCTS

Table III-5: Short List of Petroleum Products

PRODUCT STORED	PARAMETERS TO BE TESTED IN SOIL	ANALYTICAL METHOD (reported on a dry weight basis)	PARAMETERS TO BE TESTED IN WATER	ANALYTICAL METHOD[1]
Leaded Gasoline, Aviation Gasoline, and Jet Fuel	Benzene Toluene Ethyl Benzene Xylenes (total) Cumene (Isopropylbenzene) (Isopropylbenzene) Naphthalene Trimethyl benzene, 1,2,4- (Trimethyl benzene, 1,3,4-) Trimethyl benzene, 1,3,5- Dichloroethane, 1,2- Dibromoethane, 1,2- Dibromide)	EPA Method 5035/8021B or 5035/8260B	Benzene Toluene Ethyl Benzene Xylenes (total) Cumene (Isopropylbenzene) (Isopropylbenzene) Naphthalene Trimethyl benzene, 1,2,4- (Trimethyl benzene, 1,3,4-) Trimethyl benzene, 1,3,5- Dichloroethane, 1,2- Dibromoethane, 1,2-(Ethylene	EPA Method 5030B/8021B, 5030B/8260B or 524.2 EPA Method 8011 or 504.1
	Lead (total)	EPA Method 6010B or 7420	Lead (dissolved)	EPA Method 6020, 7421, 200.7, 200.8, or 200.9
Unleaded Gasoline	Benzene Toluene Ethyl Benzene Xylenes (total) Cumene (Isopropylbenzene) (Isopropylbenzene) Methyl tert-Butyl Ether (MTBE) Naphthalene Trimethyl benzene, 1,2,4- (Trimethyl benzene, 1,3,4-) Trimethyl benzene, 1,3,5-	EPA Method 5035/8260B	Benzene Toluene Ethyl Benzene Xylenes (total) Cumene (Isopropylbenzene) (Isopropylbenzene) Methyl tert-Butyl Ether (MTBE) Naphthalene Trimethyl benzene, 1,2,4- (Trimethyl benzene, 1,3,4-) Trimethyl benzene, 1,3,5-	EPA Method 5030B/8260B or 524.2
Kerosene, Fuel Oil No. 1	Benzene Toluene Ethyl Benzene Cumene (Isopropylbenzene) (Isopropylbenzene) Methyl tert-Butyl Ether Naphthalene Trimethyl benzene, 1,2,4- (Trimethyl benzene, 1,3,4-) Trimethyl benzene, 1,3,5-	EPA Method 5035/8260B	Benzene Toluene Ethyl Benzene Cumene (Isopropylbenzene) (Isopropylbenzene) Methyl tert-Butyl Ether Naphthalene Trimethyl benzene, 1,2,4- (Trimethyl benzene, 1,3,4-) Trimethyl benzene, 1,3,5-	EPA Method 5030B/8260B or 524.2
Diesel Fuel, Fuel Oil No. 2	Benzene Toluene Ethyl Benzene Cumene (Isopropylbenzene) (Isopropylbenzene) Methyl tert-Butyl Ether Naphthalene Trimethyl benzene, 1,2,4- (Trimethyl benzene, 1,3,4-) Trimethyl benzene, 1,3,5-	EPA Method 5035/8260B	Benzene Toluene Ethyl Benzene Cumene (Isopropylbenzene) (Isopropylbenzene) Methyl tert-Butyl Ether Naphthalene Trimethyl benzene, 1,2,4- (Trimethyl benzene, 1,3,4-) Trimethyl benzene, 1,3,5-	EPA Method 5030B/8260B or 524.2

Table III-5: Short List of Petroleum Products (cont.)

PRODUCT STORED	PARAMETERS TO BE TESTED IN SOIL	ANALYTICAL METHOD (reported on a dry weight basis)	PARAMETERS TO BE TESTED IN WATER	ANALYTICAL METHOD[1]
Fuel Oil Nos. 4, 5 and 6, and Lubricating Oils and Fluids	Benzene Naphthalene	EPA Method 5035/8021B or 5035/8260B	Benzene Naphthalene	EPA Method 5030B/8021B, 5030B/8260B or 524.2
	Fluorene Anthracene Phenanthrene Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(a)pyrene Benzo(g,h,i)perylene	EPA Method 8270C or 8310	Phenanthrene Pyrene Chrysene	EPA Method 8270C, 8310 or 525.2
Used Motor Oil	Benzene Toluene Ethyl Benzene Cumene (Isopropylbenzene) Naphthalene	EPA Method 5035/8021B or 5035/8260B	Benzene Toluene Ethyl Benzene Cumene (Isopropylbenzene) Naphthalene	EPA Method 5030B/8021B, 5030B/8260B or 524.2
	Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Benzo(g,h,i)perylene	EPA Method 8270C or 8310	Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Benzo(g,h,i)perylene	EPA Method 525.2
	Lead (total)	EPA Method 6010B or 7420	Lead (dissolved)	EPA Method 6020, 7421, 200.7, 200.8, or 200.9
Mineral Insulating Oil	PCB-1016 (Aroclor) PCB-1221 (Aroclor) PCB-1232 (Aroclor) PCB-1242 (Aroclor) PCB-1248 (Aroclor) PCB-1254 (Aroclor) PCB-1260 (Aroclor)	EPA Method 8082	PCB-1016 (Aroclor) PCB-1221 (Aroclor) PCB-1232 (Aroclor) PCB-1242 (Aroclor) PCB-1248 (Aroclor) PCB-1254 (Aroclor) PCB-1260 (Aroclor)	EPA Method 8082 or 508A
	Trimethyl benzene, 1,2,4- (Trimethyl benzene, 1,3,4-) Trimethyl benzene, 1,3,5-	EPA Method 5035/8021B or 5035/8260B	Trimethyl benzene, 1,2,4- (Trimethyl benzene, 1,3,4-) Trimethyl benzene, 1,3,5-	EPA Method 5030B/8021B, 5030B/8260B or 524.2
Other Petroleum Products Blended Petroleum Products Unknown Petroleum Products Other Regulated Substances	Contact the DEP Regional Office responsible for the county in which the tank is located			

[1] Samples from potable water supplies must be analyzed using a method applicable to drinking water.

Notes:
When reporting nondetects (ND), the data must be accompanied by a numerical quantitation limit that takes into account dilution, sample preparation, and matrix effects.
The responsible party has the obligation to ensure that the analytical methodologies and techniques employed are suitable to provide data that meets the minimal data quality objectives outlined and referenced in this document.
Laboratories must document that samples meet all applicable preservation requirements.

EXHIBIT E

Environmental Remediation Services 6100052061

APPENDIX D – TECHNICAL ACRONYMS DEFINITIONS

TECHNICAL ACRONYMNS/DEFINITIONS:

UST – Underground Storage Tank

AST – Aboveground Storage Tank

ACM – Asbestos Containing Materials

AIHA – American Industrial Hygiene Association

Asphalt Emulsion Waste (semi-solids) – Asphalt-containing emulsion and tarry residues that require special handling due to physical properties, typically only in warm weather.

Note: Any Asphalt Emulsion Waste requiring disposal using **Line Item 276** (Asphalt Emulsion Waste-Semisolids) during warm weather may often be disposed of using **Line Item 272** (Residual Waste) in cold weather.

Class I Asbestos Abatement Work – Activities involving the removal of thermal system insulating and surfacing ACM and PACM, as defined in 29 CFR 1926.1101.

Class II Asbestos Abatement Work – Activities involving the removal of miscellaneous ACM that is not thermal system insulation or surfacing material, as defined in 29 CFR 1926.1101. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

Clean Fill - Uncontaminated, non-water soluble, inert solid material used to level an area or bring the area to grade. The term includes soil, rock, stone, dredged material, used asphalt, and brick, block or concrete from construction and demolition activities that is separate from other waste and recognizable as such. The term does not include materials placed in or on the waters of this Commonwealth.

Containers – As applied to Waste Disposal Services, the term includes any containers normally used to store waste onsite for loading onto trucks for offsite disposal, such as 55-gallon drums and roll-off containers. For purposes of this Contract, the term excludes special handling items such as overpack drums.

Hazardous Material: Defined by US DOT as any substance or material that could adversely affect the safety of the public, handlers or carriers during transportation. Divided into 9 hazardous material classes, each with its own placard designations and transportation requirements.

Hazardous Waste – Hazardous waste used in this Contract shall be as defined by Federal (40 CFR 260), or State (25 PA Code, Chapters 260-270) regulations. In addition, for purposes of this Contract, hazardous waste shall also include PCB-containing wastes, as regulated by the Toxic Substance Control Act.

Health & Safety Officer – A person who has the responsibility and authority to develop and implement the site health and safety plan and verify compliance.

Key Professional Personnel – Supplier and Subcontractor(s) personnel that are engaged in the development of technical specifications and plans, supervisory positions, and certain professional job classification, that are essential to the satisfactory performance and completion of the technical work described within. Key professional job classifications under this contract shall include, but not limited to, the following:

Project Managers, Field Foreman/Supervisors, Geologist/Hydrogeologists, Engineers (all disciplines), Chemists (all disciplines), Soil Scientists, Environmental Scientists, and Environmental Health Specialists (e.g. Certified Industrial Hygienist, Certified Safety Professionals).

Mobilization/Demobilization – Mobilization consists of the transportation of personnel, materials and equipment to and from the work site. For the purposes of this Contract, mobilization excludes project scoping meetings and preliminary site reconnaissance. Any necessary changes in services resulting in a field meeting(s) after a fully executed Purchase Order are billable.

MOU – Memorandum of Understanding

NIST – National Institute of Standards and Technology

NVLAP – National Voluntary Laboratory Accreditation Program

Non-hazardous Waste – Non-hazardous waste, used in this Contract shall be understood to mean all waste not meeting the definition of a hazardous waste, as defined in this section. Non-hazardous waste shall include, but not be limited to, residual, municipal or construction/demolition wastes, as defined by Federal or State regulations.

OSHA – Occupational Safety & Health Administration

US EPA – United States Environmental Protection Agency

PA DEP – Pennsylvania Department of Environmental Protection

PA L&I – Pennsylvania Department of Labor and Industry

PPE – Personal Protective Equipment

Petroleum-contaminated media and debris – Petroleum-contaminated waste defined as residual waste under Pa. Code §261.4(a) (17) and disposed of using DEP Forms FC-1 and Form U.

PCM – Phase Contrast Microscopy

PLM – Polarized Light Microscopy

PACM – Presumed Asbestos Containing Material

Residual Waste – Garbage, refuse, other discarded material or other waste, including solid, liquid, semisolid or contained gaseous materials resulting from industrial, mining and agricultural operations and sludge from an industrial, mining or agricultural water supply treatment facility, wastewater treatment facility or air pollution control facility, if it is not hazardous. The term does not include coal refuse as defined in the Coal Refuse Disposal Control Act. The term does not include treatment sludge's from coal mine drainage treatment plants, disposal of which is being carried on under and in compliance with a valid permit issued under the Clean Streams Law.

Site – The "site" shall mean the extent of contamination originating within the state highway right-of-way or facility property boundary and all areas in close proximity to the contamination necessary for the implementation of remedial activities to be conducted.

TSCA – Toxic Substance Control Act

TCLP – Toxicity Characteristic Leaching Procedure

SPLP – Synthetic Precipitation Leaching Procedure

TEM – Transmission Electron Microscopy

Well Sampling Consumables – Items used for groundwater sampling events and discarded afterwards, such as plastic ground liner sheeting, twine, tape, rope, deionized water, decontamination soap/detergent, disposable bailers, and disposable polyethylene tubing. For purposes of this Contract, excludes items considered laboratory services supplies, such as disposable filters for dissolved metals analysis, coolers, ice and other preservatives, sample bottles and Level D personal protective clothing such as disposable gloves.

EXHIBIT E

Environmental Remediation Services 6100052061

PRE QUOTE BDISBO PRESENTATION 6100052061

RFP # 610052061 Environmental Remediation Services

Pre-Proposal Conference

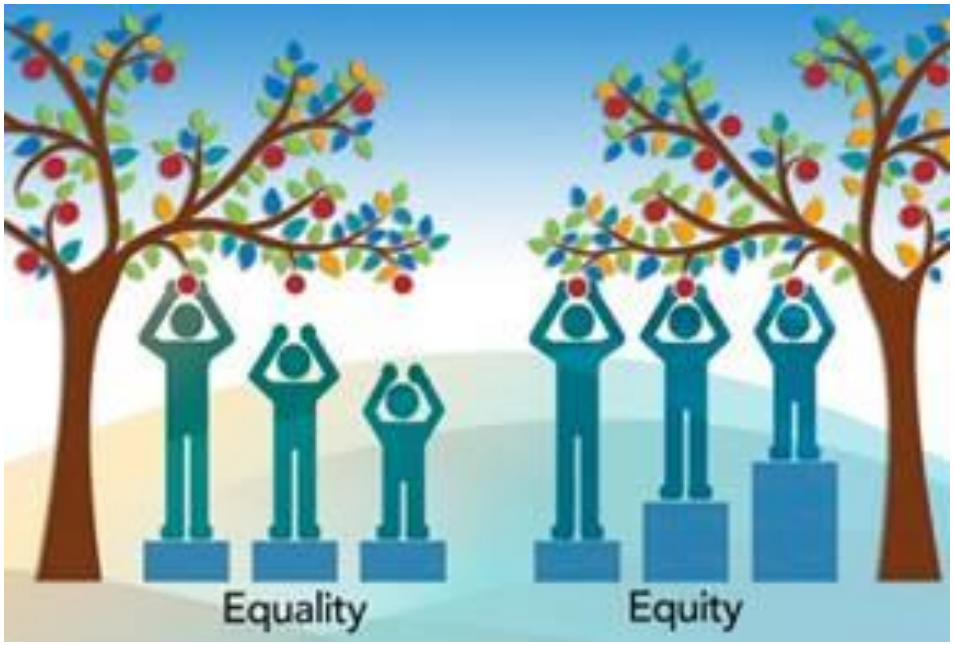
Issuing Officer –
Maurice Kujat –
mkujat@pa.gov

pennsylvania

BUREAU OF DIVERSITY, INCLUSION AND SMALL BUSINESS OPPORTUNITIES

January 10,2021 11:00am

What's the Point?



Diversity, Equity and Inclusion

inclusion means everyone

Bureau of Diversity, Inclusion and Small Business Opportunities (BDISBO)

Small Diverse Business Enterprise (SDB) and Veteran Business Enterprise (VBE) Jaggaer References:

Description

- #6. Small Diverse Business and Veteran Business Enterprise Participation
- #7. New SDB and VBE Goal Information Session
- #14. Proposal Format
- #15. Mandatory Responsiveness Requirements

Questions – RFP Questions -

- Group 1.2 - Small Diverse Business Participation
- Group 1.3 - Veteran Business Enterprise Participation

Solicitation Specific Goals

6100052061	SDB	VBE
	9%	3%

- Available subcontracting opportunities across the entire state for the applicable services,
- Availability of DGS-verified SDB/VBEs to perform commercially useful functions, and
- Historical analysis of similar projects within the last 3 years.

Primes are welcome to exceed the goal!

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SDB and VBE Classification

Vendors must self-certify as a Small Business (SB) prior to SDB/VBE validation.

SB Eligibility Requirements

- The business must be a for-profit, United States business.
- The business must be independently owned.
- The business may not be dominant in its field of operation.
- The business may not employ more than 100 full-time equivalent employees.
- The business may not exceed three-year average gross revenues of $38.5 Million, regardless of business type (effective 11/1/2018).

Small Diverse Business (SDB)

Goal oriented

- Minority Business Enterprise (MBE)
- Woman Business Enterprise (WBE)
- Service-Disabled Veteran Business Enterprise (SDVBE)
- LGBT Business Enterprise (LGBTBE)
- Disability-Owned Business Enterprise (DOBE)

Veteran Business Enterprise (VBE)

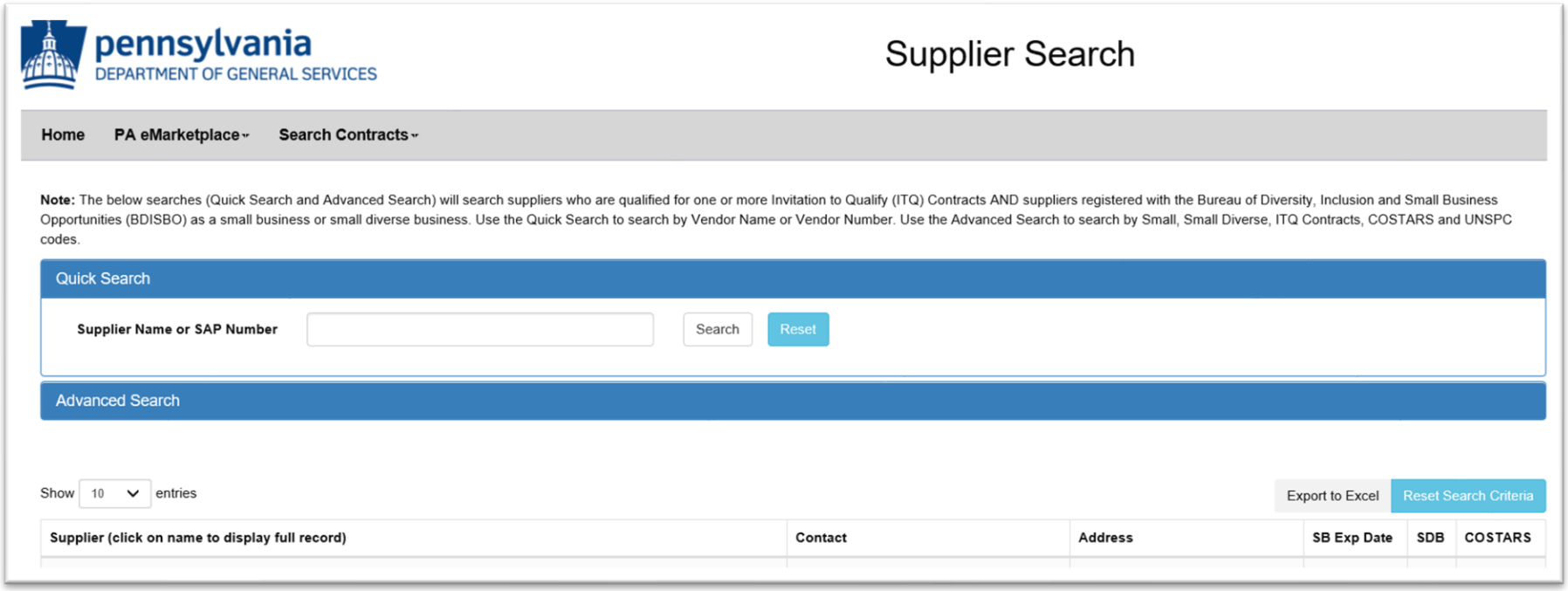
Goal oriented

- Veteran Business Enterprise (VBE)
- Service-Disabled Veteran Business Enterprise (SDVBE)

SDBs and VBEs must be certified/valid as of bid close due date and time.

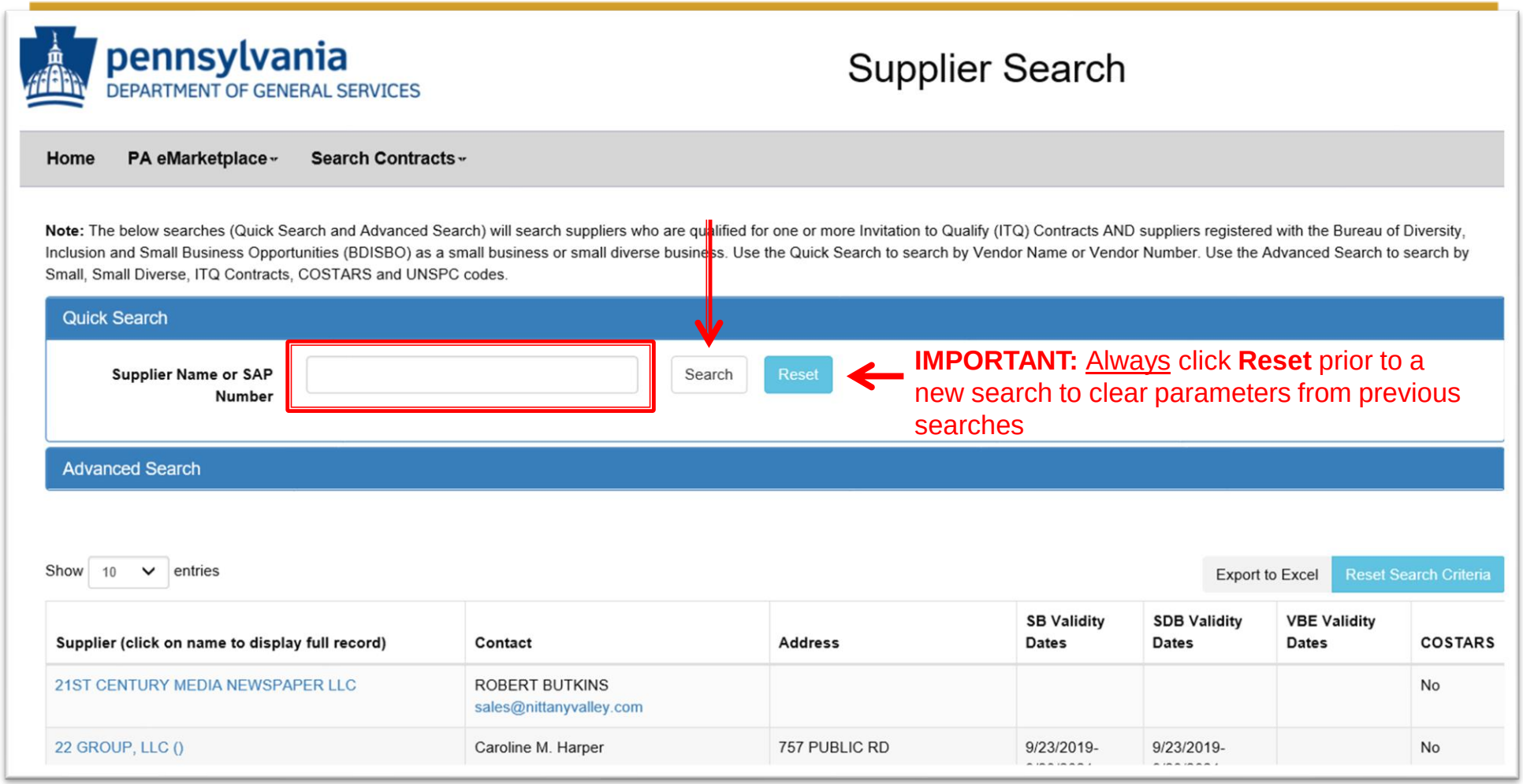
Finding SDBs and VBEs

Utilization Compliance will be closely monitored and enforced

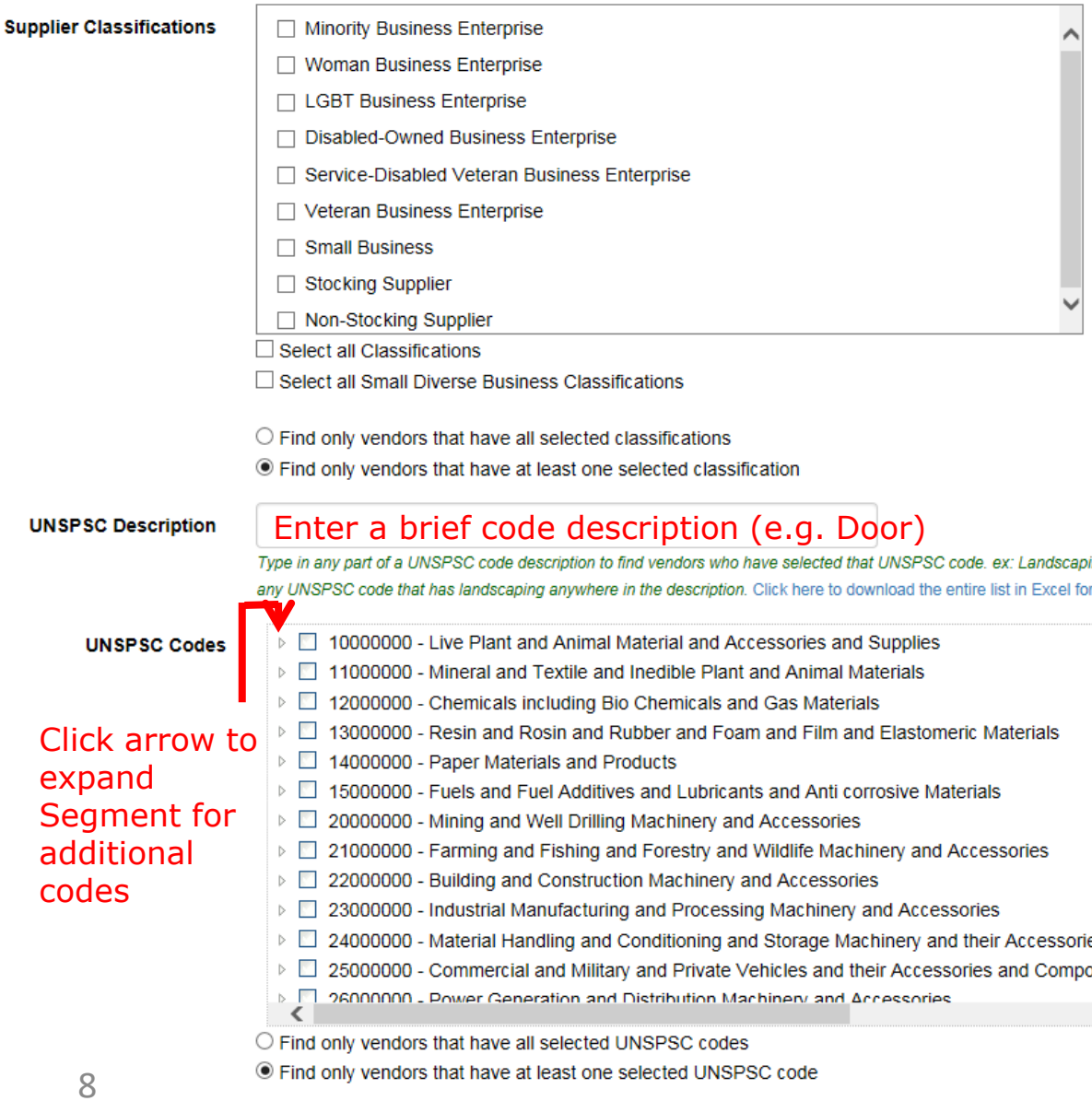


http://www.dgs.internet.state.pa.us/suppliersearch

Quick Search



Advanced Search



Select one or more classifications. To pull only SDBs, check "*Select all Small Diverse Business Classifications*" below. To Include SBs, check "*Small Business*".

OR

Click arrow to expand Segment for additional codes

Browse and select one or more codes. Don't know the codes you want? Download the entire list in Excel.

See slide 13 to understand the UNSPSC code hierarchy.

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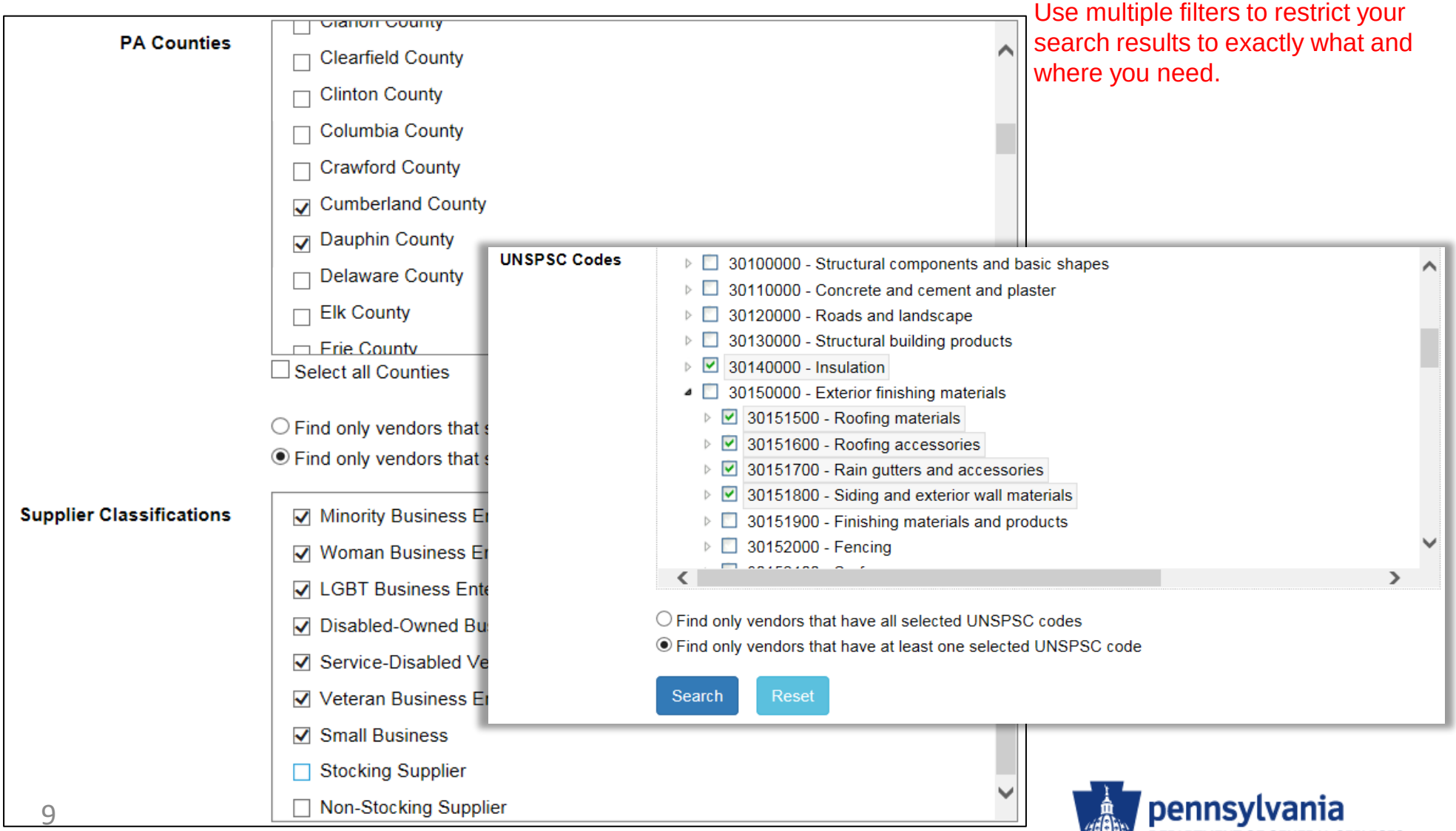
Advanced Search

Use multiple filters to restrict your search results to exactly what and where you need.



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DEPARTMENT OF GENERAL SERVICES

Search Results

Advanced Search

Show 25 entries

Export to Excel | Reset Search Criteria

Supplier (click on name to display full record)	Contact	Address	SB Validity Dates	SDB Validity Dates	VBE Validity Dates	COSTARS
ADVANCED AUDIO VISUAL SALES INC	JOHN GREENE DIRECTOR OF SALES John.Greene@advancedav.com (Phone) 610-719-6194 (Fax) 610-692-8421	208 CARTER DRIVE SUITE 7 WEST CHESTER, PENNSYLVANIA 19382 (Phone) 610-719-6194				No
ADVANCED BUILDING CONTROLS LLC (DBA ADVANCED BUILDING CONTROLS LLC)	Craig Connelly CCONNELLY@ADVANCEDBLDGCONTOLS.COM (Phone) 215-520-9964	PO BOX 303 HOLICONG, PENNSYLVANIA 18928 (Phone) 215-520-9964	2/11/2019-2/28/2021			No
ADVANCED BUILDING PERFORMANCE INC ()	Pei Pei Cavalier PEIPEI@ABPCX.COM (Phone) 301-760-9989	11225 HURDLE HILL DR POTOMAC, MARYLAND 20854 (Phone) 301-760-9989 abpcx.com	12/20/2019-12/20/2021	12/20/2019-12/20/2021		No
ADVANCED CLEANING SOLUTIONS LLC (ADVANCED CLEANING SOLUTIONS LLC)	Nicholas Ward cleanteam@advancedsolutionsPA.com (Phone) 610-597-0012	PO BOX 3223 ALLENTOWN, PENNSYLVANIA 18106	2/27/2018-3/31/2020	2/27/2018-3/31/2020	2/27/2018-3/31/2020	No

Certified Small Businesses
- Advanced Building Controls LLC
- Advanced Building Performance Inc
- Advanced Cleaning Solutions LLC

Small Diverse Businesses
- Advanced Building Performance Inc
- Advanced Cleaning Solutions LLC

Veteran Business Enterprise
- Advanced Cleaning Solutions LLC

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DEPARTMENT OF GENERAL SERVICES

Supplier Profile

Name:	ADVANCED CLEANING SOLUTIONS LLC
SAP Number:	511377
Doing Business As:	ADVANCED CLEANING SOLUTIONS LLC
Other Names:	
Keywords:	
Web site:	
SB Validity Dates:	02/27/2018 - 03/31/2020
SDB Validity Dates:	02/27/2018 - 03/31/2020
VBE Validity Dates:	02/27/2018 - 03/31/2020
COSTARS Participant:	No

SB, SDB & VBE Expiration Dates

Supplier Classifications

- Small Business
- Service-Disabled Veteran Business Enterprise
- Veteran Business Enterprise

SB, SDB & VBE Classifications

Contact Information

Contacts

Contact Type	Contact Details	Phone
CORPORATE	Email: CLEANTEAM@ADVANCEDSOLUTIONSPA.COM	
SB MAIN	Nicholas Ward Title: Email: cleanteam@advancedsolutionsPA.com	610-597-0012

Search Results

Advanced Search

Show 25 entries

Export to Excel | Reset Search Criteria

Supplier (click on name to display full record)	Contact	Address	SB Validity Dates	DB Validity Dates	VBE Validity Dates	COSTARS
ADVANCED AUDIO VISUAL SALES INC	JOHN GREENE DIRECTOR OF SALES John.Greene@advancedav.com (Phone) 610-719-6194 (Fax) 610-692-8421	208 CARTER DRIVE SUITE 7 WEST CHESTER, PENNSYLVANIA 19382 (Phone) 610-719-6194				No
ADVANCED BUILDING CONTROLS LLC (DBA ADVANCED BUILDING CONTROLS LLC)	Craig Connelly CCONNELLY@ADVANCEDBLDGCONTOLS.COM (Phone) 215-520-9964	PO BOX 303 HOLICONG, PENNSYLVANIA 18928 (Phone) 215-520-9964	2/11/2019-2/28/2021			No
ADVANCED BUILDING PERFORMANCE INC ()	Pei Pei Cavalier PEIPEI@ABPCX.COM (Phone) 301-760-9989	11225 HURDLE HILL DR POTOMAC, MARYLAND 20854 (Phone) 301-760-9989 abpcx.com	12/20/2019-12/20/2021	12/20/2019-12/20/2021		No
ADVANCED CLEANING SOLUTIONS LLC (ADVANCED CLEANING SOLUTIONS LLC)	Nicholas Ward cleanteam@advancedsolutionsPA.com (Phone) 610-597-0012	PO BOX 3223 ALLENTOWN, PENNSYLVANIA 18106	2/27/2018-3/31/2020	2/27/2018-3/31/2020	2/27/2018-3/31/2020	No

Certified Small Businesses
- Advanced Building Controls LLC
- Advanced Building Performance Inc
- Advanced Cleaning Solutions LLC

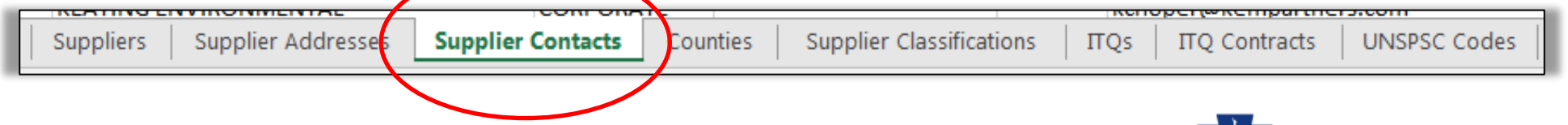
Small Diverse Businesses
- Advanced Building Performance Inc
- Advanced Cleaning Solutions LLC

Veteran Business Enterprise
- Advanced Cleaning Solutions LLC

Excel Export Results – Supplier Contacts

Excel Export Results includes Vendor ID, Supplier Name, Contact Name, Email, Phone, Fax

	A	B	C	D	E	F	G	H	I	J	K
1	SAP Number	Supplier Name	Contact Name	Name	Title	Email	PhoneAreaCode	PhoneNumber	PhoneEx	FaxAreaCo	FaxNumber
2	104279	CA WEISS SALES LLC	CORPORATE			caweiss@comcast.net					
3	104279	CA WEISS SALES LLC	SB MAIN	KRISTY ZARICHNIAK		kristyz@comcast.net	610	4588864		610	4588875
4	119565	DUFF SUPPLY COMPANY	CORPORATE	ALEX DUFFINE	VP	DFRANK@DUFFCOMPANY.COM	610	2754453	147	610	2796299
5	119565	DUFF SUPPLY COMPANY	REMITTO	BARB COHEN		bcohen@duffco.com	610	2754453	149	610	2756761
6	119565	DUFF SUPPLY COMPANY	SB MAIN	ALEX DUFFINE		aduffine@duffco.com	610	2754453			
7	119565	DUFF SUPPLY COMPANY	SB SECONDARY			info@duffco.com					
8	122594	HOUCK SERVICES INC	CORPORATE			jherrold@houcks.com					
9	122594	HOUCK SERVICES INC	SB MAIN	JARROD HERROLD		jherrold@houcks.com	717	6573302		717	6579805
10	122594	HOUCK SERVICES INC	SB SECONDARY			kgussler@houcks.com					
11	134717	PENN STATE ELECTRIC MECHANICAL	CORPORATE			razmataz33@aol.com					
12	134717	PENN STATE ELECTRIC MECHANICAL	SB MAIN	RAZ SUGARWALA		razmataz33@aol.com	717	2992090		717	2992297
13	134717	PENN STATE ELECTRIC MECHANICAL	SB SECONDARY			ksing6027@yahoo.com					
14	135270	BARBARA J SALES ASSOC INC	CORPORATE			barb@barbarajsles.com					
15	135270	BARBARA J SALES ASSOC INC	SB MAIN	BARBARA SMITH		barb@barbarajsales.com	412	5233398		800	8137122
16	135270	BARBARA J SALES ASSOC INC	SB SECONDARY			willsmith@willjservices.com					
17	137893	IDA YEAGER SALES INC	CORPORATE			idayeagersales@zoominternet.net					
18	137893	IDA YEAGER SALES INC	SB MAIN	IDA LAQUATRAYEAGER		idayeagersales@zoominternet.net	724	4525260		724	4521072
19	144061	CONSTRUCTION TOOL SERVICE INC	CORPORATE			ehuss@constructiontoolservice.com					
20	144061	CONSTRUCTION TOOL SERVICE INC	SB MAIN	BETTY CONNELLY		bconnelly@constructiontoolservice.com	412	6816673		412	6819185
21	144061	CONSTRUCTION TOOL SERVICE INC	SB SECONDARY			bcgoodwork@aol.com					
22	145576	BURKE & MICHAEL INC	CORPORATE			MARYFRANCES@BURKEANDMICHAEL.COM					
23	145576	BURKE & MICHAEL INC	SB MAIN	MARY FRANCES HOGAN		maryfrances@burkeandmichael.com	412	3212301		412	3214582
24	153927	COOPER TRADING INC	CORPORATE			cti@ctipa.com					
25	153927	COOPER TRADING INC	SB MAIN	PETER COOPER		pete@ctipa.com	724	8618830		724	8618832
26	153927	COOPER TRADING INC	SB SECONDARY			debbie@ctipa.com					
27	157009	CONTRACT HARDWARE AND SUPPLY	CORPORATE			cristil@chsupplyinc.com					
28	157009	CONTRACT HARDWARE AND SUPPLY	SB MAIN	BRAD BOTTEICHER		bradb@chsupplyinc.com	814	9412340		814	9412342



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New Forms and Processes

- SDB/VBE Instructions – *SDB-1/VBE-1* ***READ***
- SDB/VBE Participation Submittal – *SDB-2/VBE-2*
- SDB/VBE Utilization Schedule – *SDB-3/VBE-3*
- Letter of Commitment – *SDB 3.1/VBE-3.1*
- Guidance for Good Faith Effort (GFE) Waiver – *SDB-4/VBE-4* ***READ***
- GFE Waiver – *SDB-5/VBE-5*

SDB Submittal Instructions – SDB-1

SDB-1
INSTRUCTIONS FOR COMPLETING THE SMALL DIVERSE BUSINESS (SDB) PARTICIPATION SUBMITTAL AND SDB UTILIZATION SCHEDULE.

PLEASE READ BEFORE COMPLETING THESE DOCUMENTS
Bidders/Offerors do not need to return SDB-1 with their SDB Participation Submittal

The following instructions include details for completing the SDB Participation Submittal (SDB-2) which Bidders or Offerors must submit in order to be considered responsive.

The following instructions also include details for completing the SDB Utilization Schedule (SDB-3), which Bidders or Offerors must submit for any portion of the SDB participation goal the Bidder or Offeror commits to meeting.

A Bidder/Offeror's failure to meet the SDB participation goal in full or their failure to receive an approved Good Faith Efforts waiver for any unmet portion of the SDB participation goal will result in the rejection of the Bid or Proposal as nonresponsive.

I. **SDB Participation Goal**: The SDB participation goal is set forth in the eMarketplace advertisement and also in the Notice to Bidders. The Bidder/Offeror is encouraged to use a diverse group of subcontractors and suppliers from the SDB classifications to meet the SDB participation goal.

II. **SDB Eligibility**:

1. Finding SDB firms: Offerors can access the directory of **DGS-verified** SDB firms from the DGS Supplier Search directory at: http://www.dgs.internet.state.pa.us/suppliersearch.

2. **Only SDBs verified by DGS** and as defined herein may be counted for purposes of achieving the SDB participation goal. In order to be counted for purposes of achieving the SDB participation goal, the SDB firm, including an SDB prime, must be DGS-verified for the services, materials or supplies that it has committed to perform on the **SDB Utilization Schedule (SDB-3)**. A firm whose SDB verification is pending or

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SDB Submittal – SDB-2

CRITICAL
✓ Check One, and Only One, Box

SDB-2
SDB PARTICIPATION SUBMITTAL

CK ONE, AND ONLY ONE, BOX. FAILURE TO COMPLY WILL RESULT IN REJECTION OF YOUR BID/PROPOSAL.
Click on bold titles to navigate to that specific page.

☐ **I agree to meet the SDB participation goal in full.**	☐ **I am requesting a partial waiver of the SDB participation goal**	☐ **I am requesting a full waiver of the SDB participation goal**
I have completed and am submitting with my bid or proposal an **SDB Utilization Schedule (SDB-3)**, which is required in order to be considered for award.	After making good faith outreach efforts as more fully described in the **Guidance for Documenting Good Faith Efforts to Meet the SDB Participation Goal**, I am unable to achieve the total SDB participation goal for this solicitation and am requesting a partial waiver of the SDB participation goal. I have completed and am submitting with my bid or proposal both of the following, which are required in order to be considered for award: 1. an **SDB Utilization Schedule**	After making good faith outreach efforts as more fully described in the **Guidance for Documenting Good Faith Efforts to Meet the SDB Participation Goal**, I am unable to achieve any part of the SDB participation goal for this solicitation and am requesting a full waiver of the SDB participation goal. I have completed and am submitting with my bid or proposal a **Good Faith Efforts Waiver Request** for

SDB Utilization Schedule – SDB-3

CRITICAL

✓ Verify SDB/VBE validity

SDB-3
SDB UTILIZATION SCHEDULE

...ow SDBs (including where applicable a prime bidder or offeror is self-performing a portion of the work) that will ... meet the SDB participation goal (add additional pages if necessary). Submit a **Letter of Commitment (SDB-3-1)** for each ...B subcontractor, supplier, or manufacturer (add additional Letters of Commitment as necessary).

SDB Name SAP Vendor Number (6-digit number provided by SDB) SDB Verification Number (located on DGS SDB verification)	Type of SDB (check all that apply)	Description of Work to be Performed (Statement of Work/Specification reference)	% Commitment (or % of work to be self-performed by SDB bidder/offeror)	Dollar Value of Commitment (after applying any calculation per SDB-1, Section IV, Calculating SDB participation)
Name: ABC IT Solutions SAP Vendor Number: 123456 SDB Verification Number: 123456-2016-09-SB-M	MBE	IT staffing resources	%	$
Name: SAP Vendor Number: SDB Verification Number:	☐ MBE ☐ WBE ☐ LGBTBE ☐ DOBE ☐ SDVBE		%	
Name: SAP Vendor Number: SDB Verification Number:	☐ MBE ☐ WBE ☐ LGBTBE ☐ DOBE ☐ SDVBE		%	
Name: SAP Vendor Number: SDB Verification Number:	☐ MBE ☐ WBE ☐ LGBTBE ☐ DOBE ☐ SDVBE		%	
Name: SAP Vendor Number: SDB Verification Number:	☐ MBE ☐ WBE ☐ LGBTBE ☐ DOBE ☐ SDVBE		%	
Attach additional sheets if necessary			Total % SDB commitment: 0	Total $ amount: $ 0

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Letter of Commitment SDB-3.1

CRITICAL
✓ Complete all shaded areas.

SDB-3-1
LETTER OF COMMITMENT

as confirmation of the commitment by the prime Bidder or Offeror
ss (SDB) on the below-referenced Solicitation/Project.

on Name: _____

	Bidder/Offeror Information	SDB Information
Address		
Point of Contact		
Telephone number		
Email address		

Services/Supplies and Time Frame. If Bidder/Offeror is the successful vendor, the SDB shall perform or provide the following services or supplies during the term of the prime contract, as more specifically set forth below:

Services or supplies the VBE will provide:	
Specific Time Frame the VBE will provide the services or supplies:	

Dollar Value of Commitment. These services or supplies represent $_____ for the term of the contract.

SDB verified. By signing below, the SDB represents that it meets the SDB requirements set forth in the Solicitation and all required documentation has been provided to the Bidder/Offeror for its SDB submission.

Sincerely,	Acknowledged
Printed name	Printed name

SDB to expect a letter and SIGN it!

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Guidance to Document GFE SDB-4

READ, READ, READ

- The ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the Offeror of the responsibility to make Good Faith Efforts to meet the SDB participation goal.

- Prime must complete all components of the GFE paperwork. Details/Evidence are important, proof is required.

- Carefully review SDB and VBE submittal Instructions, specifically Section VI of SDB/VBE-1 which lists pertinent items as Fatal errors.

Good Faith Efforts Packet SDB-5

Good Faith Efforts (GFE) Partial or Full Waiver

- ❑ Identified Items of Work Applicant Made Available to SDBs (Part 1)
- ❑ Identified SDBs and Record of Solicitations (Part 2)
- ❑ SDB Outreach Compliance Statement (Part 3)
- ❑ Additional Information Regarding Rejected SDB Quotes (Part 4)
- ❑ SDB Subcontractor Unavailability Certificate (Part 5)

SDB GFE Documentation – SDB-5

SDB-5
GOOD FAITH EFFORTS DOCUMENTATION TO SUPPORT WAIVER REQUEST OF SDB PARTICIPATION GOAL

Project Description:	
Commonwealth Agency Name:	
Solicitation #:	
Solicitation Due Date and Time:	

Complete all five parts

Bidder/Offeror Company Name:	
Bidder/Offeror Contact Name:	
Bidder/Offeror Contact Email:	
Bidder/Offeror Contact Phone Number:	

Part 1 – Identified Items of Work Offeror Made Available to SDBs

Identify those items of work that the Offeror made available to SDBs. This includes, where appropriate, those items the Offeror identified and subdivided into economically feasible units to facilitate the SDB participation. For each item listed, show the anticipated percentage of the total contract amount. It is the Offeror's responsibility to demonstrate that enough work to meet the SDB participation goal was made available to SDBs, and the total percentage of the items of work identified for SDB participation met or exceeded the SDB participation goal set for the procurement.

Identified Items of Work	Was this work listed in the solicitation?	Does Offeror normally self-perform this work?	Was this work made available to SDB Firms? If not, explain why.
	____ yes ____ no	____ yes ____ no	____ yes ____ no

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GFE Waiver – Part 1

Identif… Items of Work Offeror Made Available to SDBs

CRITICAL
✓ List all components of work offered for subcontracting.

… that the Offeror made available to SDBs. This includes, where appropriate, those items the Offeror identified …sible units to facilitate the SDB participation. For each item listed, show the anticipated percentage of the total …e that enough work to meet the SDB participation goal was made available to SDBs, and the total percentage …f SDB participation met or exceeded the SDB participation goal set for the procurement.

…ork	Was this work listed in the solicitation?	Does Offeror normally self-perform this work?	Was this work made available to SDB Firms? If not, explain why.
	☐ yes ☐ no	☐ yes ☐ no	☐ yes ☐ no
	☐ yes ☐ no	☐ yes ☐ no	☐ yes ☐ no
	☐ yes ☐ no	☐ yes ☐ no	☐ yes ☐ no
	☐ yes ☐ no	☐ yes ☐ no	☐ yes ☐ no
	☐ yes ☐ no	☐ yes ☐ no	☐ yes ☐ no

Attach additional sheets if necessary.

GFE Waiver – Part 2

ntified SDBs and Record of Solicitations

CRITICAL
✓ Specifics and Details are important

ed to provide quotes for the Identified Items of Work made available for SDB participation. Include the name of the SDB r which quotes were solicited, date and manner of initial and follow-up solicitations, whether the SDB provided a quote, eing used toward meeting the SDB participation goal. SDBs used to meet the SDB participation goal must be listed on **ion Schedule (SDB-2)**.

Copies of all written solicitations and documentation of follow-up calls to SDBs must be attached to this form. For each Identified SDB elow, Offeror should submit an SDB Subcontractor Unavailability Certificate signed by the SDB or a statement from the Offeror that the efused to sign the SDB Subcontractor Unavailability Certificate.

Name of Identified SDB and Classification	Describe Item of Work Solicited	Initial Solicitation Date & Method	Follow-up Solicitation Date & Method	Details for Follow-up Calls	Quote Received?	Quote Used?	Reason Quote Rejected
SDB Name: ☐ MBE ☐ WBE ☐ LGBTBE ☐ DOBE ☐ SDVBE		Date: ☐ mail ☐ email ☐ fax	Date: ☐ mail ☐ email ☐ fax	Date and Time of Call: Spoke with: Left Message:	☐ yes ☐ no	☐ yes ☐ no	☐ Used other SDB ☐ Used non-SDB ☐ Self performing
SDB Name: ☐ MBE ☐ WBE ☐ LGBTBE ☐ DOBE ☐ SDVBE		Date: ☐ mail ☐ email ☐ fax	Date: ☐ mail ☐ email ☐ fax	Date and Time of Call: Spoke with: Left Message:	☐ yes ☐ no	☐ yes ☐ no	☐ Used other SDB ☐ Used non-SDB ☐ Self performing

Attach additional sheets as necessary.

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GFE Waiver – Part 3

CRITICAL
✓ Documentation for Part 1

SDB Outreach Compliance Statement

1. **List the Identified Items of Work for subcontracting opportunities for the solicitation along with specific work categories:**

2. **Attach to this form copies of written solicitations (with Bid or Proposal instructions) used to solicit Identified SDBs for these subcontract opportunities.**

3. **Offeror made the following attempts to contact the Identified SDBs:**

4. **Bonding Requirements (Please Check One):**

☐ This project does not involve bonding requirements.

☐ Offeror assisted Identified SDBs to fulfill or seek waiver of bonding requirements. (DESCRIBE EFFORTS):

5. **Pre-Bid/Proposal Conference or Supplier Forum (Please Check One):**

GFE Waiver – Part 4

Addi[illegible]l Information Regarding Rejected SDB Quotes

CRITICAL
✓ Documentation for Part 2

[illegible]rt 2 indicates that an SDB quote was rejected because the Offeror is using a non-SDB or is self-performing the [illegible]st the Identified Items of Work, state whether the work will be self-performed or performed by a non-SDB, and if [illegible]ame of the non-SDB firm. Also include the names of all SDBs and non-SDB firms that provided a quote and the amount of

Describe [illegible]ed Items of Work not being performed by SDBs (include specific section from bid or proposal)	Self-performing or using non-SDB (provide name of non-SDB if applicable)	Amount of non-SDB quote $	Name of other firms that provided quotes and whether they are SDB	Amount quoted $	Reason why SDB quote was rejected along with brief explanation
	☐ self-performing ☐ using Non-SDB Name:		☐ SDB ☐ Non-SDB Name:		☐ price ☐ capabilities ☐ other
	☐ self-performing ☐ using Non-SDB Name:		☐ SDB ☐ Non-SDB Name:		☐ price ☐ capabilities ☐ other
	☐ self-performing ☐ using Non-SDB Name:		☐ SDB ☐ Non-SDB Name:		☐ price ☐ capabilities ☐ other
	☐ self-performing ☐ using Non-SDB		☐ SDB ☐ Non-SDB		☐ price

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GFE Waiver – Part 5

Subcontractor Unavailability Certificate

CRITICAL
✓ Required for each vendor listed in Part 1

is hereby certified that the firm of _____
(Name of SDB)

located at _____
(Number) (Street)

_____
(City) (State) (Zip)

was offered an opportunity to bid on Solicitation No. _____

by _____
(Name of Prime Contractor's Firm)

****

2. _____ (SDB), is either unavailable for the work/service or unable to prepare a Proposal for this project for the following reason(s):

_____
(Signature of SDB's Representative) (Title) (Date)

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Best Practices

Do's

- Read the solicitation and all instructions completely.
- Submit SEPARATE SDB and VBE submittal forms.
- Validate subcontractor SDB/VBE status in DGS Supplier Database.
- Ensure that all appropriate forms are completed and signed correctly.
- Submit questions early per the solicitation requirements.

Don'ts

- Make any assumptions.
- Copy SDB submittal paperwork. Download and complete the VBE submittal separately, titles and accuracy matter.
- Skip any portion of the GFE request documentation.
- Forget to verify subcontractor status as current SDB/VBE in DGS Supplier Database.

Notes

- READ, READ, READ, solicitation instructions completely.

- Subcontractors identified in SDB-3, Utilization Schedule must be validated as of proposal date and time.

- Model Form SDB/VBE Subcontractor Agreement is provided for informational purposes only. To be completed by award winning vendor only.

Questions?

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BDISBO Contact Info

Bureau of Diversity, Inclusion and Small Business Opportunities
North Office Building
401 North Street, Room 611
Harrisburg, PA 17120-0500
717.783.3119
GS-BDISBO@pa.gov

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EXHIBIT E

Environmental Remediation Services 6100052061

BOP-1307 LOBBYING CERTIFICATION FORM

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BUREAU OF PROCUREMENT

LOBBYING CERTIFICATION FORM

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, Disclosure of Lobbying Activities, which can be found at:

https://www.gsa.gov/Forms/TrackForm/33144

(3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed under *Section 1352, Title 31, U. S. Code.* Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than **$100,000** for such failure.

SIGNATURE: _____

TITLE: _____ DATE: _____

EXHIBIT E

Environmental Remediation Services 6100052061

DOMESTIC WORKFORCE UTILIZATION FORM

DOMESTIC WORKFORCE UTILIZATION CERTIFICATION

To the extent permitted by the laws and treaties of the United States, each proposal will be scored for its commitment to use the domestic workforce in the fulfillment of the contract. Maximum consideration will be given to those offerors who will perform the contracted direct labor exclusively within the geographical boundaries of the United States or within the geographical boundaries of a country that is a party to the World Trade Organization Government Procurement Agreement. Those who propose to perform a portion of the direct labor outside of the United States and not within the geographical boundaries of a party to the World Trade Organization Government Procurement Agreement will receive a correspondingly smaller score for this criterion. In order to be eligible for any consideration for this criterion, offerors must complete and sign the following certification. This certification will be included as a contractual obligation when the contract is executed. Failure to complete and sign this certification will result in no consideration being given to the offeror for this criterion.

I, _____**[title]** of _____**[name of Contractor]** a _____ **[place of incorporation]** corporation or other legal entity, ("Contractor") located at _____ **[address],** having a Social Security or Federal Identification Number of _____, do hereby certify and represent to the Commonwealth of Pennsylvania ("Commonwealth") (Check **one** of the boxes below):

☐ All of the direct labor performed within the scope of services under the contract will be performed exclusively within the geographical boundaries of the United States or one of the following countries that is a party to the World Trade Organization Government Procurement Agreement: Armenia, Aruba, Austria, Belgium, Bulgaria, Canada, Chinese Taipei, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Liechtenstein, Lithuania, Luxemburg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom

OR

☐ _____ **percent** (_____**%**) **[Contractor must specify the percentage]** of the direct labor performed within the scope of services under the contract will be performed within the geographical boundaries of the United States or within the geographical boundaries of one of the countries listed above that is a party to the World Trade Organization Government Procurement Agreement. Please identify the direct labor performed under the contract that will be performed outside the United States and not within the geographical boundaries of a party to the World Trade Organization Government Procurement Agreement and identify the country where the direct labor will be performed: _____

_____

[Use additional sheets if necessary]

The Department of General Services **[or other purchasing agency]** shall treat any misstatement as fraudulent concealment of the true facts punishable under Section 4904 of the *Pennsylvania Crimes Code*, Title 18, of Pa. Consolidated Statutes.

Attest or Witness:

_____
Corporate or Legal Entity's Name

_____
Signature/Date

_____
Signature/Date

_____
Printed Name/Title

_____
Printed Name/Title

EXHIBIT E

Environmental Remediation Services 6100052061

IRAN FREE PROCUREMENT CERTIFICATION FORM

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DEPARTMENT OF GENERAL SERVICES
BUREAU OF PROCUREMENT

IRAN FREE PROCUREMENT CERTIFICATION FORM

(Pennsylvania's Procurement Code Sections 3501-3506, 62 Pa.C.S. §§ 3501-3506)

To be eligible for an award of a contract with a Commonwealth entity for goods or services worth at least $1,000,000 or more, a vendor must either: a) certify it is **not** on the current list of persons engaged in investment activities in Iran created by the Pennsylvania Department of General Services ("DGS") pursuant to Section 3503 of the Procurement Code and is eligible to contract with the Commonwealth under Sections 3501-3506 of the Procurement Code; or b) demonstrate it has received an exception from the certification requirement for that solicitation or contract pursuant to Section 3503(e).

To comply with this requirement, please insert your vendor or financial institution name and complete **one** of the options below. Please note: Pennsylvania law establishes penalties for providing false certifications, including civil penalties equal to the greater of $250,000 or twice the amount of the contract for which the false certification was made; contract termination; and three-year ineligibility to bid on contracts. (Section 3503 of the Procurement Code.)

OPTION #1 - CERTIFICATION

I, the official named below, certify I am duly authorized to execute this certification on behalf of the vendor/financial institution identified below, and the vendor/financial institution identified below is **not** on the current list of persons engaged in investment activities in Iran created by DGS and is eligible to contract with the Commonwealth of Pennsylvania Sections 3501-3506 of the Procurement Code.

Vendor Name/Financial Institution (Printed)	
By (Authorized Signature)	
Printed Name and Title of Person Signing	*Date Executed*

OPTION #2 – EXEMPTION

Pursuant to Procurement Code Section 3503(e), DGS may permit a vendor/financial institution engaged in investment activities in Iran, on a case-by-case basis, to enter into a contract for goods and services.

If you have obtained a written exemption from the certification requirement, please fill out the information below, and attach the written documentation demonstrating the exemption approval.

Vendor Name/Financial Institution (Printed)	
By (Authorized Signature)	
Printed Name and Title of Person Signing	*Date Executed*

EXHIBIT E

Environmental Remediation Services 6100052061

WORKER PROTECTION AND INVESTMENT CERTIFICATION FORM

(BOP-2201)

WORKER PROTECTION AND INVESTMENT CERTIFICATION FORM

A. Pursuant to Executive Order 2021-06, *Worker Protection and Investment* (October 21, 2021), the Commonwealth is responsible for ensuring that every worker in Pennsylvania has a safe and healthy work environment and the protections afforded them through labor laws. To that end, contractors and grantees of the Commonwealth must certify that they are in compliance with Pennsylvania's Unemployment Compensation Law, Workers' Compensation Law, and all applicable Pennsylvania state labor and workforce safety laws including, but not limited to:

1. Construction Workplace Misclassification Act
2. Employment of Minors Child Labor Act
3. Minimum Wage Act
4. Prevailing Wage Act
5. Equal Pay Law
6. Employer to Pay Employment Medical Examination Fee Act
7. Seasonal Farm Labor Act
8. Wage Payment and Collection Law
9. Industrial Homework Law
10. Construction Industry Employee Verification Act
11. Act 102: Prohibition on Excessive Overtime in Healthcare
12. Apprenticeship and Training Act
13. Inspection of Employment Records Law

B. Pennsylvania law establishes penalties for providing false certifications, including contract termination; and three-year ineligibility to bid on contracts under 62 Pa. C.S. § 531 (Debarment or suspension).

CERTIFICATION

I, the official named below, certify I am duly authorized to execute this certification on behalf of the contractor/grantee identified below, and certify that the contractor/grantee identified below is compliant with applicable Pennsylvania state labor and workplace safety laws, including, but not limited to, those listed in Paragraph A, above. I understand that I must report any change in the contractor/grantee's compliance status to the Purchasing Agency immediately. I further confirm and understand that this Certification is subject to the provisions and penalties of 18 Pa. C.S. § 4904 (Unsworn falsification to authorities).

Signature ***Date***
Name (Printed)
Title of Certifying Official (Printed)
Contractor/Grantee Name (Printed)

EXHIBIT E

Environmental Remediation Services 6100052061

TRADE SECRET CONFIDENTIAL PROPERTY INFORMATION NOTICE

Trade Secret/Confidential Proprietary Information Notice

Instructions:

The Commonwealth may not assert on behalf of a third party an exception to the public release of materials containing information believed to be exempt from public disclosure, including trade secrets or confidential proprietary information, unless the materials are accompanied, at the time they are submitted, by this form or a document containing similar information. In addition, in order to protect the safety and security of individuals, infrastructure, and information technology systems, the Commonwealth requires third parties to designate as confidential any information submitted by the third parties that, if disclosed, would be reasonably likely to jeopardize safety or security.

It is the responsibility of the party submitting this form to ensure that all statements and assertions made below are legally defensible and accurate. The Commonwealth will not provide a submitting party any advice with regard to Pennsylvania's *Right-to-Know Law*, 65 P.S. §§ 67.101—67.3104, or laws relating to trade secret or confidential proprietary information.

Name of submitting party:

Contact information for submitting party:

Please provide a brief overview of the materials that you are submitting (e.g. bid proposal, quote, grant application, statement of work, technical schematics):

Please provide a brief explanation of why the materials are being submitted to the Commonwealth (e.g. response to bid, RFP or RFQ #12345, application for grant XYZ being offered by the Department of Health, documents required to be submitted under law ABC):

Please indicate if any information has been included that you believe is exempt from public disclosure by checking the appropriate box below: (***Note****: Financial information submitted in response to an RFP or IFB to demonstrate economic capability is exempt from public disclosure in accordance with Section 708(b)(26) of the Right-to-Know Law, 65 P.S. 67.708(b)(26)*).

☐ **No information has been included that I believe is exempt from public disclosure.**

☐ **Information has been included that I believe is exempt from public disclosure.**

Please provide a list detailing which portions of the material being submitted you believe are exempt from public disclosure. This includes trade secret, confidential or proprietary information, or information that if disclosed would be reasonably likely to jeopardize the safety or security of an individual, infrastructure, or information technology system. Please provide an explanation of why you think those materials constitute a trade secret, confidential or proprietary information, or why disclosure of those materials would be reasonably likely to jeopardize safety or security. Also, please mark the submitted material in such a way to allow a reviewer to easily distinguish between the parts referenced below. (You may attach additional pages if needed)

Note: Without substantial justification, the following information will not be considered a trade secret or confidential proprietary information:

- Any information submitted as part of a vendor's cost response.
- Information submitted as part of a vendor's technical response or statement of work that does not implicate safety and security, or pertain to specific business practices or product specification.
- Information submitted as part of a vendor's technical or small diverse business and small business response that is otherwise publicly available or otherwise easily obtained.
- Information detailing the name, quantity, and price paid for any product or service being purchased by the Commonwealth.

Page Number	Description	Explanation

Acknowledgment

The undersigned party hereby agrees that it has read and completed this form, and has marked the material being submitted in accordance with the instructions above. The undersigned party acknowledges that the Commonwealth is not liable for the use or disclosure of trade secret, confidential or proprietary information, or information that if disclosed would be reasonably likely to jeopardize the safety or security of an individual, infrastructure or information technology system, where that data or information has not been clearly marked as such, and which was not accompanied by a specific explanation included with this form.

The undersigned agrees to defend any action seeking release of the materials it believes to be trade secret, confidential or proprietary, or would be reasonably likely to result in a safety or security risk if disclosed. The undersigned also agrees to indemnify and hold harmless the Commonwealth, its agents and employees, from any judgments awarded against the Commonwealth in favor of the party requesting the materials, and any and all costs connected with that defense. This indemnification survives so long as the Commonwealth has possession of the submitted material, and will apply to all costs unless and until the undersigned provides a written statement or similar notice to the Commonwealth stating that it no longer wishes to exempt the submitted material from public disclosure.

The undersigned acknowledges that the Commonwealth is required to keep all records for at least as long as specified in its published records retention schedule.

The undersigned acknowledges that the Commonwealth reserves the right to reject the undersigned's claim that the information is trade secret, confidential, proprietary or is reasonably likely to result in a safety or security risk if disclosed, if the Commonwealth determines that the undersigned has not met the burden of establishing that the information constitutes a trade secret, confidential, or is otherwise exempt. The undersigned also acknowledges that if only a certain part of the submitted material is found to constitute a trade secret, is confidential or proprietary, or is otherwise exempt, the remainder of the submitted material will become public; only the protected information will be removed and remain nonpublic.

If being submitted electronically, the undersigned agrees that the mark below is a valid electronic signature.

_____	_____	_____
Signature	Title	Date

EXHIBIT F

Environmental Remediation Services

Contractor's Technical Submittal

TECHNICAL SUBMITTAL

I-1. Statement of the Project. State in succinct terms your understanding of the project presented or the service required by this RFP.

Offeror Response

I-1 Statement of the Project

Remediation Contract Understanding

PennDOT is responsible for overseeing programs and policies affecting highways, urban and rural public transportation, airports, railroads, ports, and waterways. Through environmental analysis, PennDOT's objective is to ensure the accurate application of federal and state laws and regulations associated with the human, natural, and physical environment to transportation improvements. It is imperative that PennDOT selects a contractor that has a proven record of effective and cost-efficient environmental stewardship for providing environmental investigation and remediation support services that will best meet the needs of this remediation services contract.

The purpose of the Remediation Contract is to provide a vehicle allowing the Pennsylvania Department of Transportation (PennDOT) to obtain investigative, environmental support, and remediation services supporting the Department's construction and maintenance (O&M) programs on an as-needed basis. Based on our 24-year history of performing over 1,000 work order assignments, serving all 11 PennDOT Districts, and providing remediation services in all 67 counties in the Commonwealth of Pennsylvania (the Commonwealth), we understand the principal necessities of the contract to include the following:

Responsiveness – The need to be available 24/7/365 to address rapid response needs of PennDOT within a two-hour time period in all 67 counties of the Commonwealth is an important component of this contract. Personnel from Skelly and Loy, Inc., *A Terracon Company* (Skelly and Loy) and our team of subcontractors have successfully met the rapid response needs of PennDOT over the past 24 years. Our team is well-staffed to continue to provide immediate response to needs that can and will arise.

Accountability – Stepping forward to meet project schedules, especially for addressing unexpected issues during construction. Skelly and Loy has a proven track record for providing manpower and equipment under the Remediation Contract to mitigate environmental problems, at a moment's notice, allowing construction projects to proceed on schedule with minimal disruption.

Technical Expertise – Based on the diverse types of work order assignments expected to be performed to support the Remediation Contract, a wide range of engineering, geological, and environmental professional consulting services are needed. Skelly and Loy, as a Terracon Company, is supported by an internal staff of over 5,000 employees in 150 offices across the United States. Moreover, we have staff with direct technical experience providing environmental and remediation services under the previous and current Remediation Contracts. We will leverage our deep internal resources and those of our teaming subcontractors to deliver superior services to PennDOT under the Remediation Contract beyond what we have over the last 24 years.

Management and Business Resources – The Remediation Contract requires a dedicated staff of business professionals and internal systems to provide the reporting and billing information to PennDOT and the Commonwealth. To meet these needs, Skelly and Loy has a large, experienced staff of accounting professionals who know the billing nuances of the Remediation Contract. Moreover, our internal electronic systems and programs are used to capture, track, and report billing information on a timely basis to meet the needs of PennDOT.

Communication – Management of multiple, simultaneous projects for PennDOT Engineering Districts across the Commonwealth requires excellent internal and external communications. Skelly and Loy has established relationships with District Executives and Managers in each PennDOT Engineering office and staff in the PennDOT Central office. These relationships allow us to quickly and effectively communicate the needs, timing, and schedules of work order assignments as well as provide billing and project updates through monthly status reports. Moreover, Skelly and Loy has fostered relationships with the Pennsylvania Department of General Services (DGS) by utilizing similar communication updates.

Continued Presence and Legacy – Although a new Remediation Contract will begin on July 1, 2022, environmental and remediation projects across the Commonwealth in a large public agency such as PennDOT are ongoing and will bridge the new start date. As a trusted business partner for the past 24 years, Skelly and Loy is knowledgeable of current ongoing projects, PennDOT procedures, and PennDOT staff/contacts in the Central Office and in the District offices. Our team will again be led by **Robert Rowley, CIH, CSP** and **Mark Ioos, P.G.** Rob and Mark will manage needs for the central and eastern part of the state while, **Jason McCabe and Dan Davis, CEM, CEM** will manage efforts for the western part of the state. Our staff expertise will allow for a seamless transition and the continued excellence for the PennDOT under the new Remediation Contract. Moreover, our experience will also be a benefit for addressing PennDOT's compliance responsibilities for ongoing and past projects by competently conducting discussions and negotiations with regulatory agencies. The selection of Skelly and Loy to manage the new Remediation Contract will be a superior value to the Commonwealth.

The types of projects and services performed in the past and expected to be provided to PennDOT in the new Remediation Contract include:

- Asbestos inspections (buildings and bridges)
- Lead-based paint (LBP) inspections (buildings and bridges)
- Boarding of abandoned houses and buildings
- Quantification, containerization, and disposal of universal (i.e., lighting/electronic) wastes
- Mold and indoor air quality (IAQ) studies
- Developing project designs and bid specifications for asbestos abatement
- Overseeing the disposal of universal wastes and refrigerant gasses
- Asbestos abatement and mold abatement
- Professional Industrial Hygiene services
- Dust and noise monitoring during roadway construction
- Emergency response spill cleanup services
- Removal of aboveground storage tanks (ASTs) and underground storage tanks (USTs)
- Installation of ASTs and USTs
- Oil/water separator cleanout
- Collection of soil samples using systematic random sampling (SRS) methods for UST closure
- Submittal of AST and UST closure reports

- Excavation and removal of hydraulic lift tanks and components
- Coordination with the Pennsylvania Department of Labor and Industry (L&I) for the installation of ASTs and USTs
- Collection of waste characterization samples (solids and liquids)
- Excavation and disposal of contaminated soils and buried waste materials
- Management and disposal of non-hazardous and hazardous waste materials
- Collection of soil samples for evaluating options to handle soils under the Pennsylvania Department of Environmental Protection (PA DEP) Management of Fill Policy
- Analytical Testing
- Geophysical Surveys
- Drilling of borings and wells
- Construction of monitoring wells
- Abandonment of wells (residential, monitoring, oil, and gas)
- Collection of soil, surface water, sediment, soil gas, and groundwater samples
- Development of groundwater flow maps
- Development of Conceptual Site Models (CSMs)
- Groundwater modeling for contaminant transport
- Identification of sensitive receptors
- Design and installation of soil, soil gas, and groundwater remediation systems
- Installation of in-house residential water treatment systems, including sampling and O&M
- Remediation of groundwater using bioremediation and chemical oxidation technologies
- Supply of bottled water to private well owners
- Preparation of plans and reports for obtaining site closure under the PA DEP Act 2 program
- Clean and regulated fill determination and management
- Excavation dewatering and management of contaminated liquids
- Polychlorinated biphenyls (PCB) equipment removal and disposal as well as surface cleanup
- Construction monitoring and environmental compliance
- Biohazard remediation (i.e., medical and infectious wastes)
- Third-party environmental oversight
- Pond sediment removal and restoration
- Wetland mitigation
- Site revegetation

Photograph taken during a LBP inspection of a bridge along S.R. 3016 in Canton, Bradford County, Pennsylvania

I-2. Qualifications.

A. Company Overview.

1. Offeror must have a minimum of five (5) years' experience in the field of environmental remediation services. Documentation to substantiate (e.g. Articles of Incorporation, Income Tax Return and/or Dunn & Bradstreet report, etc.) an entities validity may be requested prior to an award or at any time.

2. Offeror and all affected Subcontractors must possess and maintain throughout the life of this Contract all applicable registrations, certifications, and licenses in connection with work required under this Contract.

3. Certifications, Accreditations and Training:

a. Valid copy of the following professional certifications for individuals performing work under this Contract:

- Pennsylvania Department of State Licensed Professional Geologist
- Pennsylvania Department of State Licensed Professional Engineer
- Board of Certified Safety Professionals Certified Safety Professional
- American Board of Industrial Hygiene Certified Industrial Hygienist
- Valid copy of Hazardous Waste Operations and Emergency Response (HAZWOPER) training for key individuals to perform field investigative and remedial efforts at contaminated sites.
- Pennsylvania Department of Labor and Industry (PA L&I) Lead-Based Paint Inspector-Technician certification. (Note: PA L&I Lead-Based Paint Risk Assessor certification will satisfy this requirement.)

b. Valid copy of the following Pennsylvania Department of Environmental Protection (DEP) issued certifications. 25 Pa. Code § 245 Administration of the Storage Tank and Spill Prevention Program.

- Underground Manufactured Storage Tank Removal (UMR)
- Underground Storage Tank Installation and Modification (UMX)
- Aboveground Manufactured Storage Tank Removal (AMR)
- Aboveground Manufactured Metallic Storage Tank Installation and Modification (AMMX)
- Aboveground Non-metallic Storage Tank Installation and Modification (AMNX)

c. Valid copy of the following PA L&I Asbestos Abatement Certifications/copies of photo licenses:

- Supplier/Contractor
- Supervisor
- Worker
- Project Designer

- Management Planner

d. Proof of analytical laboratory's bulk and airborne asbestos analysis accreditation (NVLAP accreditation) issued by the United States Department of Commerce National Institute of Standards and Technology.

e. Valid copy of analytical laboratory's PA DEP drinking water certification, encompassing the following suites of compounds: SVOCs, VOCs, Metals, PCBs, Pesticides/Herbicides and Microbiology.

f. Proof of analytical laboratory's PA DEP environmental laboratory registration in accordance with the Environmental Laboratory Accreditation Act (submit a document with the Act 25 registration number).

g. Health and Safety Program - Copy of the Offeror's Company/Corporate Health and Safety Program.

Offeror Response

I-2 Qualifications

I-2.A.1 Company Overview

As your trusted partner, Skelly and Loy has a record of success in managing and integrating large, complex environmental remediation projects on behalf of PennDOT for the last 24 years. The factors that place Skelly and Loy as your trusted partner above its competition include:

1. Our ability to listen and understand the requirements set by the client;
2. Our responsiveness in terms of meeting our client's needs;
3. Our technical resources located throughout the Commonwealth;
4. Our ability to be cost-effective though the implementation of innovative technology; and
5. Our continuous emphasis on improving the way projects are performed and how services are delivered to PennDOT.

Skelly and Loy was acquired by Terracon Consultants in 2020 and, as such, we are Skelly and Loy, *A Terracon Company*. As a Terracon Company, Skelly and Loy continues to furnish all the same services that it has provided over its past 52 years of existence but also has the benefit of added resources at our fingertips. Terracon is a national consulting firm that excels in geotechnical, environmental, materials, and facilities services. The factors that set us apart from other firms include the following.

- Skelly and Loy has served PennDOT, furnishing remediation services since 1997, successfully demonstrated the technical skills and regulatory understanding needed to support project assignments under the Remediation Contract. In addition, we take great pride in the alternate strategies offered under this contract that allowed for cost savings, improved schedules, and superior results. Several of these successes are discussed throughout our proposal.

Sound technical and regulatory understanding, technical innovativeness, and ability to openly communicate with PennDOT personnel through all phases of work order assignments.

Our project team includes key team members who have direct experience providing remediation services to PennDOT. These key individuals have long-standing, professional working relationships with all PennDOT engineering districts and will provide stability and continuity on work order assignments. Our Program Manager, **Mr. Robert Rowley, CSP, CIH,** has extensive contract/program management expertise as well as 24 years of direct experience providing services to PennDOT under the current and four previous remediation contracts. No one has more experience with the management of the PennDOT Remediation Contract than Mr. Rowley, whose accolades include:

- **24 years' experience serving as Skelly and Loy Program Manager** under the four previous and current Remediation Contracts
- Established relationships working with Commodity Specialists in the Bureau of Procurement of the DGS and representatives in PennDOT Central office
- Involved with the program-level tracking and general management of **over 1,000 work order assignments**
- Processing of Purchase Order Numbers involving **Normal and Rapid Response projects**
- **Preparation and submittal of the monthly status reports** submitted to DGS and PennDOT
- Development of proposal formats, report formats, and invoicing protocols
- Follow-up with PennDOT District offices, PennDOT Central Office, and DGS for processing COSFs and Good Receipts
- Project management of individual work order assignments involving asbestos, mold, and IAQ studies
- Involvement with emergency response projects, both general management (i.e., coordination) as well as supervision of on-site remedial services

Mr. Rowley's experience and qualifications will provide our team with in-depth leadership for managing the PennDOT Remediation Contract.

We have established strong working relationships with PennDOT personnel in the Central Office and the 11 engineering district offices. Through this interaction we understand the importance of maintaining these relationships through effective communications and high-quality performance. We know that, from time to time, unexpected issues arise during a work order assignment, and

we have demonstrated that we work with the engineers and executives in the PennDOT District offices and PennDOT Central Office to quickly resolve such problems to keep construction projects on schedule through effective and appropriate communication.

- Under the past remediation contracts, Skelly and Loy provided services associated with numerous projects, requiring our personnel to be flexible and adaptable to address emergency (rapid) response incidents 24/7/365, including holidays, overnight, and under adverse weather conditions.

Flexibility and adaptability to resolve conflicts and/or effectively respond to difficulties that arise during planned field activities.

- Skelly and Loy has a long history (over 50 years) of providing environmental services to public and private clients within the Commonwealth. This provides us with extensive experience and expertise in coordinating activities between public and private entities including utility clearances, permits, and compliance issues.

Ability to work with both public and private entities involved with PennDOT remediation projects.

- We understand that the Commonwealth is looking to get the most from its available budget. As responsible citizens in the Commonwealth, Skelly and Loy routinely provides services to Commonwealth agencies and has implemented cost-cutting strategies such as planning field work activities at two or more nearby sites to reduce mobilization costs, implementing the use of innovative technologies, and using electronic correspondence for communication and report or data delivery.

Ability to be cost-effective on all phases of PennDOT remediation projects.

- Skelly and Loy has demonstrated our capability to provide comprehensive environmental remediation services through our previous work with PennDOT, the Pennsylvania Turnpike Commission (PTC), PA DEP, Pennsylvania State System of Higher Education (PASSHE), and Maryland State Highway Administration (SHA) on open-end contracts requiring work on multiple, simultaneous projects.

Full-service environmental remediation firm exhibiting capabilities and technical expertise with a proven track record for successfully executing multiple investigative and remedial projects simultaneously.

On-Call, Cost Reimbursable, Time-and-Material Contract Experience

Skelly and Loy has successfully managed numerous On-Call and Cost Reimbursable contracts to provide environmental consulting/remediation services to various state agencies including PennDOT, PTC, PA DEP, and the PASSHE. A summary of the recent open-end contracts and indefinite delivery contracts recently managed by Skelly and Loy are summarized in Table I-2.B.1-1.

Table I-2.B.1-1
Summary of Contract Management Experience

Client	Contract Size (Thousands)	Number of Work Order Assignments	Status	Contract Name and Services Provided
Howard County Maryland	$1,072	25	Inactive	Environmental Assessment, Engineering, and Compliance Services
Howard County Maryland	$295	19	Inactive	Phase I and Phase II Environmental Assessment Services
Maryland Environmental Service	$236	6	Inactive	Stormwater Management and Remediation Services
Maryland Environmental Service	$705	8	Inactive	Environmental Management Systems and Environmental Compliance Services
Maryland National Capital Parks and Planning Commission	IDIQ	Just Awarded	Active	Environmental Assessment and Remediation Services
Maryland Department of Transportation State Highway Administration (MDOT SHA)	$5,000	11	Active	Environmental Engineering and Compliance Services, Statewide
MDOT SHA	$1,000	21	Active	Environmental Engineering and Geo-Hazard Services, Statewide
MDOT SHA	$1,590	10	Inactive	JV Partner for BCS 2012-03F Environmental Design and Permitting Services
Pennsylvania Turnpike Commission	$2,000	5	Active	Storage Tank and Environmental Assessment Services
Pennsylvania Turnpike Commission	$2,500	2	Active	Municipal Separate Storm Sewer System (MS4) Permit Assistance
Pennsylvania Turnpike Commission	$5,000	3	Active	MS4 Permit Assistance
Pennsylvania Department of Transportation	$18,500	273	Active	Remediation, Industrial Hygiene, and Env Services Statewide, PA
Pennsylvania Department of Transportation	$13,986	300	Inactive	Remediation, Industrial Hygiene, and Env Services Statewide, PA
Pennsylvania Department of Transportation	$8,951	201	Inactive	Remediation, Industrial Hygiene, and Env Services Eastern, PA
Pennsylvania Department of Transportation	$3,389	95	Inactive	Remediation, Industrial Hygiene, and Env Services Western, PA
Pennsylvania Department of Transportation	$5,965	141	Inactive	Remediation, Industrial Hygiene, and Env Services Eastern, PA
Pennsylvania Department of Transportation	$3,106	77	Inactive	Remediation, Industrial Hygiene, and Env Services Western, PA
Pennsylvania Department of Transportation	IDIQs	+1,000	Historic	45 District-wide open-end contracts for Environmental services
Pennsylvania State University	100	2	Active	O&M of Groundwater Treatment System, Former Fire Training Area
Philadelphia Water Department	$1,400	14	Inactive	Stream Channel and Wetland Design Services
Philadelphia Water Department	$1,475	18	Inactive	Stream Channel and Wetland Design Services
Philadelphia Water Department	$4,000	17	Inactive	Stream Channel and Wetland Design Services

Table I-2.B.1-1
(continued)

Client	Contract Size (Thousands)	Number of Work Order Assignments	Status	Contract Name and Services Provided
Philadelphia Water Department	$2,900	13	Inactive	Stream Channel and Wetland Design Services
Philadelphia Water Department	$2,250	10	Active	Ecological Restoration and Riparian Asset Design
Pittsburgh Public Schools	$1000	500	Active	On-Call Asbestos and Hazardous Materials Assessment Services
City of Pittsburgh	$300	250	Active	Comprehensive asbestos assessments
Shippensburg University	$122.6	5	Inactive	Professional Engineering/Architectural Design Services (PASSHE)
Allegheny County Airport Authority	$75	3	Active	Phase I & II Site Assessments, storage tank compliance, stormwater planning, sustainability, and misc. env. services.

I-2.A.2 Company Overview (continued)

As a provider of remediation services to PennDOT over the past 24 years, Skelly and Loy understands the importance of and is committed to ensuring that all the applicable registrations, certifications, and licenses in connection with work required under the Remediation Contract will be furnished either through in-house staff or subcontractor teaming members. The certifications held by Skelly and Loy and our subcontractors meeting the requirements of the Remediation Contract are presented in the following section.

I-2.A.3 Certifications, Accreditations and Training

Presented below is a discussion of the certifications, accreditations, and training for the personnel firms on our team that are committed for meeting the requirements of the Remediation Contract. Documentation of the licenses, certifications, accreditations, and training certificates for Skelly and Loy and our team members are included in in Section 1.1, Technical Questions, in the JAGGAER system.

I-2.A.3.a. Personnel Professional Certifications

Professional Geologists - Skelly and Loy is committed to furnishing Professional Geologists licensed in the Commonwealth of Pennsylvania to support work order assignments under the Remediation Contract. These professionals have experience furnishing geologic and hydrogeologic services, karst terrains, groundwater flow modeling, development of remedial options. In addition, our **Professional Geologists and Hydrogeologists, led by Mark Ioos, P.G. and Ed Durborow, P.G.,** routinely work on projects involving the PA DEP management of fill policy and closure of sites under the PA DEP Land Recycling Program (Act 2). Individual professional licenses for our Geologists and Hydrogeologists are presented in Section 1.1, Technical Questions, in the JAGGAER system.

Professional Engineers – Professional Engineers are used to develop and design remedial options and treatment systems. The **Professional Engineers** at Skelly and Loy have expertise

in the areas of **civil and environmental engineering**, led by Gerald Longenecker, P.E., Michael Lower, P.E. and Justin Matinchek, P.E., and routinely design soil and groundwater remediation systems and assist with the development of remedial engineering controls such as soil caps overlying waste materials. Moreover, our Professional Engineers address MS4, develop Stormwater Pollution Prevention Plan (SWPPP), and routinely tackle Total Maximum Daily Loads (TMDLs) for meeting Chesapeake Bay discharge standards. Individual professional licenses for our engineers are presented in Section 1.1, Technical Questions, in the JAGGAER system.

Certified Safety Professional – To address safety issues, Skelly and Loy has included Rob Rowley, CSP, CIH, a Board Certified Safety Professional (CSP) on our team. The certification for our CSP is presented in Section 1.1, Technical Questions, in the JAGGAER system.

Certified Industrial Hygienist – To support asbestos, mold, IAQ, and industrial hygiene issues, Skelly and Loy has included Rob Rowley, CSP, CIH, an American Board of Industrial Hygiene Certified Industrial Hygienist, on our team. The certification for our CIH is presented in Section 1.1, Technical Questions, in the JAGGAER system.

HAZWOPER – Training is an essential part of a successful organization. Valid copies of the Hazardous Waste Operations and Emergency Response (HAZWOPER) training (eight-hour updates) for our **key staff** is presented in Section 1.1, Technical Questions, in the JAGGAER system. This training meets the requirements of Code of Federal Regulations (CFR) 1910.120, allowing these personnel to oversee the cleanup of roadway spills, perform field investigative, conduct remedial efforts at contaminated sites under the Remediation Contract.

- Stan Attick
- Daniel Aungst, P.E.
- Calvin Bush, II, P.E.
- Chris Candela. P.E.
- Megan Cruz
- Daniel Davis, CEM, CES
- Edward N. Durborow, P.G.
- Amanda Ege
- Maureen Egner
- Kathy Eisele
- Jon English
- Shannon N. Evans, GIT
- Toby Good
- Jessica Gumbert
- Nicole Hain
- Brian Hamilla, P.G.
- Douglas Hess, P.G.
- Mark Ioos, P.G.
- Sean James
- Lizette Jimenez
- Chris Langewisch
- Amanda Lofink
- John Malachowski
- Jason McCabe
- Matt Nowlin
- John Nye
- Greg Orris
- Robert Rowley CIH, CSP
- Nate Ruhl
- Ryan Sheidy
- Dana Sword, GIT
- Lauren Tilley, CEPIT
- Mike Weatherby
- Terry White

Lead-Based Paint – Title IV of the Toxic Substances Control Act (TSCA) classifies lead as a toxic substance. Accordingly, the determination of lead concentrations in paint, dust, and soils is important for protecting human health and the environment. To perform LBP inspections on bridges and buildings, Skelly and Loy has included L&I certified LBP Inspectors or Risk Assessors on our team led by Greg Orris who has 30 years' experience. Individual licenses for our LBP inspectors and risk assessors are presented in Section 1.1, Technical Questions, in the JAGGAER system.

I-2.A.3.b. Storage Tank Handling Certifications

Skelly and Loy has been furnishing clients in the Commonwealth of Pennsylvania with storage tank services for over 30 years. For supporting environmental and remediation services associated with storage tanks under the Remediation Contract, our team is led by Jon English who has over 30 years' experience. We are committed to furnishing personnel and subcontractor firms on our team holding the required PA DEP-issued certifications. Importantly, these certifications meet the requirements of the PennDOT Remediation Contract and will ensure **compliance with of 25 Pa. Code § 245 Administration of the Storage Tank and Spill Prevention Program**. Individual storage tank licenses and licenses for the subcontractor firms included on our team are presented in Section 1.1, Technical Questions, in the JAGGAER system.

- Underground Manufactured Storage Tank Removal (UMR)
- Underground Storage Tank Installation and Modification (UMX)
- Aboveground Manufactured Storage Tank Removal (AMR)
- Aboveground Manufactured Metallic Storage Tank Installation and Modification (AMMX)
- Aboveground Non-Metallic Storage Tank Installation and Modification (AMNX)

I-2.A.3.c. Asbestos Certifications

Skelly and Loy/Terracon performs thousands of asbestos inspections annually, consisting of both Asbestos Hazard Emergency Response Act (AHERA, for re-occupancy) and National Emission Standards for Hazardous Air Pollutants (NESHAP, for demolition) inspections. **Terracon was ranked No. 1 in the nation by Engineering News Record (ENR) for providing asbestos services in 2021**. For supporting environmental and remediation services associated with asbestos under the Remediation Contract, Skelly and Loy/Terracon is committed to furnishing personnel and subcontractor firms on our team holding the required L&I-issued certifications. Our asbestos team is led by Rob Rowley, CSP, CIH and Dan Davis, CEM, CES each of whom has over 30 years of expertise in asbestos services and management. These licenses meet the requirements of the PennDOT Remediation Contract and will ensure compliance with Act 194 of 1990 (Asbestos Occupations Accreditation and Certification Act). Individual asbestos licenses and licenses for the subcontractor firms included on our team are presented in Section 1.1, Technical Questions, in the JAGGAER system.

- Asbestos Inspector certifications
- Asbestos Supervisor certification
- Asbestos Management Planner certification
- Asbestos Project Designer certification
- Contractor certification (Asbestos Abatement)
- Asbestos Worker and Supervisor certifications (Asbestos Abatement)

The asbestos abatement firms included on our team include:

- Bristol Environmental
- EcoServices, LLC (Small Diverse Business Enterprise)

- KLA Roofing and Construction, LLC
- Prism Response-Alloy

Skelly and Loy fully understands the additional asbestos inspection and abatement regulations specific to **Allegheny County**. For performing asbestos facility inspections in Philadelphia, Skelly and Loy employs **City of Philadelphia-accredited Asbestos Investigators**. For oversight of asbestos abatement in Philadelphia, we also employ City of Philadelphia Asbestos Project Inspectors. Asbestos licenses and certifications specific to Allegheny County and the City of Philadelphia for personnel and subcontractors on our team are presented in Section 1.1, Technical Questions, in the JAGGAER system.

As an added benefit, Skelly and Loy is capable of furnishing **NIOSH 582 Certified PCM Analysts**. These personnel are trained to oversee asbestos and hazardous materials abatement operations. During asbestos abatement, our NIOSH 582 Certified PCM Analysts can conduct real-time active air monitoring and analysis of filter media utilizing PCM techniques. The ability to analyze the filter media on-site is often important for asbestos abatement projects being conducted in inhabited buildings, where real-time assurance of the effectiveness of the asbestos containment system is needed to protect the safety of building personnel.

I-2.A.3.d. Laboratory Bulk and Airborne Asbestos Analysis Accreditation

Skelly and Loy has included the following laboratories on our team which have accreditation under the National Voluntary Laboratory Accreditation Program (NVLAP) to perform bulk and airborne asbestos analyses. Importantly, we have an established working relationship with each of these laboratories and have performed numerous projects together. The NVLAP certifications for the following laboratories on our team are presented in Section 1.1, Technical Questions, in the JAGGAER system.

- ALS Global
- BATTA Laboratories, LLC
- Eurofins Lancaster Laboratories
- International Asbestos Testing Laboratories LLC (iATL)

I-2.A.3.e. Laboratory PA DEP Drinking Water Certification

Skelly and Loy has included the following analytical laboratories on our team which have certification for the analysis of drinking water samples volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, PCBs, pesticides/herbicides, and microbiology parameters. Importantly, we have an established working relationship with each of these laboratories and have performed numerous projects together. The PA DEP Drinking Water certifications for the following laboratories on our team are presented in Section 1.1, Technical Questions, in the JAGGAER system.

- ALS Global Laboratories
- Eurofins Lancaster Laboratories
- Fairway Laboratories Inc.
- Pace Analytical Services, Inc.

I-2.A.3.f. Laboratory PA DEP Environmental Laboratory Registration

Skelly and Loy has included the following analytical laboratories on our team which have registration in accordance with the Environmental Laboratory Accreditation Act. At the end of this response section, we have included the certificates with the Act 25 registration numbers for each

of the laboratories included on our team. Importantly, we have an established working relationship with each of these laboratories and have performed numerous projects together. The PA DEP laboratory certifications for the following laboratories on our team are presented in Section 1.1, Technical Questions, in the JAGGAER system.

- ALS Global Laboratories
- Eurofins Lancaster Laboratories
- Fairway Laboratories Inc.
- Pace Analytical Services, Inc.

I-2.A.3.g. Health and Safety Program

Safety means ensuring the health and safety of all employees, subcontractors, and the general public by consistently making safety a priority and encouraging proactive prevention measures.

The health and safety of our employees and subconsultants is vital. To demonstrate our safety commitment, Skelly and Loy/Terracon implements an ***Incident and Injury-Free™ (IIF™)*** program which is based on care and concern as well as a commitment to everyone going home safely to their family every day. *IIF*™ is not something we do; it is in everything we do. *IIF*™ is about care and concern for people. It is our personal and organizational commitment at all levels of the company. It is where safety is held as a core value as well as an operational priority. Working safely is an inseparable part of working correctly, just as much as other operational priorities, in particular quality, profitability, and schedule. *IIF*™ is our commitment to our people, who we value for who they are and what they do. *IIF*™ is not just something we do, it's in everything we do.

We have adopted the following into our safety program to support *IIF*™.

Core Safety Rules

Rules that are common to all employees and must be complied with at all times as part of planning and performing our work in an *IIF*™ manner. Rules are followed alongside Skelly and Loy/Terracon and client policies as well as local, state, and federal regulations. These rules include:

General

1. Rule #1. No talking or texting on your cell phone while driving on our business or property. Never pick up the phone or adjust navigation while driving.

2. Rule #2. Start every job task with Pre-Task Planning and update the plan when personnel or conditions change.

3. Rule #3. Follow our-required safety training and get authorization before work starts:

    - in excavations,
    - in confined spaces,
    - when working at heights, and
    - before other job tasks which require it.

4. Rule #4. Lift with safe techniques and get help when lifts are awkward or heavier than 50 pounds.

5. Rule #5. Speak up right away and redirect a co-worker performing an unsafe act to safe work practices.

Personal Protective Equipment (PPE)

6. Rule #6. Wear PPE as required by project, task, and/or work environment. Inspect it before and during use; repairing or discarding and replacing it, if defective.

Equipment and Tools

7. Rule #7. Use our approved tools and equipment according to manufacturers' instructions, and never modify or override safety devices.

8. Rule #8. Inspect tools and equipment before, during, and after use. If defective, repair, discard them, or tag them with "Do Not Use" and remove them from service. Tell your supervisor.

9. Rule #9. Always track and keep clear of equipment moving in work areas.

Motor Vehicles

10. Rule #10. Wear your seat belt while the vehicle is in motion and when parked adjacent to or on an active roadway.

11. Rule #11. Operate and park the vehicle to prevent the need for backing as a first move. If you must back up, use a spotter. If working alone, use our approved self-spotting techniques.

12. Rule #12. Perform a 360° walkaround as your final action before moving a motor vehicle. Use a safety awareness cone or steering wheel cover when parked on our business.

13. Rule #13. Use our approved methods to secure loads, equipment, and tools on or in the vehicle you are operating.

Reporting an Injury

14. Rule #14. Call WorkCare if you are injured and tell your supervisor right away.

Core Safety Practices

Practices are basic safety responsibilities common to all employees and must be complied with unless we can describe how we planned to do the work more safely. At no time is a less-safe action allowed than what is spelled out in a Practice. Listed below are our Core Safety Practices.

Employees have the right and responsibility to:

1. Practice #1. Take the time you need to do the job safely.

2. Practice #2. Warm up for work before physical activity.

3. Practice #3. Stop work if you feel unsafe. Tell a supervisor and work together to fix the problem.

4. Practice #4. Manage controllable hazards and unsafe conditions in your work area. Report hazards you cannot control to a supervisor.

Manager and Supervisor Expectations

Managers and supervisors are responsible for ensuring employees are following Our Rules to Live By and are accountable for assigning work in an *IIF*™ manner. This includes allotting sufficient time to complete the work, scheduling properly trained staff, and providing adequate information for completion of Pre-Task Planning. Safety check-ins and documented safety coaching are proactive steps for *IIF*™ work.

Safety Accountability Policy

Our safety accountability policy corresponds with our Rules and Practices and describes what accountability steps apply to an employee, regardless of position, who violates a Rule or Practice.

OSHA and EMR Ratings

Our safety and health performance is tracked and monitored by a Corporate Health and Safety Manager. These performance measures include the following.

- Occupational Safety and Health Administration (OSHA)-recordable injuries/illnesses, incident rates, lost workdays, and Experience Modification Rating (EMR)
- Monthly review of workers' compensation claims/reports and other insurance loss claims
- Review of Accident/Incident Investigation Report forms

Terracon's excellent safety record, OSHA-recordable injury and illness rates, and workers' compensation as EMR for the past ten years is presented in Table I-2.A.3.g-1.

Table I-2.A.3.g-1
Safety Information for the Period of 2013-2022

Calendar Year	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Experience Mod Rating	0.95	0.86	0.72	0.66	0.6	0.71	0.82	0.76	0.79	0.96
Hours Worked		11,690,388	11,066,464	11,122,740	10,699,061	9,730,568	8,853,135	8,597,797	7,679,270	6,927,043
Average Number of Employees		5,200	4,950	4,900	4,700	4,400	4,115	3,794	3,332	3,027

A copy of our Corporate Health and Safety Program manual has been uploaded in Section 1.1, Technical Questions, in the JAGGAER system.

B. Prior Experience. Include experience in the field of environmental remediation. Experience shown should be work done by individuals who will be assigned to this project as well as that of your company. Studies or projects referred to must be identified and the name of the customer shown, including the name, address, and telephone number of the responsible official of the customer, company, or agency who may be contacted.

1. Supply three (3) quality client references from either large (100 or more employees) organizations or state entities for which the company is currently providing environmental remediation services. The supplied references must meet the following requirements:

a. Each client should reference various projects that demonstrate the Suppliers ability to perform a full range of environmental remediation and investigative services.
b. Each client reference must provide the project title, a description detailing the project scope and size, the organization for whom the work was performed, and a point of contact at that organization.

Offeror Response

I-2.B Prior Experience

The contractor selected to provide services under the Remediation Contract must not only have the technical expertise but must also possess a track record for successfully executing projects. Skelly and Loy has an excellent record of providing and performing remediation services to PennDOT and other public/private clients. Our proven track record provides evidence of our ability to manage and implement the types of projects expected to be performed under the Remediation Contract.

Our staff of licensed professionals (i.e., engineers, geologists, and soil scientists) and technical service personnel (i.e., wastewater treatment plant operators, electricians, specialists, etc.) have successfully been furnishing hydrogeologic and engineering remediation consulting services to public and private clients for the design, construction, and implementation of remediation systems for over 30 years. We have been involved with the design and construction of more than 100 groundwater and soil remediation systems. These treatment systems range in scale from small soil-mixing projects to stabilization of metals in soils to an air stripping tower capable of treating up to 3,500 gallons per minute of groundwater impacted with chlorinated VOCs. Specifically, our geologic and engineering services have been furnished to public and private clients for the design and construction of the following types of remediation systems:

- In-situ and ex-situ soil remediation projects, including stabilization
- In-situ chemical oxidation methodologies for remediation of groundwater
- Evaluation, design, and implementation of bioremediation methodologies for remediating groundwater
- Design and construction of groundwater extraction systems
- Design and construction of air sparging systems
- Design and installation of soil vapor extraction (SVE) systems
- Design and construction of dual phase remediation systems (groundwater and SVE)
- Public water supply treatment plant systems

- Wastewater treatment plant components and systems
- Acid mine drainage (AMD) and acid rock drainage (ARD) treatment systems
- Wetland mitigation and treatment systems
- Stream and waterways restoration projects
- Stormwater management and treatment systems

Our team has demonstrated 24 consecutive years of knowledge and capability of providing PennDOT with technical assistance regarding the design and construction of remediation systems, including preparing detailed scopes of work for remedial action projects; developing design plans sealed by a licensed Professional Geologist or Professional Engineer; providing technical review of remedial design; and providing management, technical oversight, and technical assistance for remedial actions. During the planning process for a remedial system, we routinely conduct pilot testing to ensure that our designs are founded on real data, not guesses. In addition, we have the experience and capabilities to prepare maps and plans for developing remedial designs. The Skelly and Loy team utilizes the latest versions of GIS, AutoCAD and three-dimensional mapping software to prepare an array of maps, plans, design drawings, and custom figures, as needed.

Based on our extensive project experience, we understand that remediation systems must be designed, installed, and managed in consideration of applicable regulatory guidelines, including the following:

- Clean Air Act (CAA) regulations which may impact the types and quantities of air emissions from the remedial projects

- CAA regulations which may require the project design to include specific types of pollution-control devices to reduce air emissions

- Resource Conservation and Recovery Act (RCRA) regulations which may require the project design to meet specific design requirements for RCRA-regulated units such as lining for waste disposal area, leachate collection systems for landfills, destruction and removal efficiency rates for incinerators, etc.

- RCRA regulations regarding accumulation and disposal of hazardous wastes generated during construction activities such as manifesting requirements, labeling requirements, etc.

- UST regulations which may require tank and piping designs to meet specific requirements for secondary containment, leak detection, and corrosion protection

- Clean Water Act (CWA) regulations which may require the project design to include pollution-control equipment to meet discharge limitations

- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requirements which may exempt activities from permitting requirements

As newer site characterization technologies are developed, remediation strategies have evolved for treating and remediation of contaminants in-situ. Our hydrogeologists and engineers have developed and applied techniques for the in-situ remediation of contaminants at numerous sites providing cost savings to our clients. In-situ remediation of contaminants in both soils and

groundwater is an emerging technology that is another tool in our arsenal for the cleanup of sites under the Remediation Contract.

To demonstrate our technical and contract management experience for furnishing environmental assessment and remediation services under the Remediation Contract, Skelly and Loy has included with our qualifications package descriptions for three representative contracts (see the writeups presented at the end of this section). These descriptions were selected from many candidate contracts/projects performed by Skelly and Loy. To demonstrate our ability to furnish environmental assessment and remediation services within the Commonwealth, we have elected to include only projects performed within Pennsylvania. These three contracts document our technical and contract management experience to successfully provide environmental and remediation services under the Remediation Contract. Importantly, the key staff presented in the Section I-2.C (Personnel) had a role supporting the work order assignments for the projects/contracts presented below. This consistency in our staff and experience will ensure that Skelly and Loy will continue to furnish exceptional environmental and remediation services to PennDOT under the Remediation Contract.

1. **PennDOT Statewide Remediation Services IDIQ Contract** – Skelly and Loy has been providing environmental assessment and remedial services to PennDOT under five successive agency-wide contracts since 1997. These five successive contract awards are summarized below.

    - PennDOT Agency-Wide Remedial Services Contract, Central Pennsylvania; 1997 to 2001; 6 Work/Purchase Orders; Cumulative billings $0.6 Million.

    - PennDOT Agency-Wide Remedial Services Contracts, Eastern and Western Pennsylvania; 2001 to 2005; 218 Work/Purchase Orders; Cumulative billings $9.1 Million.

    - PennDOT Agency-Wide Remedial Services Contracts; Eastern and Western Pennsylvania; 2005 to 2011; 296 Work/Purchase Orders; Cumulative billings $12.3 Million.

    - PennDOT Agency-Wide Remedial Services Contracts, Statewide Pennsylvania; 2011 to 2016; 301 Work/Purchase Orders; $13.9 Million.

    - PennDOT Agency-Wide Remedial Services Contracts, Statewide Pennsylvania; 2016 to present; 286 Work/Purchase Orders; $18.5 Million (to date).

    Skelly and Loy has demonstrated 24 years of proven service to PennDOT with environmental investigation and remediation services statewide. Over this period of time, Skelly and Loy has demonstrated the ability to investigate and remediate substances of environmental concern on an on-call basis, statewide. Under the multiple Remediation Contracts managed by Skelly and Loy, we have delivered exceptional environmental and remediation services under Normal Response and Rapid Response projects in all 67 counties of the Commonwealth.

2. **PTC Storage Tank Services Open-End Contract** – Skelly and Loy has been providing storage tank compliance services to the PTC under three successive open-end contracts since 2004. These four successive contract awards are summarized below.

- PTC Storage Tank Services Contract, Eastern Region; 2004 to 2009; 16 work order assignments; contract value $1.65 Million.

- PTC Storage Tank Services Contract, Statewide; 2009 to 2014; 6 work order assignments; contract value $2.375 Million.

- PTC Storage Tank Services Contract, Eastern Region; 2014 to 2019; 5 work order assignments; Contract value $2 Million.

- PTC Storage Tank Services Contract, Eastern Region; 2019 to Present; 4 work order assignments; Contract value $3 Million.

Skelly and Loy has 17 years of experience performing services for a similar client and similar services, including soil and groundwater investigations and remediation; direct push (Geoprobe®) sampling for soil, soil gas, and groundwater; installation and abandonment of monitoring wells and water supply wells; sample collection for analysis of hazardous substances and petroleum products; asbestos, LBP sampling and abatement plans; UST closure/site assessments and UST tightness testing; health and safety plans (HASPs); waste disposal; regulatory agency coordination; National Pollutant Discharge Elimination System (NPDES) monitoring and reporting; MS4 compliance inspections; preparation of bid documents; construction management; emergency response; O&M for wastewater treatment; and confidential – attorney work products.

3. **Fire Training Site Groundwater Monitoring, Remediation System Maintenance, Site Investigation, Environmental, and Remediation Services, Open-end Contract, The Pennsylvania State University, State College, Centre County, Pennsylvania** – This is a five-year contract where Skelly and Loy performs monthly remediation system O&M along with monthly, quarterly, and annual groundwater monitoring and reporting. Additional assignments have included conducting a groundwater and soil investigation at the Penn State Airport to evaluate potential impacts due to polyfluoroalkyl substances (PFAS), performing oversight for the removal of two 175,000-gallon USTs located at the Western Campus Steam Plant, and assisting with the removal of three 1,000-gallon concrete tanks that stored excess pesticide residues at the Penn State Biglerville Fruit Research Lab.

   This contract demonstrates our ability to perform O&M services for an automated groundwater treatment system. In addition, we have furnished the following additional services: environmental engineering recommendations to enhance the automation of the groundwater treatment system and minimize shutdowns, collection of groundwater samples on a quarterly basis, drilling of borings, collection of soil samples, development of groundwater flow and groundwater plume maps, regulatory reporting, removal of USTs, evaluation of impacts to soils and groundwater due to emerging contaminants (PFAS), and removal and closure of USTs containing hazardous waste.

Our technical and contract management experience for providing the environmental and remediation services referenced above is highlighted in Table I-2.B-1. This table includes information pertaining to our three featured projects and illustrates the breadth of experience that Skelly and Loy offers PennDOT for supporting work order assignments under the Remediation Contract.

Table I-2.B-1
Technical and Contract Management Experience

Selected Projects Included in Section I-2.B	Anticipated Services for Work Assignments											
	Emergency Response	Site Investigations	Environmental Sampling and Testing	Data Evaluation and Report Preparation	Storage Tank Services	Asbestos Services and Abatement Lead-Based Paint Inspections	Industrial Hygiene Services	Remediation Services	Hazardous and Non-Hazardous Waste Disposal	Drilling (Borings and Wells) Well Abandonment	Excavation	Regulatory Reporting Act 2 Reporting, Management of Fill
PennDOT Statewide Remediation Services IDIQ Contract	X	X	X	X	X	X	X	X	X	X	X	X
Storage Tank Services Statewide Contract, PTC	X	X	X	X	X	X	X	X	X	X	X	X
Pennsylvania State University, Former Fire Training Area	X	X	X	X	X	X		X	X	X		X

Pennsylvania Department of Transportation (PennDOT) Agency-Wide Remediation Services Contract, Statewide, Pennsylvania

Client
Pennsylvania Department of Transportation

Estimated Project Value
Current: $15,900,000
Total: $50,484,743

Completion Date
Ongoing

Key Components
Phase I ESAs/Phase II ESAs; Soil and Groundwater Investigations; Direct Push (Geoprobe) Sampling for Soil, Soil Gas, and Groundwater; Sampling Potable Wells; Installation/Abandonment of Monitoring wells and Potable Wells; Bottled Water and Residential Water Treatment Systems; Remediation of Soils and Groundwater; UST and AST Closures/Installations; Asbestos Inspections and Abatement; Lead-Based Paint Inspections; Mold Inspections and Remediation; Hazardous Substances, Petroleum Products, PCBs, DNAPLs, Heavy Metals, Drum Sampling; Geophysical Surveys; Geotechnical Studies; Hazardous and Non-Hazardous Waste Disposal; Removal/ installation of Wastewater and Septic Systems; Industrial Hygiene, Health & Safety Oversight, Prep of Health & Safety Plans; Emergency Response; Stormwater/MS4 Compliance; Confidential – Attorney-Client Work Products

Reference Contact
Mr. John S. Clark, P.G.
Project Manager
Strategic Environmental Management Program Section
Maintenance Technical Leadership Division
Bureau of Maint. and Operations
400 North Street- 7th Floor
Harrisburg, PA 17120-0094
P: 717-772-3085

For more than 20 years, Skelly and Loy, Inc. has held an Agency-Wide Remedial Services Indefinite Delivery/Indefinite Quantity (IDIQ) Contract with PennDOT for providing services statewide within the Commonwealth. Under our current contract, Skelly and Loy has received more than **270 individual Work Order assignments** to date. This workload requires the simultaneous completion of assignments at separate sites across Pennsylvania. The comprehensive services that Skelly and Loy has provided to PennDOT have included both normal and emergency response work order assignments to perform the following services.

Asbestos Building and Bridge Inspections and Abatement – Skelly and Loy has provided asbestos services in buildings slated for both pre-demolition (i.e., right-of-way acquisition) and pre-rehabilitation. Routine services have included conducting asbestos and hazardous material building inspections, development of bid specifications and special provisions, and asbestos-containing material abatement, disposal of asbestos-containing wastes, and air monitoring. Individual projects have included the abatement of over 2.9 miles of asbestos caulking, and 56,000 square feet of asbestos containing vapor and fire barrier paper.

Mold Inspections and Remediation – Skelly and Loy has provided inspection and remediation services for mold at PennDOT facilities statewide that are actively being used and/or are undergoing renovation. We have also developed bid specifications and special provisions for mold remediation, and conducted clearance sampling for mold following remediation activities.

Industrial Hygiene and Health and Safety Oversight Services – These services have been provided for assessing health and safety conditions at maintenance facilities and roadway construction work zones, providing oversight of the management and handling of contaminated soils/waste materials, furnishing environmental health and safety monitoring equipment, and confined space entry services. We have also conducted Indoor Air Quality studies and mitigation.

Geophysical Surveys – Skelly and Loy has provided geophysical surveying services for the detection/location of buried structures (i.e., USTs), drums, waste materials, metallic objects, and underground utilities. In addition, Skelly and Loy has provided services for the use of geophysical wire line instruments/cameras for the logging and inspection of wells.

Geotechnical Studies – Skelly and Loy has performed geotechnical investigations which have included the drilling of borings using the Standard Penetration Test (SPT) split-spoon sampler procedures to determine the engineering characteristics of the subsurface materials. During these studies, soil and rock materials have been collected for physical testing using AASHTO Accredited laboratories. In addition, Skelly and Loy has developed detail reports containing recommendations for foundation designs.

Dewatering of Excavations and Management of Liquid Waste Materials – Skelly and Loy has provided services for the dewatering of excavations. In addition, Skelly and Loy routinely offers services for the management of water at construction sites. Projects have included furnishing frac tanks for the temporary on-site storage of pumped water, the on-site treatment and disposal of contaminated water, and the pump-out of excavations via vac-trucks and the off-site disposal of water at a permitted disposal facilities. Liquid waste materials have included both non-hazardous and hazardous liquids and water.

Removal and Installation of Aboveground Storage Tanks (ASTs) and Underground Storage Tanks (USTs) – Skelly and Loy has provided removal and installation of heating oil, waste oil, gasoline, diesel fuel, and tar emulsion storage tanks. Services have included demolition and/or rehabilitation of AST containment structures, installation of

new tank systems, and hookup of electrical service for new tank systems. Such services have been provided at maintenance facilities, at properties acquired by ROW units, and unknown/unregistered tanks discovered during construction activities.

Hazardous and Non-Hazardous Waste Disposal – Skelly and Loy has provided services that have included the disposal of both solid and liquid wastes. This has included the loading, transportation, and disposal contaminated soils; asphalt emulsion wastes; asbestos-containing wastes; PCB-containing wastes; municipal wastes; residual wastes; and non-hazardous and hazardous liquid wastes.

Excavation and Disposal of Buried Waste Materials – Skelly and Loy has provided services for the excavation and segregation of waste materials, collection of post-excavation samples, grading/revegetation of disturbed areas, and preparation of closure reports for addressing regulatory reporting standards.

Wastewater and Septic Systems – Skelly and Loy has provided O&M and equipment inspection services, system evaluation studies, and installation of septic and wastewater systems.

Clean Fill Determination Services/Assessments – The management of excess soil and rock materials generated during construction projects is subject to regulation. Skelly and Loy has provided services to assess potential beneficial reuse of excavated soils, asphalt, and concrete for construction projects. In addition, we have conducted investigations to minimize the volume of materials for offsite disposal and developed management plans for the reuse of materials onsite for reducing project costs.

Direct Push Drilling Services – Skelly and Loy routinely drills soil borings (Geoprobe) and collects samples of environmental media for laboratory testing. Services have also included the use of membrane interface probe (MIP) technology in conjunction of a mobile laboratory for the real-time characterization of VOCs concentrations with respect depth in soil materials.

Analytical Testing – Skelly and Loy has collected environmental samples of various media (soil, sediment, surface water, groundwater, air, soil gas, and miscellaneous waste materials) for analytical testing. Services have been provided for the collection of sample media by properly trained and equipped personnel, with samples managed under chain-of-custody protocols.

Third-Party Oversight Services – Skelly and Loy has provided third party oversight services during active construction projects for documenting the generation, handling, and disposal of waste materials by general contractors.

Bottled Water and Residential Water Treatment Systems – Skelly and Loy has furnished residents with bottled water. Services have also included the installation of water treatment systems, including follow up O&M and water quality testing services.

Design of Soil and Groundwater Remediation Systems – Skelly and Loy has addressed contaminated soils and groundwater at PennDOT facilities by designing and installing site-specific remediation systems including product recovery systems, soil gas extraction, groundwater extraction, air stripping, liquid and vapor phase activated carbon, in situ chemical oxidation, and bioremediation.

Wetland Mitigation – Skelly and Loy has provided services for the investigation of wetlands and the development of mitigation plans for wetland systems impacted by roadway construction activities and/or the operations at PennDOT facilities.

Construction Monitoring and Environmental Compliance – We have provided monitoring/inspection services for assuring general contractors maintain compliance with the environmental permit requirements during the construction phase of highway projects.

Water Quality Monitoring and Aquatic Biota – Skelly and Loy has provided services to investigate and develop mitigation plans for water resources and sensitive aquatic biota impacted by roadway construction activities and/or operations at PennDOT facilities.

Well Abandonment – Skelly and Loy has provided services for the abandonment of private residential wells, monitoring wells, and orphan oil & gas wells.

Bio-Hazard Remediation (i.e., medical waste) – Skelly and Loy has provided services for the pick-up and disposal of used syringes, feces, cleaning of underpasses, cleaning and grubbing of tent farm areas, and removal of bedding and clothing.

Storage Tank Services Contract, Pennsylvania Turnpike Commission
Statewide, Pennsylvania

Client/Owner
Pennsylvania Turnpike Commission

Estimated Project Value
Current: $2,500,000
Since 2004: $5,200,000

Completion Date
Ongoing

Key Components
Soil & Groundwater Investigations and Remediation; Direct Push (Geoprobe) Sampling for Soil, Soil Gas, and Groundwater; Installation & Abandonment of Monitoring Wells and Water Supply Wells; Hazardous Substances and Petroleum Products; Asbestos, LBP sampling and Abatement Plans; UST Closure/Site Assessments, and UST Tightness Testing; Health and Safety Plans (HASP); Waste Disposal; Regulatory Agency Coordination; NPDES Monitoring and Reporting; MS4 Compliance Inspections; Preparation of Bid Documents; Construction Management; Emergency Response; O&M for Wastewater Treatment; Confidential – Attorney Work Products

Reference Contact
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Under this 5-year open-end contract, Skelly and Loy, Inc. has provided a multitude of environmental and engineering services to the PTC to assist in compliance with managing their storage tanks systems and responding to rapid response events.

Services provided have included subsurface investigations, groundwater assessments, fate and transport modeling, groundwater remediation, development of asbestos abatement plans, underground storage tank (UST) closure/site assessments, and UST tightness testing. Additional assignments included technical report review, regulatory agency coordination, technical support to PTC legal counsel, National Pollutant Discharge Elimination System (NPDES) monitoring and reporting, MS4 compliance inspections, preparation of bid documents, construction management, water quality and water supply studies, and emergency response duties.

Our current Open-End Agreement is specific to UST and rapid response environmental and engineering services. Under this contract assignments have included providing oversight during the upgrade of UST systems at over 50 maintenance facility and Toll Plaza locations, technical assistance with preparation of a Multi-Site/Multi-Party Agreement for remedial work at 21 of the current and former Service Plaza locations, and continued monitoring and remediation of PTC sites. Following are examples of Work Order assignments completed by Skelly and Loy.

Site Characterization – Skelly and Loy has provided site characterization services at numerous sites that had have been impacted by petroleum hydrocarbon compounds. These services have consisted of performing geophysical surveys, characterizing soils, drilling borings via direct push technologies, use of membrane Interface probe (MIP) technologies to characterize hydrocarbon compounds in the underlying soils, drilling of monitoring wells, groundwater investigations, groundwater sampling and monitoring, development of fate and transport models, and performing risk assessments.

Remediation Services – Skelly and Loy has developed remediation plans for utilizing the following remediation techniques at PTC sites: excavation and disposal/recycling of contaminated soils, soil vapor extraction, groundwater pump and treat, use of vapor-phase and liquid-phase activated carbon absorbers, product recovery systems, bioremediation, in situ chemical oxidation (ISCO), and installation of engineering controls to prevent direct contact with contaminated media.

Computer Modeling – Based upon the integration of more risk-based decisions into the site closure process by regulatory agencies, Skelly and Loy has developed numerous fate and transport groundwater models, used statistical analyses, and performed risk assessments evaluating trends in contaminant concentrations for expediting the closure of sites.

Geo-hazards and Geo-Technical – Skelly and Loy has performed numerous studies related to geohazards associated with UST systems at turnpike service plazas, toll plazas, and maintenance facilities. These assessments have included the evaluation of subsidence issues associated with tank tops, interchange roadway areas, and water seepage issues. For these studies, geotechnical assessments have been conducted to characterize the subsurface materials. Skelly and Loy has developed recommendations for mitigating the geo-hazard and water seepage issues.

Emergency Response – Skelly and Loy has responded to numerous over-the-road spills and roadway accidents. On these projects, the response crews contained the spilled product while securing the site and protecting the driving public from roadside excavations. Skelly and Loy has provided turnkey services from the initial call to final site restoration and report preparation.

Geophysical surveys – Skelly and Loy has performed numerous geophysical surveys at

service plazas, toll plazas, and maintenance facilities. The geophysical surveys were performed as part of other ongoing environmental assessments and were used to identify out-of-service USTs, and underground utilities. The assessment work included using electromagnetic (EM) and ground penetrating radar (GPR) instrumentation.

UST Environmental Management System (EMS) – Skelly and Loy linked the PTC's tank database to a GIS Web-based mapping system that can be remotely accessed to obtain tank system data and has assisted with the implementation of Fuel View, a proprietary software program that when tied into the current Veeder-Root Automatic Tank Gauging (ATG) systems, allows the PTC to remotely monitor compliance records and tank inventory records for storage tank systems at the their 26 service plazas and interchange locations. This software system, developed by a private vendor, integrates the remote access communication functions of ATG systems with existing database records to monitor fuel levels and status of compliance issues. In addition, Skelly and Loy continues to monitor the PTC's storage tank EMS system on a daily basis tracking alarms associated with the Fuel View systems for each facility with storage tanks. The remote monitoring of these systems allows leak detection and system alarms to be prioritized so labor can be properly allocated to planning rather than reacting. To address alarms, Skelly and Loy dispatches certified ATG technicians to tank sites for further diagnosing the alarm issue and take actions to reset the computer programs or shutdown the tank system until the compliance issue can be addressed. To date, the system has greatly reduced compliance issues related to the collection, storage, and reporting of monthly inventory records for UST systems.

GIS Mapping System – Skelly and Loy is currently integrating the GIS mapping database system and the Fuel View software to develop a comprehensive interactive environmental monitoring system that will include current tank information, inspection reports, the status of environmental investigations, and regulatory status. The web-based approach will allow for easy user interface to remotely access information via a computer or smart phone technology, allowing personnel to make informed decisions before a minor issue becomes a complicated and expensive environmental matter.

Facility Operations and Compliance Inspections – Skelly and Loy is also performing monthly auditing checks of various storage tank components including: fuel dispenser sumps, review of mechanical line leak detection tests, leak detection via in-tank sensors, and tank monitoring records to verify compliance. We have furnished services to inspect the structural integrity of tank tops, check the tank and dispensing system components for liquids and sediment, and perform annual functionality testing on all of the Veeder-Root systems. As these are short-duration and quick-paced projects, Skelly and Loy has completed these regulatory agency-required inspections with little to no notice while maintaining compliance.

MS4 Compliance Assessments and Inspections – Skelly and Loy has assisted the PTC to proactively evaluate the adequacy of its Municipal Separate Storm Sewer System (MS4) stormwater-related activities for compliance with the Chesapeake Bay cleanup initiatives. Services have included a review of the PTC roadway corridor and affiliated Operation Sites (maintenance areas, toll exchanges, offices, service plazas, other leaseholds, and Turnpike State Police barracks). Skelly and Loy coordinated with the Pennsylvania Department of Environmental Protection (PA DEP) and U.S. Environmental Protection Agency (U.S. EPA) to assist the PTC in negotiating its MS4 Permit renewal. As part of the project, Skelly and Loy replaced the PTC's first-generation mapping with a GIS database to produce up-to-date PTC MS4 maps. Skelly and Loy also completed draft PRPs to achieve a 10% reduction in the amount of sediment and nutrient loading discharging to waterways impaired by sediment or nutrients east and west of the Chesapeake Bay and for all waterways within the PTC-regulated area within the Chesapeake Bay drainage basin. Skelly and Loy continues providing annual reporting assistance.

Water Well Siting, Drilling, and Upgrades to the Water Treatment System – Based upon sediment and water quality issues, Skelly and Loy investigated water quality issues in a water supply well. The investigation included the collection of water quality samples and surveying the well with a downhole video camera. Based upon the inspection of the well, it was determined that the surface casing was deteriorating, allowing sediment and turbidity to degrade the water quality. Skelly and Loy sited a new well location at the facility for meeting their water demand needs and provided oversight for the drilling of the new well, and recommendations for well construction. In addition, Skelly and Loy provided the PTC with services for upgrading the existing water treatment system to meet water quality standards.

Wastewater Systems – Skelly and Loy has provided consulting services and O&M support for wastewater treatment systems associated with Service Plaza rest stops and maintenance facilities.

Waste Disposal – Skelly and Loy provided oversight and inspection services during recycling of over 10,000 tons of hydrocarbon-impacted soils generated from numerous UST closures on PTC property.

Fire Training Site Groundwater Monitoring, Remediation System Maintenance, Site Investigation, Environmental, and Remediation Services
The Pennsylvania State University, State College, Centre County, Pennsylvania

Client/Owner
The Pennsylvania State University

Estimated Project Value
Total: $650,000

Completion Date
Ongoing

Key Components
Quarterly groundwater monitoring of 18 wells; Monthly Sampling and Monitoring of 3 Recovery Wells; Monthly and quarterly sampling of selected monitoring wells; Annual reporting to PA DEP; Meeting PA DEP system permit discharge limits; Maintaining hydraulic control of contaminant plume; Remediation System O&M; On-site Health and Safety Monitoring; Storage Tank Removal and Demolition Oversight services; Drilling of Borings; Collection of Soil Samples; Management and Disposal of Petroleum-impacted Soils; Sampling of Residential and Public Water Supply Wells; Evaluation of Groundwater Impacts Related to PFOA and PFOS compounds; Management of Fill services; Removal of Pesticide Evaporation Tank.

Reference Contact
Ms. Lysa Holland, P.E.
Environmental Compliance Engineer
Environmental Health and Safety
The Pennsylvania State University
6K Eisenhower Parking Deck
University Park, PA 16802-2116
P: 814-865-6391

Through an open-end contract and other contract vehicles, Skelly and Loy has been furnishing The Pennsylvania State University with a wide variety of environmental and remediation services. The services furnished to the University have included: professional Geologic and Environmental Engineering; site investigation, remediation system operation and maintenance (O&M); monthly and quarterly sampling; removal and closure of storage tanks, and regulatory reporting. Further information regarding the assignments are provided below.

Fire Training Site Groundwater Monitoring, Remediation System Maintenance – The groundwater underlying the Fire Training site contains chlorinated solvents and polyfluoroalkyl substances (PFAS). Skelly and Loy performs monthly remediation system O&M along with monthly, quarterly, and annual groundwater monitoring, and reporting. The project objectives include meeting permit limits established by the Pennsylvania Department of Environmental Protection (PA DEP) for the system effluent and maintaining hydraulic control of the contaminant plume to ensure that nearby drinking water wells remain uncontaminated.

Groundwater monitoring involves sampling a series of 18 bedrock monitoring wells. The remediation system is being used to recover chlorinated volatile organic compounds (cVOCs) that include cis-1,2-dichloroethene (cis- DCE), tetrachloroethene (PCE), trichloroethene (TCE), and vinyl chloride in addition to perfluorooctanoic acid (PFOA) and perfluorooctyl sulfonate (PFOS). Monthly monitoring of system inflow rates and sampling of three groundwater recovery wells are performed during routine monthly O&M visits to maintain system efficiency. Monthly and quarterly sampling of selected monitoring wells are performed with the sample results reported to PSU and the PA DEP. All 18 wells are gauged and sampled on an annual basis with the results incorporated into a comprehensive annual report that is provided to the PA DEP. The annual report is used to track the system's remedial progress by presenting the sampling results with data plots depicting long-term water quality trends.

System O&M also includes periodic acidification and cleaning to remove calcium scale from system components as well as repair and/or replacement of compressors, effluent pumps, and space heaters. Skelly and Loy has successfully engineered and made changes to the remedial system to improve efficiency and minimize system shutdowns.

Penn State Airport, PFOA and PFOS Groundwater Study – In 2018, PFOA and PFOS compounds were identified in several private wells in the vicinity of the airport. The Pennsylvania State University retained the services of Skelly and Loy to collect groundwater samples

from the existing monitoring well network at the airport to determine the source area for the PFOA and PFOS compounds contained in the groundwater underlying the area. The study also involved the collection of groundwater samples from offsite residential and public water supply wells. The testing results for the groundwater study were inconclusive in regard to the source area for the PFOA and PFOS compounds.

Skelly and Loy also was retained to conduct an soils investigation at the airport for a planned taxiway improvement project. The investigation included the drilling of borings using direct-push technology (i.e., Geoprobe) and the collection of soil samples for analytical testing. Due to concerns regarding potential impacts due to PFOA and PFOS compounds, the soil samples were submitted for analysis of 24 PFOA and PFOS isomers. The analytical testing results showed the concentration of the PFOA and PFOS isomers detected in the soil samples were less than the regulatory cleanup levels. Skelly and Loy provided the University with recommendations for managing the soils in compliance with the PADEP's Management of Fill policy.

Western Campus Services Building Tank Closure – The project involved oversight during the closure of 2-175,000-gallon Underground Storage Tanks (USTs) located at the Western Campus Steam Plant. The tanks were installed in the early 1970's and formerly used to hold #2 and #4 heating fuel.

Each of the two tank systems was approximately 50'x50'x10', and they were connected with a steel pump house building. Sequencing of our work activities was completed in the following manner, with consideration to the asbestos and demolition contractors' schedules.
Skelly and Loy field screened soil throughout the project to ensure that soils impacted by petroleum were segregated and managed as waste materials.

In addition, Skelly and Loy worked with the demolition contractor to screen soils during tank excavation and demolition. Following tank demolition, a concrete pad underlying the tank was removed to facilitate closure sampling for the tank systems. Skelly and Loy obtained closure samples in May 2018.

The project was completed on time and under budget allowing for the new steam plant building construction to begin on schedule

Removal of Pesticide Evaporation Tank – Skelly and Loy, Inc. assisted Penn State University with removal of three 1,000-gallon concrete tanks that stored excess pesticide rinsates at the Penn State Biglerville Fruit Research Lab, located on University Drive in Biglerville, Pennsylvania.

The tanks were contained in a subsurface vault with a wood structure built over the tank area for weather protection. Work consisted of safe work plans review and implementation, removal and disposal of the wood structure over the tank area, pumping residual water from the tanks, removal and disposal of the three tanks, sump, and piping, and confirmatory soil sampling from the tank base area. The confirmatory soil samples were submitted to a PADEP certified environmental testing laboratory for the analysis of pesticides, herbicides, insecticides, and fungicides. The testing results showed none of these compounds were detected in the subsurface. The excavation was backfilled with clean gravel, topsoil, graded. and seeded. UST closure reporting was completed at the end of the project. Skelly and Loy completed work within the project budget and schedule, both of which exceeded Penn State's expectations.

C. Personnel. Describe in narrative form the number of executive and professional personnel who will be engaged in the work and indicate where these personnel will be physically located during the time they are engaged in the Project. For key personnel, an outline of the management and operational structure, including senior staff professionals, project staff professionals and assistant staff professionals (titles can be found on **Appendix A – Cost Submittal)** include the employee's name, and through a resume or similar document, the Project personnel's education and experience in the fields outlined in the Company Overview above. Indicate the responsibilities each individual will have in this Project and how long each has been with your company. The Pennsylvania Department of General Services (DGS) and/or the Pennsylvania Department of Transportation (PennDOT) reserves the right to request resumes of senior staff professionals and project staff professionals performing service and to request replacement of any staff found unsuitable to perform the work under the scope of services for this Contract.

Offeror Response

I-2.C Personnel

Skelly and Loy proposes to perform the Program Management functions for the Remediation Contract from our office located in Harrisburg, Pennsylvania. To serve this contract, we have five additional offices located in Blue Bell, Pittsburgh, and State College, Pennsylvania; Hunt Valley, Maryland; and Moorestown, New Jersey. We are proud of our Pennsylvania heritage and are committed to the Commonwealth's future.

Skelly and Loy proposes to perform the Program Management functions for the Remediation Contract from our office located in Harrisburg, Pennsylvania. Our close proximity to DGS headquarters (Forum Place Building, 555 Walnut Street, Harrisburg, Pennsylvania) and PennDOT Central Office (Keystone Building, 400 North Street, Harrisburg, Pennsylvania) will facilitate a timely response and a direct line of communication to the DGS Contract Manager and to the PennDOT Central Office Technical Manager.

Personnel Resources

Skelly and Loy will use staff in its Harrisburg, Philadelphia West (Blue Bell), Pittsburgh, and State College, Pennsylvania; Hunt Valley, Maryland; and Philadelphia East (Moorestown), New Jersey office locations to support work order assignments under the Remediation Contract. Our office locations and the technical disciplines of its personnel are presented in Table I-2.C.-1. The office locations represent established centers of operations for furnishing staff and resources to serve the contract.

Table I-2.C-1
Staff Availability by Office Location

Physical Location of Skelly and Loy/Terracon Offices	Labor Bid Classifications											
	Project Manager	Senior Geologist/Hydrogeologist	Sr. Environmental/Sanitary Engineers	Technician, Hazardous Materials	Environmental/Sanitary Engineers	Environmental Scientist (Standard)	Clerical/Secretarial Personnel	Draftsperson/CADD Operator	Survey Crew: Includes PA Certified Surveyor	Environmental Scientist (Standard Rate)	Environmental Scientist (Emergency)	Environmental Scientist (Emergency)
Bid Item Number	2	3	5	9	11	14	15	16	17	22	34	40
HARRISBURG, PENNSYLVANIA	11	4	8	7	6	21	4	6	3	8	21	8
PHILADELPHIA WEST (BLUE BELL), PENNSYLVANIA	2	---	1	---	---	5	---	---	---	1	5	1
PITTSBURGH, PENNSYLVANIA	6	1	---	---	1	6	1	3	---	7	6	7
STATE COLLEGE, PENNSYLVANIA	---	---	---	---	---	2	---	---	---	---	2	---
HUNT VALLEY, MARYLAND	3	---	6	---	3	---	2	1	---	2	---	2
PHILADELPHIA EAST MOORESTOWN, NEW JERSEY	2	1	2	---	---	---	1	---	---	---	---	---

Key Staff Roles and Responsibilities

A wide array of professionals and experienced staff members have been selected by Skelly and Loy to cover the full range of specialized services anticipated under the Remediation Contract. The roles and responsibilities for each of our **Key Staff** personnel are presented in Table I-2.C-2.

In addition to their areas of technical expertise, these individuals were selected for their ability to provide the highest level and clarity of communication in their work. Our demonstrated success with PennDOT has been realized through ongoing formal and informal communication at each staff level. The objective is to keep team members informed, on schedule, and involved in order to achieve success in meeting project goals.

Table I-2.C-2
Key Staff Roles and Responsibilities

Program Role	Responsibilities	Authority	Reports To
Principal in Charge (Contract Support Services) Sandra K. Basehore, Manager Harrisburg Office Principal-In-Charge	• Provide corporate management oversight • Provide a communications link among DGS, PennDOT Central Office, and senior Skelly and Loy corporate management • Ensure that adequate staff and financial resources are supplied to the contract	• Implement appropriate changes requested by DGS and PennDOT Central Office • Nominate a new proposed Program Manager if this becomes necessary for a particular reason	• DGS and PennDOT Central Office
Bid Item #1 Program Manager Robert D. Rowley, CIH, CSP Contract Administrator	• Provide overall direction, coordination, technical consistency, and administration of contract • Provide resource allocation • Provide project quality and health and safety implementation • Serve as main point of contact with PennDOT and DGS personnel • Review project status with project managers and PennDOT personnel • Administer streamlined reporting system	• Approve budgets and schedules • Approve expenditures • Communicate with DGS and PennDOT on contractual, project, and technical issues • Final approval of documents • Assign review team resources • Select/dismiss Skelly and Loy personnel	• DGS and PennDOT Central Office Skelly and Loy Principal-In-Charge
QA/QC Officer (Contract Support Services) Paul J. DeAngelo Manager of Environmental Services	• QA/QC Review of Deliverables	• Department Manager and Authorized Project Reviewer	• Skelly and Loy Principal-In-Charge
Contract Manager (Contract Support Services) Jennifer M. White, Accounting Manager	• Review cost estimates • Review project schedules • Track cost and schedule monthly • Identify project cost/schedule issues • Compliance with DGS contract requirements • Compliance with subcontractor procurement procedures • Prepare all procurement and contract documentation • Monitor DBE requirements	• Implement program invoicing procedures and audit compliance • Implement program procurement procedures and audit compliance • Review and approve invoices	• Skelly and Loy Program Manager • Skelly and Loy Principal-In-Charge
Bid Item #2 Project Managers Daniel J. Davis, CEM, CES Maureen Egner Jon English Jason T. McCabe	• Plan, coordinate, and monitor projects • Prepare and submit progress reports and project deliverables • Subcontractor performance evaluation • Budget and schedule compliance • Comply with health and safety and quality plans	• Modify work plans to meet site conditions • Purchase site-specific equipment and supplies within PennDOT procurement guidelines • Project teamwork assignments	• PennDOT Project Officer • Skelly and Loy Program Manager
Bid Item #3 Senior Geologists and Hydrogeologists Edward N. Durborow, P.G. Brian M. Hamilla, P.G. Douglas J. Hess, P.G. Mark B. Ioos, P.G.	• Standardize field and testing procedures • Supervise on-site staff and contractors • Review work on a daily basis • Prepare daily reports	• Stop work if significant variances in defined procedures are identified • Ensure that on-site activities are performed in accordance with the approved work plans • Direct, budget, and manage the day-to-day job site issues	• Skelly and Loy Program Manager (Remediation Contract issues) • Project Manager (site specific issues)

Table I-2.C-2
(continued)

Program Role	Responsibilities	Authority	Reports To
Bid Item #5 **Senior Environmental and Sanitary Engineers** Daniel R. Aungst, P.E. Calvin Bush, II, P.E. Gerry Longenecker, P.E. Michael Lower, P.E. Justin Matincheck, P.E.	• Provide remediation technical direction in their areas of experience • Ensure that technical work meets appropriate standards	• Recommend appropriate remedial technologies • Report special permitting, construction, and implementation issues	• Project Manager
Bid Item #9 **Technician, Hazardous Materials** Stan Attick Toby Good John Nye Mike Weatherby Terry White	• Provide hands-on site work • Install remediation components • Provide O&M services to remediation systems • Environmental support services	• Remediation system start up and shutdown of components • Operation of mechanical equipment • Electrical, plumbing, and mechanical services.	• Project Manager
Bid Item #11 **Environmental/Sanitary Engineers** Ben Burlew Al Budinsky Luke Gaidos Don Polly	• Provide remediation technical direction in their areas of experience • Ensure that technical work meets appropriate standards	• Recommend appropriate remedial technologies • Report special permitting, construction, and implementation issues	• Project Manager
Bid Item #14 **Environmental Scientist (Standard)** Shannon N. Evans, GIT John Malachowski Matt Nowlin Greg Orris Ryan Sheidy Lauren Tilley, CEPIT Dana Sword, GIT	• Coordinate and oversee on-site environmental work activities • Collection of Environmental and waste samples • Oversight of subcontractors	• Direct personnel, resources, and equipment • Implement procedures for the protection of on-site workers and the general public	• Project Manager
Bid Item #15 **Clerical/Secretarial Personnel** Michelle Gandy, CAP, TA, MOS Expert Kira Shaffir-Lupo	• Prepare monthly status reports • Prepare invoices • Process new work order assignments and Change Orders • Provide technical typing services and assist in preparation of reports	• Report project control issues to Skelly and Loy Contract Administrator • Implement corrective action if required to control project	• Skelly and Loy Program Manager • Skelly and Loy Contract Manager
Bid Item #16 **Draftsperson/CADD Operator** Harry Frank Dan Johnston Brad Reese	• Prepare maps and diagrams • Develop schematics for remediation systems • Develop GIS maps and manipulate GIS databases	• Provide recommendations on development of maps and figures for reports • Check report quantities and calculations for design specifications	• Project Manager
Bid Item #17 **Survey Crew:** **Includes PA Certified Surveyor** Nate Beck Gerald “Bud” Grove, P.E., P.L.S. Richard Johnston	• Survey property boundaries • Survey Top of casing elevation for monitoring wells • Operate aerial vehicles (drones) • Reduce digital survey data for creation of site maps (topographic and cultural features)	• Provide recommendations for survey techniques • Provide recommendations for drone mapping and photography	• Project Manager
Bid Item #22 **Environmental Scientist** **(Standard Rate)** Amy Bruggeman Sean James Elizabeth Grietzer Jessica Gumbert Nate Ruhl	• Provide technical direction in their areas of experience • Ensure technical work meets appropriate standards	• Recommend appropriate staff for project requirements • Review technical content of deliverables	• Project Manager

Table I-2.C-2
(continued)

Program Role	Responsibilities	Authority	Reports To
Bid Item #34 **Environmental Scientist** **(Emergency)** Shannon N. Evans, GIT John Malachowski Matt Nowlin Greg Orris Ryan Sheidy Lauren Tilley, CEPIT Dana Sword, GIT	• Provide technical direction in their areas of experience during emergency response operations • Perform on-site cleanup work • Provide oversight of subcontractors • Ensure that technical work meets appropriate standards	• Recommend appropriate staff for project requirements • Review technical content of deliverables	• Project Manager
Bid Item #40 **Environmental Scientist** **(Emergency)** Amy Bruggeman Luke Gaidos Elizabeth Grietzer Jessica Gumbert	• Provide technical direction in their areas of experience during emergency response operations • Perform on-site cleanup work • Provide oversight of subcontractors • Ensure that technical work meets appropriate standards	• Recommend appropriate staff for project requirements • Review technical content of deliverables	• Project Manager

Resumes for the key staff listed in Table I-2.C.-2 are presented at the end of this section. The resumes provide the employees' names, education, experience, years of service with Skelly and Loy, and their assigned roles in providing services under the Remediation Contract.

In addition to our key staff, Skelly and Loy has a large staff of professionals who possess a diverse range of expertise, experience, and geographical availability to quickly and effectively respond to PennDOT's needs under the Remediation Contract. Our four Pennsylvania-based office locations and satellite offices in Hunt Valley, Maryland, and Moorestown, New Jersey, will collectively furnish geographical availability to quickly and cost-effectively respond to PennDOT's requirements under the Remediation Contract. A comprehensive listing of the personnel who will be involved with this contract is presented in Table I-2.C.-3. This table provides information regarding each staff member's name, education, professional role, years of experience, and number of years with Skelly and Loy/Terracon for supporting the services required under the contract.

Quality Control (QA/QC) Plan: Skelly and Loy prioritizes quality, and we strive to exceed expectations on every assignment. For that reason, we employ a dual review process for every project deliverable that includes a quality control review by our subject matter expert (SME) and a quality assurance review from our Authorized Project Reviewer (APR). This process is followed regardless of whether that deliverable is completed internally or by a subconsultant. This dual review process is embedded in **Skelly and Loy's core rules of practice** and formally established in both our Quality Program Manual and Project Quality Manual. To that end, Skelly and Loy will commit **Paul DeAngelo**, Senior Principal/Environmental Department Manager, to oversee the QA/QC process for this agreement. Mr. DeAngelo's 31-year career includes management of many different types of environmental studies for PennDOT ranging from NEPA assessments, environmental clearances, and permitting all types of transportation projects. In this capacity, Mr. DeAngelo has a profound understanding of the PennDOT's needs and expectations in regard to deliverable quality. As part of his everyday responsibilities, Mr. DeAngelo serves as our Department Manager and APR for the environmental practice line as part of our QA/QC process for the Harrisburg Office. In accordance with our corporate Quality Program Manual, our QA/QC plan will be implemented for each project that includes:

- Compliance with the approved scope, budget, and schedule
- Routine coordination with the District through phone, email, Teams virtual or in-person meetings, and status reports
- Weekly team meetings with key staff to discuss issues and recommendations
- Independent internal review of calculations/documents by expert staff not involved with the project
- Quality Control Review of deliverable by a SME
- Corrective action, if needed
- Quality Assurance Review of subconsultant documents and Skelly and Loy's deliverables by our APR prior to submission to the District

Table I-2.C-3
Remediation Contract Personnel Experience Roster

Employee Name and Specialty	Billing Classification	Education	Office	Total Years Experience	Years Experience with Company	Anticipated Services for Work Assignments												
						Program and Project Management	Emergency Response	Site Investigations	Environmental Sampling and Testing	Data Evaluation and Report Preparation	Storage Tank Services	Asbestos Services and Abatement Lead-Based Paint Inspections	Industrial Hygiene Services	Remediation Services	Hazardous and Non-Hazardous Waste Disposal	Drilling (Borings and Wells) Well Abandonment	Excavation	Regulatory Reporting Act 2 Reporting, Management of Fill	Quality Assurance/Quality Control
Aeppli, Bob Environmental Scientist	Bid Item #14, #34 Env. Scientist	M.S., 2015, Environmental Health and Engineering B.S., 2010, Biology (Ecology, Evolution and Behavior Option)	Harrisburg	7	7			X	X	X				X		X		X	
Anderson, Ethan Environmental Scientist	Bid Item #14, #34 Env. Scientist	B.S., 2017, Geo-Environmental Studies	Harrisburg	5	3			X	X	X				X		X		X	
Arthur, Steven Facilities Engineer	Bid Item #2 Project Manager	HNC, 1993, Quantity Surveying; ONC, 1991, Building; 1989, Building Diagnostics	Hunt Valley	33	2.5	X		X	X	X				X			X		
Attick, Stanley Electrical Technician	Bid Item #9 Haz Mat Technician	Secondary Education Journeyman Electrical License	Harrisburg	27	25		X	X	X		X			X	X	X	X		
Auger, Alex, E.I.T. Hazardous Materials Technician	Bid Item #9 Haz Mat Technician	B.S., 2021, Civil Engineering with Concentration on Structural Engineering	Harrisburg	1	1		X	X	X		X			X	X	X	X		
Aungst, Daniel, P.E. Environmental Engineer	Bid Item #5 Sr. Env. Engineer	B.S., 2001, Environmental Engineering	Harrisburg	22	22	X	X	X	X	X				X	X		X	X	
Bair, Dan CADD and Graphics Design	Bid Item #16 Draftsperson/CADD	A.S., 1999, Computer-Aided Drafting	Harrisburg	23	23					X								X	
Bair, Laura Senior Environmental Scientist	Bid Item #2 Project Manager	B.S., 1999, Geo-Environmental Studies	Harrisburg	24	23	X		X	X	X				X			X		
Baldwin, Nathan CADD and Graphics Design	Bid Item #16 Draftsperson/CADD	B.S., 2015, Geology	Pittsburgh	6	4					X								X	
Beck, Nathan Surveying	Bid Item #17 Survey Crew	B.A., 2008, Economics	Harrisburg	21	21			X		X						X	X		
Bentz, Bob III Environmental Scientist	Bid Item #14, #34 Env. Scientist	B.S., 2015, Geology with Minor GIS	Pittsburgh	7	1			X	X	X				X		X		X	
Berra, Benjamin Environmental Scientist	Bid Item #2 Project Manager	M.S., 1998, Geo-Environmental Studies B.S., 1996, Geo-Environmental Studies	Harrisburg	24	24	X		X	X	X				X			X		
Berra, Laura, P.E. Engineer	Bid Item #5 Sr. Env. Engineer	M.S., 1998, Mining Engineering B.S., 1996, Mining Engineering	Harrisburg	25	24	X	X	X	X	X				X	X		X	X	
Bratton, Morgan Environmental Scientist	Bid Item #14, #34 Env. Scientist	B.S., 2013, Environmental Biology	Harrisburg	10	10			X	X	X				X		X		X	
Brethel, Michael, Jr., P.E. Geotechnical Engineer	Bid Item #2 Project Manager	B.S., 2002, Civil Engineering	Hunt Valley	20	3	X		X	X	X				X			X		

Table I-2.C-3
(continued)

Employee Name and Specialty	Billing Classification	Education	Office	Total Years Experience	Years Experience with Company	Anticipated Services for Work Assignments													
						Program and Project Management	Emergency Response	Site Investigations	Environmental Sampling and Testing	Data Evaluation and Report Preparation	Storage Tank Services	Asbestos Services and Abatement Lead-Based Paint Inspections	Industrial Hygiene Services	Remediation Services	Hazardous and Non-Hazardous Waste Disposal	Drilling (Borings and Wells) Well Abandonment	Excavation	Regulatory Reporting Act 2 Reporting, Management of Fill	Quality Assurance/Quality Control
Brookens, Andy Senior Environmental Scientist	Bid Item #2 Project Manager	B.S., 1993, Biology	Harrisburg	30	30	X		X	X	X				X			X		
Bruggeman, Amy Environmental Scientist	Bid Item #22, #40 Env. Scientist	B.S., 2005, Wildlife and Fisheries Science Associates, 2003, Wildlife Technology	Harrisburg	9	8			X	X	X				X			X	X	
Bruggeman, Eric Environmental Scientist	Bid Item #14, #34 Env. Scientist	B.S., 2004, Geography Land-Use	Harrisburg	19	18			X	X	X				X		X		X	
Budinsky, Albert Engineering	Bid Item #11 Env. Engineer	B.S., 1986, Engineering of Mines	Harrisburg	35	15	X		X	X	X				X	X		X	X	
Burlew, Ben, E.I.T. Environmental Engineer	Bid Item #11 Env. Engineer	B.S., 2021, Engineering	Harrisburg	1	1	X		X	X	X				X	X		X	X	
Bush, Calvin, P.E. Water Resources Engineering	Bid Item #5 Sr. Env. Engineer	B.S., 2014, Civil Engineering	Harrisburg	17	6	X		X	X	X				X	X		X	X	
Candela, Chris, P.E. Environmental Engineer	Bid Item #2 Project Manager	B.A., 1991, Biological Sciences	Blue Bell	33	5	X		X	X	X				X			X		
Carty, Elizabeth Clerical/Secretarial	Bid Item #15 Clerical/Secretarial	Some College	Moorestown	23	6					X								X	
Champney, Meaghan Environmental Scientist	Bid Item #22, #40 Env. Scientist	M.S., 2020, Biomedical Anthropology B.A., 2017, Anthropology	Pittsburgh	4	1			X	X	X				X			X	X	
Cruz, Megan Senior Staff Scientist	Bid Item #14 Sr. Env. Scientist	B.S., 2007, Environmental Science	Moorestown	9	9	X		X	X	X	X	X	X						
Davis, Dan, CEM, CES Senior Project Manager	Bid Item #2 Project Manager	B.S., 1986, Biology	Pittsburgh	36	11	X		X	X	X				X			X		X
Davis, Dominique Clerical/Secretarial	Bid Item #15 Clerical/Secretarial	General Studies, A.A.S.	Hunt Valley	9	6					X								X	
DeAngelo, Paul Environmental Department Manager	Bid Item #2 Senior Project Manager	M.S., 2005, Environmental Pollution Control B.S., 1991, Biology	Harrisburg	31	31														X
Deibert, Sarah Environmental Scientist	Bid Item #14, #34 Env. Scientist	B.S., 2014, Wildlife and Fisheries Science	Harrisburg	4	4			X	X	X				X		X		X	
Dennis, Megan Environmental Scientist	Bid Item #14, #34 Env. Scientist	B.S., 2011, Biology and Chemistry	Harrisburg	10	10			X	X	X				X		X		X	
Desai Jigar, Ph.D., P.E. Facilities Engineer	Bid Item #2 Project Manager	Ph.D., 2007, Civil Engineering M.S., 2003, Construction Project Management	Moorestown	16	14	X		X	X	X				X			X		

Table I-2.C-3
(continued)

Employee Name and Specialty	Billing Classification	Education	Office	Total Years Experience	Years Experience with Company	Anticipated Services for Work Assignments													
						Program and Project Management	Emergency Response	Site Investigations	Environmental Sampling and Testing	Data Evaluation and Report Preparation	Storage Tank Services	Asbestos Services and Abatement Lead-Based Paint Inspections	Industrial Hygiene Services	Remediation Services	Hazardous and Non-Hazardous Waste Disposal	Drilling (Borings and Wells) Well Abandonment	Excavation	Regulatory Reporting Act 2 Reporting, Management of Fill	Quality Assurance/Quality Control
Desso, Jason CADD and Graphics Design	Bid Item #16 Draftsperson/CADD	Secondary Education CADD Design	Harrisburg	22	22					X								X	
Dickson, David Senior Environmental Scientist	Bid Item #2 Project Manager	B.S., 1991, Interdisciplinary in Social Sciences	Pittsburgh	31	6	X		X	X	X				X			X		
Duan, Linda, P.E. Senior Engineer	Bid Item #5 Sr. Env. Engineer	M.S., 2017, Civil Engineering B.S., 2015, Civil Engineering	Hunt Valley	5	3	X		X	X	X				X	X		X	X	
Dunay, Alan Environmental Scientist	Bid Item #14, #34 Env. Scientist	B.S., 1997, Biology	Harrisburg	25	25			X	X	X				X		X		X	
Durborow, Edward, P.G. Senior Geologist	Bid Item #3 Sr. Geologist	B.S., 1984, Environmental Earth Science	Harrisburg	36	21	X	X	X	X	X	X			X	X	X	X	X	
Duressa, Aboma Environmental Scientist	Bid Item #22, #40 Env. Scientist	B.A., Management	Hunt Valley	9	3.5			X	X	X				X			X	X	
Ege, Amanda Environmental Scientist	Bid Item #14, #34 Env. Scientist	B.S., 2007, Environmental Science - Concentration in Policy and Law	Blue Bell	13	4			X	X	X				X		X		X	
Egner, Maureen Env. Compliance Specialist	Bid Item #2 Project Manager	B.A., 1988, Policy and Management Studies	Harrisburg	34	34	X		X	X	X				X			X		
Ehrhart, Carrol, RLA Environmental Engineering	Bid Item #11 Env. Engineer	B.S., 1979, Landscape Architecture	Harrisburg	43	11	X		X	X	X							X	X	
Eisele, Kathy Senior Environmental Scientist	Bid Item #2 Project Manager	B.S., 1990, Civil Engineering	Moorestown	18	3	X		X	X	X				X			X		
English, Jon Storage Tank Specialist	Bid Item #2 Project Manager	B.A., 1985, Geo-Environmental Studies	Harrisburg	35	32	X	X	X	X	X	X			X	X	X	X		X
Evans, Shannon, GIT Geologist	Bid Item #14, #34 Env. Scientist	B.S., 2018, Geology & Environmental Science	Harrisburg	4	4		X	X	X	X	X			X	X	X	X	X	
Frank, J. Harry GIS Specialist	Bid Item #16 Draftsperson/CADD	M.A., 2018, Geography & Environ. Planning B.S., 2013, Geography & Environ. Planning	Harrisburg	6	6					X								X	
Frawley, Dody Environmental Scientist	Bid Item #11 Env. Engineer	M.S., 2007, Environmental Science B.S., 2000, Environmental Science	Harrisburg	26	6	X		X	X	X				X	X		X	X	
Funderlich, Sara Environmental Scientist	Bid Item #22, #40 Env. Scientist	B.S., 2021, Biology	Pittsburgh	1	1			X	X	X				X			X	X	
Gaidos, Luke Environmental Scientist	Bid Item #14 Env. Scientist	B.S., 2018, Biology	Harrisburg	4	4	X		X	X	X				X	X		X	X	

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(continued)

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						Program and Project Management	Emergency Response	Site Investigations	Environmental Sampling and Testing	Data Evaluation and Report Preparation	Storage Tank Services	Asbestos Services and Abatement Lead-Based Paint Inspections	Industrial Hygiene Services	Remediation Services	Hazardous and Non-Hazardous Waste Disposal	Drilling (Borings and Wells) Well Abandonment	Excavation	Regulatory Reporting Act 2 Reporting, Management of Fill	Quality Assurance/Quality Control
Gandy, Michelle, CAP, TA, MOS Expert Clerical/Secretarial	Bid Item #15 Clerical/Secretarial	A.A., 2010, Administrative Office Specialist	Harrisburg	32	32					X								X	
Good, Toby Water Treatment Plant Operator	Bid Item #9 Haz Mat Technician	A.A., 1981, Electronic & Computer Technology	Harrisburg	37	25		X	X	X		X			X	X	X	X		
Grietzer, Elizabeth Environmental Scientist	Bid Item #22, #40 Env. Scientist	M.S., 2018, Biology B.S., 2016, Biology	Harrisburg	4	4			X	X	X				X			X	X	
Grossi, Jeff Jr Environmental Scientist	Bid Item #22, #40 Env. Scientist	M.A., 2021, Anthropology B.A., Classics and Ancient Mediterranean Studies/Anthropology	Pittsburgh	12	1			X	X	X				X			X	X	
Grove, Gerald, P.E., P.L.S. Survey and Mapping	Bid Item #17 Survey Crew	B.S., 1971, Civil Engineering	Harrisburg	51	9	X		X		X						X	X	X	
Gumbert, Jessica Environmental Scientist	Bid Item #22, #40 Env. Scientist	B.S., 2019, Environmental Science	Harrisburg	3	2		X	X	X	X				X	X		X	X	
Gunnett, John R. CADD and Graphics Design	Bid Item #16 Draftsperson/CADD	Secondary Education CADD Design	Harrisburg	23	23					X								X	
Hain, Nicole Environmental Scientist	Bid Item #14, #34 Env. Scientist	B.S., 2017, Environmental Resource Management/Biology/Wildlife Sciences	Blue Bell	3	3			X	X	X				X		X		X	
Hamilla, Brian, P.G. Senior Geologist	Bid Item #3 Sr. Geologist	B.S., 1987, Geology	Harrisburg	35	4	X	X	X	X	X	X			X	X	X	X	X	
Henderson, Bryan Environmental Scientist	Bid Item #14, #34 Env. Scientist	B.A., 1987, Anthropology	Pittsburgh	35	28			X	X	X				X		X		X	
Hepler, Ben Environmental Scientist	Bid Item #14, #34 Env. Scientist	M.S., 2014, Biology B.S., 2012, Biology	Harrisburg	5	5			X	X	X				X		X		X	
Hess, Douglas, P.G. Senior Geologist	Bid Item #3 Sr. Geologist	B.S., 1981, Geology	Harrisburg	41	27	X	X	X	X	X	X			X	X	X	X	X	
Hollabaugh, Scott Drilling Manager	Bid Item #2 Project Manager	High School, 1986	Blue Bell	35	1	X		X	X	X				X			X		
Hubler, Junell Environmental Scientist	Bid Item #14, #34 Env. Scientist	Highway Construction Inspector, 2003	State College	18	18			X	X	X				X		X		X	
Ioos, Mark, P.G. Senior Geologist	Bid Item #3 Sr. Geologist	M.S., 1988, Geology B.S., 1981, Geology	Harrisburg	35	24	X	X	X	X	X	X			X	X	X	X	X	X
James, Sean Environmental Scientist	Bid Item #14, #34 Env. Scientist	A.D., 2004, Multimedia Technology	Pittsburgh	15	11		X	X	X	X	X	X	X	X	X	X	X	X	

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(continued)

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						Program and Project Management	Emergency Response	Site Investigations	Environmental Sampling and Testing	Data Evaluation and Report Preparation	Storage Tank Services	Asbestos Services and Abatement Lead-Based Paint Inspections	Industrial Hygiene Services	Remediation Services	Hazardous and Non-Hazardous Waste Disposal	Drilling (Borings and Wells) Well Abandonment	Excavation	Regulatory Reporting Act 2 Reporting, Management of Fill	Quality Assurance/Quality Control
Jensen, Rick CADD and Graphics Design	Bid Item #16 Draftsperson/CADD	Associate, 2007, Specialized Technology	Harrisburg	25	25					X								X	
Jimenez, Lizett Staff Environmental Scientist	Bid Item #14 Env. Scientist	B.S., 2019, Environmental Science	Moorestown	3	3			X	X	X	X	X	X	X	X	X	X		
Johnston, Daniel CADD and Graphics Design	Bid Item #16 Draftsperson/CADD	Secondary Education Graphic Design Degree	Harrisburg	29	29					X								X	
Johnston, Richard GPS and Mapping	Bid Item #17 Survey Crew	B.S., 2006, Environmental Management	Harrisburg	31	31			X		X						X	X		
Johnston, Thomas Senior Environmental Scientist	Bid Item #2 Project Manager	B.S., 1983, Biology A.A., 1981, Biology and Chemistry	Harrisburg	38	36	X		X	X	X				X			X		
Kavaleuski, Alex Senior Engineer	Bid Item #5 Sr. Env. Engineer	M.S., 1994, Civil Engineering	Moorestown	21	14	X		X	X	X				X	X		X	X	
Kaufell, William Sr Env. Scientist - Air Quality	Bid Item #2 Project Manager	B.A., 1991, Geography and Urban Planning	Harrisburg	30	29	X		X	X	X				X			X		
Keys, Penny Clerical/Secretarial	Bid Item #15 Clerical/Secretarial	High School	Harrisburg	32	32					X								X	
Khalilullah, Ahmad Engineer	Bid Item #11 Env. Engineer	B.S., 2019, Civil Engineering	Hunt Valley	5	5	X		X	X	X				X	X		X	X	
Khasawneh, Yazen Senior Engineer	Bid Item #5 Sr. Env. Engineer	Ph.D., 2014, Civil Engineering and Geotechnical Engineering M.S., 1999, Civil Engineering and Geotechnical Engineering B.S., 1995, Civil Engineering	Hunt Valley	20	3.5	X		X	X	X				X	X		X	X	
King, Eaton Materials Engineer	Bid Item #2 Project Manager	A.A., 2011, Construction Management	Hunt Valley	22	5	X		X	X	X				X			X		
Klinger, Marv Senior Environmental Scientist	Bid Item #2 Project Manager	M.S., 1984, Biology B.S., 1982, Biology	Harrisburg	40	35	X		X	X	X				X			X		
Kuncio, Gerry Senior Environmental Scientist	Bid Item #2 Project Manager	M.A., 1993, American History B.S., 1982, American History	Pittsburgh	35	24	X		X	X	X				X			X		
Lange, Eric Environmental Scientist	Bid Item #14, #34 Env. Scientist	M.S., 2009, Agricultural Forestry and Consumer Science B.S., 1992, Environmental Resource Management	Pittsburgh	30	19			X	X	X				X		X		X	
Langewisch, Chris Environmental Sr. Project Manager	Bid Item #14 Env. Scientist	B.A., 1981, Biology	Moorestown	33	3	X		X	X	X				X		X	X	X	X

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(continued)

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						Program and Project Management	Emergency Response	Site Investigations	Environmental Sampling and Testing	Data Evaluation and Report Preparation	Storage Tank Services	Asbestos Services and Abatement Lead-Based Paint Inspections	Industrial Hygiene Services	Remediation Services	Hazardous and Non-Hazardous Waste Disposal	Drilling (Borings and Wells) Well Abandonment	Excavation	Regulatory Reporting Act 2 Reporting, Management of Fill	Quality Assurance/Quality Control
Leslie, Cooper Environmental Scientist	Bid Item #22, #40 Env. Scientist	B.S., 2020, Biology and Environmental Science	Harrisburg	2	2			X	X	X				X			X	X	
Lofink, Amanda Environmental Scientist	Bid Item #14, #34 Env. Scientist	B.A., 2002, Environmental Studies	Blue Bell	20	4			X	X	X				X		X		X	
Longenecker, Gerry, P.E. Sr. Environmental Engineer	Bid Item #5 Sr. Env. Engineer	M.S., 1980, Agricultural Engineering B.S., 1979, Agricultural Engineering	Harrisburg	41	29	X		X	X	X				X	X		X	X	
Lower, Michael, P.E. Environmental Engineer	Bid Item #5 Sr. Env. Engineer	B.S., 1996, Chemical Engineering	Harrisburg	26	23	X		X	X	X				X	X		X	X	
Lowry, Sam CADD and Graphics Design	Bid Item #16 Draftsperson/CADD	B.S., 2018, Environmental Science, Minor Geology	Pittsburgh	3	1					X								X	
Lynd, Alyssa Environmental Scientist	Bid Item #14, #34 Env. Scientist	M.S., 2014, Geo-Environmental Studies B.S., 2012, Earth and Environmental Science	Harrisburg	7	7			X	X	X				X		X		X	
Malachowski, John Environmental Scientist	Bid Item #14, #34 Env. Scientist	B.S., 2017, Biology	Harrisburg	8	1		X	X	X	X	X			X	X	X	X	X	
Matincheck, Justin, P.E. Environmental Engineer	Bid Item #5 Sr. Env. Engineer	B.S., 2009, Environmental Engineering	Harrisburg	14	14	X		X	X	X				X	X		X	X	
Mance, Richard Senior Geologist	Bid Item #3 Sr. Geologist	B.S., 1985, Geology	Pittsburgh	33	4	X	X	X	X	X		X	X	X	X	X	X	X	
McCabe, Jason Senior Environmental Specialist	Bid Item #2 Project Manager	B.S., 2003, Geology	Pittsburgh	19	7	X		X	X	X				X			X		X
Mills, Joe Senior Scientist, Acid Rock Drainage	Bid Item #11 Env. Engineer	B.S., 1979, Biology	Hunt Valley	41	7	X		X	X	X				X	X		X	X	
Mummert, Jared Environmental Scientist	Bid Item #14, #34 Env. Scientist	B.S., 2017, Environmental Systems Engineering	Harrisburg	5	5			X	X	X				X		X		X	
Ness, Spencer CADD and Graphics Design	Bid Item #16 Draftsperson/CADD	Ph.D., In-process, Geotechnical/Foundation Engineering M.S., 2021, Structural Engineering B.S., 2014, Structural Engineering	Hunt Valley	7.5	9 months					X								X	
Nevin, Andrew Environmental Scientist	Bid Item #14, #34 Env. Scientist	B.S., 2004, Biology	Harrisburg	15	15			X	X	X				X		X		X	
Nowlin, Matthew Environmental Scientist	Bid Item #14, #34 Env. Scientist	B.S., 2006, Applied Industrial Ecology	Harrisburg	20	15		X	X	X	X	X	X	X	X	X	X	X	X	

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						Program and Project Management	Emergency Response	Site Investigations	Environmental Sampling and Testing	Data Evaluation and Report Preparation	Storage Tank Services	Asbestos Services and Abatement Lead-Based Paint Inspections	Industrial Hygiene Services	Remediation Services	Hazardous and Non-Hazardous Waste Disposal	Drilling (Borings and Wells) Well Abandonment	Excavation	Regulatory Reporting Act 2 Reporting, Management of Fill	Quality Assurance/Quality Control
Nye, John Water Treatment Plant Opp	Bid Item #9 Haz Mat Technician	Secondary Education PA Sewage Treatment Plant Operators License	Harrisburg	41	25		X	X	X		X			X	X	X	X		
Orris, Gregory Env. Scientist and Compliance	Bid Item #14, #34 Env. Scientist	Secondary Education Asbestos and Lead Hazard Risk Assessor	Harrisburg	30	30		X	X	X	X	X	X	X	X	X	X	X	X	
Ostap, Matt Environmental Scientist	Bid Item #22, #40 Env. Scientist	B.S., 2020, Geo-Environmental Studies	Harrisburg	2	2			X	X	X				X			X	X	
Patel, Vik, P.G. Senior Geologist	Bid Item #3 Sr. Geologist	B.S., 1986, Geology	Moorestown	35	6	X			X	X					X	X		X	
Perez, Amy Administrative Support	Bid Item #15 Clerical/Secretarial	Secondary Education Administrative Assistant	Harrisburg	23	23					X								X	
Piazza, Gregg Senior Engineer	Bid Item #5 Sr. Env. Engineer	M.E., 1994, Civil Engineering B.S., 1987, Mathematics	Hunt Valley	27	1	X		X	X	X				X	X		X	X	
Polly, Don E.I.T. Environmental Engineering	Bid Item #11 Env. Engineer	Certificate, 1968, Civil Engineering Certificate, 1966, Accounting	Harrisburg	55	50	X		X	X	X				X	X		X	X	
Reece, Suzanne Environmental Scientist	Bid Item #14, #34 Env. Scientist	M.S., 2013, Osteoarcheology B.A., 2011, Anthropology	Blue Bell	9	4			X	X	X				X		X		X	
Reese, Bradley CADD and Graphics Design	Bid Item #16 Draftsperson/CADD	B.A., 2004, Urban Planning	Pittsburgh	18	18					X								X	
Rowley, Robert, CIH, CSP Certified Industrial Hygienist	Bid Item #1, Contract Administrator	B.S., 1993, Environmental Engineering Tech.	Harrisburg	29	29	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Ruhl, Nate Environmental Scientist	Bid Item #22, #40 Env. Scientist	Studied, 2004-2009, Engineering, Computer Science, and Psychology	Pittsburgh	8	8		X	X	X	X		X	X	X	X		X	X	
Sapen, Brent Civil Designer	Bid Item #5 Sr. Env. Engineer	B.S., 1987, Structural Design and Construction Engineering	Harrisburg	36	37	X		X	X	X				X	X		X	X	
Schwenk, Kelsey Environmental Scientist	Bid Item #14, #34 Env. Scientist	M.S., 2017, Natural Resources; Land, Water, and Air B.S., 2014, Wildlife Conservation and Agriculture and Natural Resources	Harrisburg	6	2			X	X	X				X		X		X	
Shaffir-Lupo, Kira Accounting	Bid Item #15 Clerical/Secretarial	B.A., 2015, Business Management	Harrisburg	5	3					X								X	
Shang, Aaron Engineer	Bid Item #11 Env. Engineer	M.S., 2016, General Structure Engineering	Hunt Valley	3	2.5	X		X	X	X				X	X		X	X	
Sheeler, Dan Hazardous Materials Technician	Bid Item #9 Haz Mat Technician	High School	Harrisburg	16	16		X	X	X		X			X	X	X	X		

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Sheidy, Ryan Environmental Scientist	Bid Item #14, #34 Env. Scientist	B.S., 1997, Environmental Science	Harrisburg	24	24		X	X	X	X	X			X	X	X	X	X	
Sinclair, James Senior Environmental Scientist	Bid Item #2 Project Manager	B.S., 2001, Wildlife and Fisheries Science	State College	20	6	X		X	X	X				X			X		
Sinclair, Tammy Clerical/Secretarial	Bid Item #15 Clerical/Secretarial	Bradford School, Secretarial Science	Pittsburgh	44	1					X								X	
Smith, Trent Environmental Scientist	Bid Item #22, #40 Env. Scientist	B.S., 2021, Geosciences	Harrisburg	1	1			X	X	X				X			X	X	
Soiles, Emma Environmental Scientist	Bid Item #22, #40 Env. Scientist	B.S., 2018, Geology	Blue Bell	3	3			X	X	X				X			X	X	
Starner, Kevin, CEP Senior Environmental Scientist	Bid Item #2 Project Manager	B.S., 1998, Geo-Environmental Studies	Harrisburg	24	24	X		X	X	X				X			X		
Steele, Ryan Environmental Scientist	Bid Item #22, #40 Env. Scientist	B.S., Ongoing, Business Administration B.S., 2013, Biology	Pittsburgh	2	1		X	X	X	X		X	X	X		X	X	X	
Sustich, Trent Environmental Scientist	Bid Item #14, #34 Env. Scientist	B.S., 2001, Physical/Environmental Geography	Pittsburgh	12	11	X	X	X	X	X					X		X	X	
Sword, Dana, GIT Geologist	Bid Item #14, #34 Env. Scientist	B.S., 2018, Geology	Harrisburg	3	>1		X	X	X	X	X			X	X	X	X	X	
Tes, Jane Clerical/Secretarial	Bid Item #15 Clerical/Secretarial	Bachelors, 2007, Marketing	Hunt Valley	15	5					X								X	
Thomas-Cline, Jenna Environmental Scientist	Bid Item #22, #40 Env. Scientist	M.A., 2015, Art History B.A., 2013, Art History	Pittsburgh	6	5			X	X	X				X			X	X	
Tilley, Lauren, CEPIT Environmental Scientist	Bid Item #14, #34 Env. Scientist	B.S., 2004, Environmental Geoscience	Harrisburg	18	18		X	X	X	X	X	X	X	X	X	X	X	X	
Tribue, Todd Accounting and Admin Support	Bid Item #15 Clerical/Secretarial	A.A.S., 1987, Business Management	Harrisburg	22	22					X								X	
Toki, Steve Senior Environmental Scientist	Bid Item #2 Project Manager	B.S., 1995, Environmental Health / Biology Minor	Pittsburgh	28	12	X		X	X	X				X			X		
Tucker, Randy Environmental Scientist	Bid Item #14, #34 Env. Scientist	B.A., 2009, Anthropology	Pittsburgh	12	8			X	X	X				X		X		X	
Tulasi, Devi Senior Engineer	Bid Item #5 Sr. Env. Engineer	M.S., 2005, Civil Engineering	Blue Bell	19	1	X		X	X	X				X	X		X	X	

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Weatherby, Michael Hazardous Materials Technician	Bid Item #9 Haz Mat Technician	Secondary Education Vocational-Technical School, 1985, Machinist	Harrisburg	37	18		X	X	X		X			X	X	X	X		
White, Terry Hazardous Materials Technician	Bid Item #9 Haz Mat Technician	Studied Mechanical Engineering Technology	Harrisburg	8	8		X	X	X		X			X	X	X	X		
Wilder, Darrell Senior Engineer	Bid Item #5 Sr. Env. Engineer	M.S., 1999, Geotechnical Engineering B.S., 1990, Civil Engineering	Hunt Valley	22	2	X		X	X	X				X	X		X	X	
Wilson, Matthew Environmental Scientist	Bid Item #22, #40 Env. Scientist	B.A., 2009, Anthropology	Pittsburgh	4	4			X	X	X				X			X	X	
Woodworth, Dylan Environmental Scientist	Bid Item #14, #34 Env. Scientist	B.S., 2013, Geography with Concentration in Watershed Management	Harrisburg	9	9			X	X	X				X		X		X	
Yadava, Rabi Senior Engineer	Bid Item #5 Sr. Env. Engineer	Ph.D., 1997, Structural Engineering M.S., 1992, Offshore Structures Engineering B.S., 1990, Civil Engineering	Hunt Valley	31	5	X		X	X	X				X	X		X	X	
Zenko, Marilyn Environmental Scientist	Bid Item #14, #34 Env. Scientist	B.A., 2009, Anthropology-Archaeology	Blue Bell	12	9			X	X	X				X		X		X	
Zizan, Michael Senior Environmental Scientist	Bid Item #2 Project Manager	B.S., 1982, Agronomy	Pittsburgh	37	35	X		X	X	X				X			X		
Zugay, Logan Environmental Scientist	Bid Item #14, #34 Env. Scientist	B.S., 2011, Wildlife Biology	Harrisburg	11	11			X	X	X				X		X		X	

ROBERT D. ROWLEY C.I.H., C.S.P.
Senior Industrial Hygienist

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #1; Contract Administrator

EDUCATION:
B.S., Environmental Engineering Technology, 1993, The Pennsylvania State University

B.S., Ornamental Horticulture, 1983, The Pennsylvania State University

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
Engineer-In-Training, PA

Certified Industrial Hygienist

Certified Safety Professional

U.S. EPA Certified Asbestos Inspector, PA and MD

US EPA Certified Asbestos Worker/Supervisor, PA and MD

OSHA Confined Space Entrant/Attendant/Supervisor

OSHA HAZWOPER/40HR/8HR Refresher/8HR Supervisor

American Red Cross CPR First Aid Training

YEARS OF EXPERIENCE:
29 Years

As a result of his specialized industrial hygiene and safety certifications and OSHA training, Mr. Rowley's project experience has focused on the management of environmentally-related materials assessment and abatement including facility decontamination and decommissioning. On such projects, he ensures that all abatement activities are performed in compliance with: local, State, and Federal regulations; industry standards; corporate policies; and site-specific plans and specifications. He has managed the wide range of tasks associated with such projects including health and safety plan development and implementation, industrial hygiene sampling and testing, and waste disposition. Mr. Rowley serves as a permanent member on the Office Safety Leadership Team. He holds certifications through the Board of Certified Safety Professionals and the American Board of Industrial Hygiene as a Certified Safety Professional and Certified Industrial Hygienist respectively. He directs the proposal preparation for, and the implementation of industrial hygiene projects for the company.

PROFESSIONAL EXPERIENCE

Agency-Wide Environmental Remediation Services, PennDOT, Statewide, PA - Under this six-year contract, Skelly and Loy has performed various environmental investigative and remedial services for over 280 Work Orders exceeding $9.1 million. Work has been performed at PennDOT Maintenance Facilities, District Offices, Rest Areas, Materials Testing Laboratories, Highway Right Of Ways, as well as on properties acquired by PennDOT for transportation improvement projects. Services included storage tank removals; transport and disposal of waste materials; subsurface and hydrogeologic investigations; asbestos and PCB investigations/abatement; indoor air quality assessments; mold remediation; emergency response spill cleanups. Mr. Rowley has served as the contract administrator as well as a project manager for projects under this and past Remediation contracts.

Environmental Remediation - Mr. Rowley has designed and directed operations pertaining to containment and cleanup of surface fuel spills. He has also planned and managed various projects where his experience in erosion and sedimentation pollution control was utilized to establish vegetation at former waste sites including numerous projects involving the in-place closure of various waste materials. In addition, Mr. Rowley performed the services of Resident Engineer at multiple remedial construction projects.

Asbestos-Containing Materials (ACM), Polychlorinated Biphenyl (PCB), and Lead-Based Paint (LBP) Inspections and Abatement - As an EPA trained and Pennsylvania Department of Labor and Industry Certified Asbestos Worker, Supervisor, and Inspector, Mr. Rowley has participated in more than 150 environmental health and safety projects. His responsibilities include: completing investigations to identify the presence of ACM, LBP and other hazardous materials; contributing to the production of mitigation and abatement plans; monitoring the activities and practices of abatement contractors; and performing personal, environmental, and clearance sampling. He carries out all assignments in accordance with EPA and OSHA protocol and project-specific QA/QC, Health and Safety, and Monitoring Plans.

Indoor Air Quality and Mold Assessments - Whether by complaint or regulatory driven, Mr. Rowley provides Indoor Air Quality (IAQ) and Mold assessment services to building owners and employers to help determine if existing employer work practices, engineering controls, and personal protection equipment is adequate in protecting employees from airborne contaminants and if building heating ventilation and air conditioning systems are operating satisfactorily.

Facility Decommissioning - Mr. Rowley has successfully proposed and managed numerous facility decommissioning projects for both pre-demolition and pre-renovation purposes. These projects involved first the identification and quantification of hazardous and environmentally regulated materials, then waste profiling, subcontractor coordination, asbestos abatement and waste disposal oversight, and finally clearance testing and documentation. Such decommissioning projects involved tank entry and cleaning, line jetting operations, asbestos abatement, containerization and shipment of bulk and smaller containers of wastes, and the decontamination of exposed remaining surfaces making the facilities safe for subsequent renovation or demolition. Mr. Rowley is responsible for the management of daily onsite operations, compliance with environmental and safety regulations, ensuring that proper waste disposal protocols are followed, and adherence to budget and schedule. His work efforts resulted in numerous sites being remediated and made ready for redevelopment and infrastructure improvement.

Hazardous Waste Site Investigations - Mr. Rowley's field experience includes field chemistry; qualification, control, and containment of hazardous materials; supervision of drilling operations; implementation of remedial investigations techniques such as groundwater well design, construction, and installation; and environmental sampling in accordance with U.S. Environmental Protection Agency (EPA) sampling protocol.

He has conducted multiple dye tracer studies in order to determine the outfall/discharge point of storm and floor drains. In addition, he has managed groundwater characterization projects and participated in delineation of soil and groundwater contamination at many sites

Confined Space Entry - Trained as a confined space entrant, attendant, and supervisor, Mr. Rowley routinely develops confined space entry programs and oversees their implementation. His responsibilities on such projects include preparing site-specific Health and Safety Plans addressing emergency contingencies, training of personnel, supervising confined space entry, and conducting atmospheric testing for toxicity, explosivity, and oxygen deficiency. Mr. Rowley ensures that all activities are completed in accordance with OSHA requirements as presented in 29 CFR 1910.146.

Emergency Response - Mr. Rowley routinely manages emergency response projects ranging from the release of regulated substances to the environment or occupied buildings, to fire and flood damage requiring identification and abatement of asbestos containing materials, to inspecting and remediating buildings that are structurally compromised and require demolition. Mr. Rowley provides these services to: insurance companies; public and private schools; manufacturing entities; State Departments of General Services, Transportation, and Environmental Protection; and County and Municipal governments.

Environmental Research and Background Studies - Mr. Rowley's involvement in these projects has included deed researches, aerial photography evaluations, soil and geology mapping reviews, local, State, and Federal agency coordination, and technical writing.

Environmental Health and Safety - Mr. Rowley routinely assists projects managers in the development of site specific health and safety plans, administers OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) annual refresher training to Geo-Environmental and AMS Service Group employees in accordance with 29CFR1910.120. He also performs required respirator qualitative fit testing for Harrisburg Skelly and Loy employees.

OSHA-Compliance Industrial Hygiene Exposure Assessments - Following either OSHA or National Institute for Occupational Safety and Health Sampling protocol and methods, Mr. Rowley routinely oversees and performs worker exposure assessments for a large array of clients including law enforcement, manufacturing, industrial, health care, and construction and contracting. He performs initial site scoping to gain a feel for site layout, existing engineering and administrative controls, work practices, and personal protective equipment in order to determine the number and type of exposure groups then determines the appropriate number, type, and locations of samples to be collected. Utilizing only American Industrial Hygiene Association accredited laboratories, laboratory provided sample media, and properly calibrated sample collection equipment, exposure assessments are performed from which a compliance determination and recommendations for mitigation can be made.

Air Discharge Permitting, Plan Approvals, and Request for Determination - Mr. Rowley assists clients with obtaining and/or renewing air discharge permits and also prepares and submits “Requests for Determination of Changes of Minor Significance and Exemption from Plan Approval/Operating Permit” (RFDs) for regulated businesses located within the Commonwealth of Pennsylvania. Successful completion, submission, and approval of RFDs have helped clients avoid costly and burdensome Air Discharge Permits and Plan Approvals.

DANIEL J. DAVIS, CEM, CES
Senior Environmental Project Manager

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #2; Project Manager

EDUCATION:
B.S., Biology, 1986, Ohio State University

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
Certified Environmental Manager/Certified Environmental Specialist

U.S. EPA Certified Asbestos Inspector, PA and WV

U.S. EPA Management Planner, PA and WV

U.S. EPA Certified Asbestos Project Designer, PA and WV

Lead Abatement Supervisor

Asbestos Hazard Evaluation Specialist, OH

OSHA HAZWOPER/40HR/ 8HR Refresher/Supervisor

OSHA Confined Space Entrant/Attendant/Supervisor

YEARS OF EXPERIENCE:
36 Years

Mr. Davis has comprehensive hazardous substance management, assessment, and design experience. He has conducted various remediation duties at numerous hazardous waste sites including air sampling; health and safety planning; actual remediation from level D to level B contamination; sampling of drums, soil, streams, etc.; and is experienced at hazardous materials decontamination. He has conducted numerous large scale and specialized asbestos and lead management activities including building inspections and surveys, management planning, on site monitoring, abatement supervision, preparation of design specifications and drawings, O&M plans, specification implementation, and air monitoring. He also conducted indoor air quality (IAQ) investigations and sampling.

Mr. Davis serves as a Senior Project Manager on various environmental projects involving the management of hazardous materials including asbestos, lead-based paint (LBP), IAQ, environmental studies, and hazardous waste. In this capacity, he is responsible for staff supervision, client relations, cost estimates, project scheduling, and all other aspects involved in abatement design.

Mr. Davis worked for a remediation firm which conducted large scale remediation projects for industrial clients involving PCBs, heavy metals, cyanide, organics, and solvents. He performed health and safety supervision and sampling for heavy metals, drums, soils, stream sediment, solvents, and organics.

PROFESSIONAL EXPERIENCE

Pittsburgh Public Schools Indoor Environmental Air Quality and Industrial Hygiene On-Call Contracts, Pittsburgh, Pennsylvania - Managed and performed environmental inspections for asbestos-containing materials (ACM); LBP; polychlorinated biphenyls (PCB); mercury-containing fluorescent lamps, thermostats, and equipment; fluorescent tubes; chlorofluorocarbons (CFC); NiCad batteries; lead-acid batteries; and radioactive sources. He developed technical abatement specifications and drawings, conducted all pre-bid meetings, and assisted in the selection of the most qualified abatement contractor. He managed and performed environmental abatement monitoring services for the renovations to the building, which included monitoring the abatement contractor for the proper removal and disposal or recycling of ACM and other hazardous materials.

PennDOT Environmental Remediation Services, Statewide, Pennsylvania - Mr. Davis serves as the project manager of the western Pennsylvania environmental remediation contract for PennDOT. Services provided include Phase I/Phase II Environmental Site Assessments (ESAs), soil, groundwater, and waste characterization, site remediation, waste management planning, asbestos and lead paint inspections and abatement, storage tank management, removal, and remediation, hazardous waste management, health and safety monitoring, investigation derived waste management, field operations oversight and documentation, construction monitoring, and geophysical investigations to support highway and bridge construction, renovation, and replacement.

Demolition of Former ALCOSAN Operation and Maintenance Building Allegheny County, Pennsylvania - Mr. Davis serves as project manager for providing environmental and engineering services to complete a demolition plan for ALCOSAN's old O&M building. Skelly and Loy is providing hazardous materials inspection and abatement specifications as well as a site survey and

civil engineering services including a grading plan and civil site specifications. Phase I ESAs were performed to assist with planning the location of the new lab and Right of Way Acquisitions.

Pittsburgh VA Medical Center Crawlspace #1, #2, and #3 Contaminated Soil Project, Allegheny County, Pennsylvania - Mr. Davis currently serves as the Project Manager for the preparation of working drawings and asbestos abatement specifications, submittal review, and construction/air monitoring services for the project.

Asbestos Building Inspections for Buildings Slated for Demolition in Various Areas of the City of Pittsburgh, Allegheny County, Pennsylvania - Mr. Davis currently serves as Project Manager for an open-end environmental contract with the City of Pittsburgh for completion of pre-demolition asbestos inspections. Under this contract, Skelly and Loy has completed a total of 78 project-specific, task order asbestos inspections for the City of Pittsburgh since 2012.

Open-End Environmental Contract, City of Pittsburgh, Pennsylvania - Project Manager for an open-end environmental contract involving asbestos, lead, indoor air quality, radon, and Phase I and II Site Assessments for all properties governed by the City.

Open-End Environmental Contracts, West Virginia Department of Highways, West Virginia - Project Manager for all environmental building surveys, remediation and construction management for a Right-of-Way acquisition prior to the demolition. Over 450 single and multi-story buildings were investigated.

VA Pittsburgh Healthcare System Demolition and Disposal Plan, Environmental Assessment, and Hydrological Analysis, Highland Drive Campus, Allegheny County, Pennsylvania - Environmental Manager for the assessment and review of the environmental and hazardous materials of the all the buildings at the VA Highland Drive campus. Materials assessed were asbestos, LBP, underground storage tanks (UST), stored chemicals, and other potential waste materials. Recommendations were made on how materials would need to be handled during future campus building demolition.

Bayer Materials Science Facility, New Martinsville, West Virginia - Project Manager for an environmental assessment of all thermal system insulation (TSI) for the Hydrochloric Acid, Boiler House 1 and 2 Buildings which incorporated a database management program incorporating digital photography. The assessment was intended to validate existing data, determine condition of TSI, database report generation, cost estimates, and Operation and Maintenance program.

Historic Atlantic City Convention Hall, New Jersey Sports and Exposition Authority, Atlantic City, New Jersey - Project Manager and Environmental Consultant providing investigation, recommendations, remediation design, and construction monitoring for all environmental concerns of this historic structure which has encompassed a remedial action plan for UST, AST, PCB, asbestos, LBP and CFCs. Specialized work practices were required because of the building's historic fabrics and status.

Multi-Year Open-End Asbestos Contracts, New Jersey Department of Transportation, Statewide, New Jersey - Project Manager for multi-task environmental investigations, remediation, and construction management for right-of-way acquisition throughout the entire state of New Jersey.

PROFESSIONAL AFFILIATIONS

Environmental Assessment Association - Member #77270

EDWARD N. DURBOROW, P.G.
Senior Geologist / Tank Management

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #3; Senior Geologist and Hydrogeologist

EDUCATION:
B.S., Environmental Earth Science, 1984, Edinboro University

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
Professional Geologist, PA (PG# 000114-G)

OSHA HAZWOPER/40 HR Supervisor/ 8 HR Refresher

YEARS OF EXPERIENCE:
36 Years

For 36 years, Mr. Durborow has applied his scientific knowledge and expertise to a wide range of projects including geotechnical investigations, environmental site assessments, underground storage tank investigations, site characterization investigations, remedial feasibility studies, site remediation, and water resource investigations. In his role as Project Manager, Mr. Durborow directed numerous environmental and water resource projects. His responsibilities have included work scope and budget preparation, scheduling and staffing, planning and oversight of field efforts, data interpretation and analysis, report preparation and effective communication with the client and regulatory agency representatives. The following paragraphs summarize Mr. Durborow's wealth of project experience gained both at Skelly and Loy and through previous employment.

PROFESSIONAL EXPERIENCE

PennDOT Agency-Wide Remedial Services Contract, Statewide, PA - Mr. Durborow serves as Project Manager/Senior Geologist on numerous projects involving environmental impacts and clean fill issues for maintenance facilities, roadway improvement projects, bridge replacement projects and property acquisition sites. Mr. Durborow has provided technical consulting services statewide to PennDOT under multiple agency-wide remedial services contracts since 2001, and has successfully obtained Act 2 closure for sites in numerous PADEP Regions. His specific project responsibilities include site reconnaissance; preparation of corrective action work plans and project budgets; oversight of all site characterization/remedial activities; data review and analysis; remedial feasibility studies; remedial design; liaison to regulatory agency; and final report preparation.

Pennsylvania Turnpike Commission Project Experience - Mr. Durborow currently serves as the lead Geologist providing technical support to the PTC for on-going environmental site cleanup efforts being completed at all 21 PTC Service Plaza Facilities, including on-going efforts associated with a multi-party, multi-site agreement currently being negotiated between the PTC, PADEP and other responsible parties. Mr. Durborow has managed environmental cleanup efforts at several PTC Service Plaza sites including permanent closure and removal of UST systems, and implementation of remedial efforts including chemical oxidation and enhanced bioremediation techniques.

General Technical Assistance Contract 4, PADEP, Statewide, PA - Mr. Durborow currently serves as Senior Geologist and Project Manager for projects being completed under this contract. Specific project responsibilities include field oversight of soil gas sampling, collection of soil/groundwater samples using direct-push drilling techniques, direct-push drilling with membrane interface probe (MIP) technology, rock coring and geophysical surveys; data review and analysis; technical support to GTAC personnel; and final report preparation.

Clean Fill Investigations – Mr. Durborow has managed numerous projects as well as provided technical expertise in evaluating and managing soil/rock materials generated during roadway and private construction projects in accordance with the Pennsylvania Department of Environmental Protection's (PADEP) “Clean Fill Policy”. His experience has included developing plans for collecting samples and analytical testing programs to evaluate concentrations of organic compounds and inorganic compound (i.e., heavy metals) in soil and rock materials. This information was used to provide recommendations for the management of these materials as waste materials, regulated fill materials, or clean fill materials.

Geotechnical Subsurface Investigations - In previous employment, Mr. Durborow worked in a geotechnical soils laboratory and has hands-on experience with soil classifications testing, particle size analysis, hydrometer analysis, consolidation testing, unit weight analysis, specific gravity determination, and strength testing. His testing experience includes a wide range of projects including numerous landfill, transportation, dam, and structural projects and has installed inclinometers to monitor for slope stability.

Remedial Feasibility Testing - As a Professional Geologist, Mr. Durborow has routinely evaluated the technical feasibility and cost-effectiveness of remedial action technologies with respect to the governing regulations and client's objectives. Based on the assessment, Mr. Durborow has prepared Remedial Action Plans (RAP) to implement remedial measures necessary to obtain closure for the site. His responsibilities included performance of pilot testing, communications with regulatory agencies, and conceptual design of the selected alternative. His pilot test experience includes groundwater pumping, soil vapor extraction, vacuum-enhanced groundwater pumping, and the enhancement of natural biodegradation including injection and oxygen released compounds.

Superfund Program - Mr. Durborow has worked on several superfund Remedial Investigations/Feasibility Studies (RI/FS) including the Harrisburg International Airport, a landfill near Allentown, and a site in Delaware. His duties included drilling supervision, monitoring well construction, soil and groundwater sampling, and aquifer testing.

Underground Storage Tank (UST) Closure and Remedial Clean-Up Investigations - Mr. Durborow has provided environmental oversight during numerous UST removals/closures. His responsibilities include supervising excavation of tanks, appurtenances, and impacted soils; directing tank cleaning activities, conducting closure sampling, analysis, and documentation; and ensuring the proper disposal of all excavated materials. Past clients have included several of the major oil companies including Exxon, Sunoco, and BP.

Brownfields/Act 2 Site Characterizations/Remedial Investigations - To facilitate the reuse of industrial sites, Mr. Durborow has managed environmental characterizations and remedial investigations in accordance with Pennsylvania's Land Recycling Program. On such projects, he has worked closely with both his clients and Pennsylvania Department of Environmental Protection representatives to characterize sites, negotiate clean-up standards, develop risk-based remedies, and expedite site cleanups. In his role as Project Manager, Mr. Durborow has directed all project phases including work plan formulation, budget and schedule management, staff oversight, and final report preparation. In the field, he has supervised numerous subsurface drilling methods including direct push, air-rotary, mud-rotary, hollow-stem auger, and rock coring. In addition, he has extensive experience with the installation and sampling of groundwater monitoring wells and piezometers and the set up and completion of aquifer testing using pressure transducers and computerized data loggers. He is highly skilled at collecting environmental samples and recording field measurements.

Environmental Site Assessments - As Project Manager, Mr. Durborow has conducted numerous Phase I and Phase II Environmental Site Assessments. Primarily performed as a measure of due diligence in property transactions, Mr. Durborow has identified and delineated environmental concerns associated with such properties and has provided recommendations to mitigate the environmental concerns.

RELEVANT TRAINING

- PCPG, Environmental Statistics in PA, November 2010
- Pennsylvania Council of Professional Geologists, UECA Changing the Course of Remediation in PA, July 2009
- USTIF Summer Series, PCPG. August 2007
- PA DEP Land Recycling Program Client Workshops, PADEP, 1998, 2002, 2006 and 2007
- PA DEP Vapor Intrusion Guidance Training, PADEP, 2004
- The Remediation Course, Princeton Groundwater, Inc., 2002
- Assessment and Remediation of Sites Impacted by MTBE, NGWA, 1999
- Risk-Based Corrective Action, ASTM, 1996
- Pennsylvania's Land Recycling Program - Proposed Rulemaking, PCPG, 1996
- Understanding Pennsylvania's New Environmental Cleanup Laws, PA Chamber of Business and Industry, 1995 Groundwater Pollution and Hydrology, The Princeton Course, 1991

JONATHAN A. ENGLISH, Senior Scientist, Tank Management

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #2; Project Manager

EDUCATION:
B.A., Geo-Environmental Studies, 1985, Shippensburg University

Masters Candidate, Geo-Environmental Studies, Shippensburg University

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
PA DEP UMR, PA

OSHA HAZWOPER/40HR/ 8HR Refresher/Supervisor

YEARS OF EXPERIENCE:
35 Years

A seasoned project manager with more than 35 years of professional experience, Mr. English's career has focused on mitigating the environmental impacts of hydrocarbon contamination. On behalf of state and government agencies, industrial clients and private citizens, Mr. English has identified the presence, characterized the extent, and assessed the risk to both human health and the environment as a result of such releases. He has developed Remedial Action Plans (RAPs), negotiated multi-site agreements for investigations and clean-ups, designed soil and ground water remediation systems, supervised the construction and installation of such systems, and performed long-term monitoring. Mr. English also has extensive experience in storage tank systems and has developed storage tank monitoring systems for both public and private sector clients.

As a result of his experience, Mr. English has extensive knowledge of 40 CFR Parts 264, 280-281, National Fire Protection Association, Inc. (NFPA), American Petroleum Institute (API), and PA DEP UST and AST regulations (ACT 32 and ACT 2), including the 2018 updates required by EPA. In accordance with PA DEP's Land Recycling Program (Act 2), Mr. English approaches such projects by applying a risk-based corrective action process that integrates risk and exposure assessments to establish appropriate clean-up goals for the site. His thorough knowledge of the Act 2 process and the regulatory requirements for achieving site closure approval is a proven asset during the negotiation process with PA DEP. Thus, he is confident with approaching regulators with innovative solutions involving site closure and his opinions are respected by those agencies.

PROFESSIONAL EXPERIENCE

Pennsylvania Turnpike Commission (PTC) - Mr. English has served as Contract Manager for open-end contracts for storage tank services since 1995. Under five separate contracts, he has managed the successful completion of more than 85 work orders**,** simultaneously managing up to 20 assignments. Projects completed under these contracts involved Underground Storage Tank (UST) tightness testing, contaminant assessment/site characterization, fate and transport modeling, risk assessments, remedial system design, construction management, and long-term monitoring/reporting. Site assignments included directing closure/site assessment services for multiple commercial UST systems, site characterization and remediation of fuel-impacted soils, attainment sampling, and negotiations with PADEP for Act 2 closures of the several sites. He supervised turnkey closure of four USTs at a PTC site adjacent to an active Superfund site, overseeing geophysical investigations, UST closure/site assessment, and health and safety monitoring. Mr. English has been involved in the negotiations with Exxon, Cumberland Farms and Sunoco regarding past petroleum releases at 21 current and former Service Plazas and with 7-11, who is the current site operator. The negotiations resulted in the first ever multi-party, multi-site agreement under PADEP's Act 2 program and will serve as a basis for future agreements of this nature. UST upgrades at numerous PTC Maintenance facilities toll barrier and tunnel locations and continued compliance inspections of these tank systems were also completed under Mr. English's supervision. A tank management and compliance program has been developed and implemented to ensure continued compliance with PADEP requirements. This program includes monthly compliance inspections, oversight of new tank system installations, remote and on-site Veeder Root environmental compliance monitoring, tank system repairs and modifications, research into technological improvements for compliance monitoring, development of a GIS based data storage system to integrate tank compliance

documents into other PTC GIS databases, providing Level A, B and C tank operator training to PTC employees, and strategizing integration of the gambrel tolling structures into the existing infrastructure once the all-electronic tolling is fully implemented.

Pennsylvania Department of Transportation (PennDOT) - Project assignments for this client have included UST and AST management, coordination of removals, and oversight during tank closure site assessments. Mr. English has been responsible for all aspects of these projects, from site scooping and proposal preparation through completion of the field work and submission of the supporting documentation. Additional project specific assignments have included site characterizations, oversight and sampling associated with remedial work efforts, development of work plans aimed at proper management of impacted materials, and general project management duties. Mr. English has completed projects at active PennDOT Maintenance Facilities where work efforts could have had a significant impact to the normal operational schedule of the facility. This work was able to be coordinated to minimize disruption to the facility, while completing the project within the stipulated time frame and budget. Rapid response work efforts have also been assigned to Mr. English, where timely mobilization to the project area resulted in completion of the rapid response efforts in a manner that allowed for the original project schedule to not be impacted by the additional work completed.

Getty Oil Company - As Client Manager, Mr. English has worked on more than 25 Getty properties ranging from small service stations to bulk storage facilities. He has been responsible for coordinating project personnel, subcontractors and equipment - ensuring that all work is completed on-time and within budget. On one site, he conducted pilot testing to design groundwater extraction, soil vapor extraction, air sparging, vacuum enhanced liquid removal, and dual phase (liquid and vapor) remediation systems. He used the results of the pilot test to determine the radial influence of groundwater and vapor extraction in the subsurface, to accurately size equipment, and to calculate appropriate well configuration to maximize the efficiency of the remedial remedy selected. Results were presented to regulatory agencies with successful outcomes.

Carlos R. Leffler - To date, Mr. English has worked on more than 35 properties owned by this regional fuel distributor. He has been responsible for conducting phased site characterizations to determine the lateral and vertical distribution of hydrocarbon constituents in the subsurface. These investigations have included geophysical and soil vapor surveys, soil borings, monitoring well installation, and sample collection and analyses. Fate and transport modeling has been conducted to determine both the human health and environmental risk associated with the site so that appropriate site remediation strategies can be implemented.

Multiple Client - Mr. English has served as project managers on numerous storage tank projects involving anywhere from one to 12 tanks. On such projects, he has been responsible for UST upgrades, replacements, removals, site assessments, and site closures. He has been responsible for coordinating field personnel and equipment, synthesizing resulting data, completing reports, and providing project management. His clientele has included government agencies and organizations such as local municipalities and school districts, industries and businesses including Fortune 500 companies, real estate agents, small businesses and private residents.

RELEVANT TRAINING

PADEP Act 2 Vapor Intrusion Training
American Red Cross CPR/First Aid
Operation of Organic Vapor Analyzer Equipped Gas Chromatograph
Installation of Steel Aboveground and Underground Storage Tanks - Highland Tank Company
Installation of Fiberglass Aboveground and Underground Storage Tanks - Owens-Corning Inc.

BRIAN M. HAMILLA, P.G.
Senior Geologist, Site Investigation and Closure

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #3; Senior Geologist and Hydrogeologist

EDUCATION:
B.S., Geology, 1986

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
Professional Geologist, PA (PG #001199-G)

OSHA 40-Hour Health and Safety Certifications (OSHA 1910.120)

OSHA 8-hour Hazardous Waste Operations Annual Refresher Training

OSHA 8-hour Hazardous Waste Operations Site Supervisor Training

Training:
University of Connecticut Soil Vapor Extraction
Bioventing Principle Applications
Bioremediation Engineering Design
On-Site Treatment of Hydrocarbon-Contaminated Soils
SAIC Leadership Courses
George Washington University PM101

YEARS OF EXPERIENCE:
35 Years

Mr. Hamilla is a Licensed Professional Geologist/Senior Project Manager with 35 years of experience. His project experience included the fields of environmental, geology, hydrogeology, engineering, remediation, renewable energy, liability transfer of properties, and demolition and construction. As a Senior Project Manager, he provides project management, technical consultation, and client representation. Using his broad base of knowledge gained from these disciplines, he offers cost-effective approaches to completing numerous types of projects which include Phase I and II investigations, feasibility studies, fate and transport analyses, wetland projects, geophysical investigations, asbestos removal, explosion cleanups, demolition projects, environmental site restoration projects, and asbestos removal and has handled numerous permitting issues for his clients. His clients have included GTAC Projects, fertilizer manufacturers, the banking industry, petroleum companies (dealing with gasoline, heavier ended petroleum hydrocarbons and heating oil releases), paper manufacturers, steel manufacturers, and the Pennsylvania Department of Transportation (PennDOT) as well as an array of other industries.

PROFESSIONAL EXPERIENCE

Subsurface and Site Characterization Investigations - Mr. Hamilla has performed numerous site investigations under Act 2 to determine the extent and movement of compounds of concern in soil, groundwater, surface water, soil vapor, and indoor air. The compounds of concern have included with volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and heavy metals.

Remedial Feasibility Studies, System Design/Build, and Operation and Maintenance (O&M) of Systems - Mr. Hamilla has conducted feasibility studies to determine the most cost-effective method to reach site closure on sites ranging from less than an acre to greater than 30 acres. He has prepared Remedial Action Plans and implemented those plans for the cleanup of sites that have included natural attenuation (utilizing fate and transport modeling), soils excavation, vapor extraction systems for soils, pump and treat systems for groundwater, and dual phase extraction systems for soil and groundwater.

Additional Professional Experience - As a Senior Project Manager, Mr. Hamilla has responded to numerous explosions that dealt with the stabilization and cleanup of petroleum products, pesticides, herbicides, and acids. He has guided demolition of buildings that contained asbestos, lead, pesticides, and herbicides. He has worked with the cleanup of tank releases into office buildings and residential homes and dealt with issue of product in porous walls and floors, under the floors, as well as the indoor air problems that are caused by these situations. To complete many of his projects, Mr. Hamilla has had to manage securing, permitting for borrow sites, highway access permits, wetland permits, permit for moving electric poles, tree permits, grading permits, surface mining permits, erosion and sediment (E&S) plans, traffic control plans, and air permit for remedial systems.

PROJECT EXPERIENCE

Senior Project Manager, GTAC-5 Project, Pennsylvania Department of Environmental Protection (PADEP) - Emigsville, Pennsylvania - Mr. Hamilla took over the project mid-stream and following the review of the approved work plan which called out to determine if the nearby stream was a gaining or losing

stream. He worked with the PA DEP Project Manager to change the plan to remove the gauging of the stream since the area was karst and the stream could be gaining and losing in various areas along the stream. Mr. Hamilla proposed that funding be transferred to collect soil samples from the nearby stream bottom and at locations at the site where chemicals may have gathered or would drain toward. The collection of the soil samples gave the project one sample that exhibited the on-site existence of a compound-of-concern, and the PA DEP was able to switch the project back to a former owner of the site, ending the need for GTAC funding by placing the liability on the former owner of the site.

Senior Project Manager, GTAC-5 Project, PADEP, Lakeside, Pennsylvania - Mr. Hamilla directed ongoing semi-annual groundwater sampling and reporting for the site. Oversight of the two residential carbon systems was also conducted. Due to the obsolete system that was being utilized, discussions where held with PA DEP Project Manager to determine if the systems should be replaced as additional parts for the carbon systems were no longer available. Following a decision by the PA DEP to replace the two carbon systems, a new system was designed and installed two new carbon systems in the homes. The new systems replaced all piping, carbon units, and the sediment filters. The new systems included carbon units, piping with numerous disconnects (for ease of changing out carbon in the future), sediment filters, and system manuals for the homeowner and the PA DEP. Mr. Hamilla worked with PA DEP to convince them to change to a more cost-effective method for carbon disposal. The carbon disposal method allowed the carbon to be disposed of with the homeowner's trash per the United States Environmental Protection Agency's (U.S. EPA) Point-of-User or Point-of-Entry Treatment Options for Small Drinking Water Systems (U.S. EPA 815-R-06-010 April 2006). This method reduced the risk of having the carbon disposed of by commercial contractors. This manner of disposing of the carbon was accepted by the PA DEP and put into use at each of the sites.

Project Manager, Former Manufactured Gas Plant, Lebanon County, Pennsylvania - Mr. Hamilla directed a site investigation including geophysical survey, soil gas survey, soil sampling, groundwater well installation, and groundwater monitoring. Following review of the data collected, 1,500 tons of soil were removed for recycling, and a closure on the soils at the site was granted by the PA DEP. The groundwater at the site has been granted an Act 2 closure under a fate-and-transport scenario, which was based on natural attenuation and site-specific values.

Project Director, Industrial Client, Hanover, Pennsylvania - Mr. Hamilla managed the investigation of soils and groundwater, developed a remedial alternatives study, and designed a high-vacuum, dual-phase extraction system to clean up the release of naphtha into a clayey soil. Within two years, the system was shut down as the last three rounds of quarterly sampling reported no detectable concentrations of compounds of concern. Soil attainment under the statewide health standard was met, and an Act 2 closure was granted.

Project Manager, Petroleum Distributor, Hershey, Pennsylvania - Mr. Hamilla directed soil and groundwater investigations in response to leaking diesel and gasoline USTs at the site. Following the investigative phase, a remedial alternative study was conducted, and a pump-and-treat system was designed and installed to remove product from the top of the water table as well as the dissolved constituents. Following three years of operation, a fate-and-transport analysis was conducted, and an Act 2 site closure was granted.

Project Manager, Confidential Client, Former Retail Gasoline Station and Garage, Southern Lancaster County, Pennsylvania - Mr. Hamilla directed the soil and groundwater investigations and soil vapor sampling following releases from gasoline and diesel USTs. Following the investigations, the data were utilized to receive an Act 2 closure from the PADEP by showing attainment of the Residential Statewide Health Standard by all compounds of concern at the site, with the exception of methyl tertiary butyl ether (MTBE). The MTBE in the groundwater attained a Site-Specific Standard.

Program Director, Chevron Texaco (CVX) Programs Retail and Terminal Work in the Eastern U.S. - Mr. Hamilla managed 170 sites in the Eastern U.S. Management of the program included the coordination of all the SAIC offices involved in the CVX program to ensure that the proper technical and health and safety (H&S) decisions were made. These sites included soils investigations, groundwater investigations, and remediation of petroleum products.

DOUGLAS J. HESS, P.G.
Senior Geologist - Site Investigation and Closure

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #3; Senior Geologist and Hydrogeologist

EDUCATION:
B.S., Geology, 1981, Bloomsburg University

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
Professional Geologist, PA (PG# 000186-G)

OSHA HAZWOPER/40HR/ 8HR Refresher

YEARS OF EXPERIENCE:
41 Years

Mr. Hess has 41 years of experience providing environmental and hydrogeological consulting services to both public and private sector clients facing contamination, mine planning, and groundwater resource management concerns. A specialist in groundwater characterization, remediation, and protection, Mr. Hess has conducted and managed a wide variety of projects including the evaluation and remediation of soil and groundwater contamination resulting from petroleum hydrocarbon and hazardous waste releases, hydrogeologic evaluation of mine dewatering and mine filling/closure operations, and the development, management, and protection of sensitive potable water supplies derived from groundwater sources. His experience includes both invasive and noninvasive investigation techniques in varied geological terrain to determine the nature and distribution of on-site environmental concerns as well as potential off-site impacts affecting surface and groundwater supplies.

PROFESSIONAL EXPERIENCE

Permitting and Regulatory Compliance Issues - Mr. Hess routinely deals with groundwater quality protection strategy issues by working closely with state and local regulatory agencies to facilitate environmental permitting and address compliance testing requirements for project completion. Mr. Hess has successfully completed applications for NPDES discharge permits, Pennsylvania Department of Environmental Protection potable supply well permits, and Delaware River Basin Commission and Susquehanna River Basin Commission groundwater withdrawal and consumptive use permits.

Remedial Construction - Mr. Hess has designed and installed soil and groundwater remediation systems in order to effectively remediate hydrocarbon contamination problems in a variety of geologic environments. These systems employed the most current remedial technologies available such as soil vapor extraction (SVE), liquid ring dual phase extraction, dual air sparging/soil vapor extraction, two-phase liquid extraction, bioremediation, and chemical oxidation systems designed to affect the simultaneous cleanup of both hydrocarbon contaminated soil and groundwater. Mr. Hess is currently managing a five-year operations and maintenance contract for a groundwater remediation system designed to mitigate a groundwater plume containing chlorinated organic solvents and per- and polyfluoroalkyl substances (PFAS). The source area is associated with former fire training activities that released fire retardant chemicals that are now threatening a large public wellfield. The treatment methods include air stripping and liquid-phase granular activated carbon that have proved effective in maintaining hydraulic control of the contaminant plume.

Groundwater Flow and Contaminant Transport Modeling - To evaluate subsurface conditions, Mr. Hess utilizes a variety of analytical and numerical groundwater flow modeling and contaminant fate and transport techniques. Based on both published and site-specific data, he prepares computer models for predictive analysis of groundwater flow systems and dispersal of subsurface contaminants. Most recently, he has applied fate and transport models to assess migration of petroleum hydrocarbons associated with releases from underground storage tanks and evaluate the potential for groundwater mounding resulting from land application of focused wastewater recharge produced by on-lot sewage disposal systems.

Mr. Hess has also completed a number of two- and three-dimensional numerical computer models dealing with groundwater flow and contaminant fate and transport. He has developed computer models in varied hydrogeologic terrains in Pennsylvania, Ohio, Indiana, Virginia, and North Carolina to investigate and

solve a variety of environmental problems that include predicting underground mine filling rates and final water levels for deep underground mine closures, migration and natural attenuation of hydrocarbons and chlorinated solvents, comprehensive sinkhole assessments, construction dewatering, and both underground and open-pit mine dewatering impacts on nearby sensitive water resources. His modeling results have undergone extensive regulatory scrutiny with the results used, in all cases, to successfully demonstrate subsurface conditions, predict future impacts, and resolve groundwater flow and contaminant migration issues. For example, Mr. Hess utilized the United States Geologic Survey's MODFLOW computer software (Visual MODFLOW) to develop a three-dimensional, five-layer groundwater flow model for a mining site located in the Coastal Plain of North Carolina. These modeling results were used to assess the relationships between open-pit quarry dewatering activities and sinkhole development, develop sinkhole management and mitigation plans to minimize the impacts of future sinkhole development, delineate areas of potential future sinkhole development, and investigate impacts to surface and groundwater sources. . Most recently, Mr. Hess has utilized three-dimensional groundwater modeling to evaluate potential offsite impacts to surface water and groundwater resources as a result of mine dewatering activities for several large noncoal surface mining operations in Pennsylvania, Ohio and Indiana.

PROJECT EXPERIENCE

State College Airport, State College, Pennsylvania - In 2019 and 2020, the DEP conducted a Statewide sampling of 96 public water supplies for the presence of PFAS. The results of this program identified PFAS in groundwater near the Airport at levels exceeding EPA's HAL (current default PFAS standard being used in by the DEP in Pennsylvania). In a collaborative effort with the DEP, PSU developed an Internal Task Force and requested Skelly and Loy, A Terracon Company, to help with an additional sampling of several existing Airport water supply wells in addition to several residential supply wells located near the Airport. All sampling results have been shared with the DEP and we have had several technical discussions with the DEP. To date, DEP has performed additional independent, and more focused, sampling in the area. At least two other potential sources of PFAS have been identified adjacent to the Airport. These combined sampling results have failed to confirm the Airport as the source (sole or contributing) of PFAS in the area. DEP's investigation of the PFAS source is ongoing. We are continuing to provide technical and field assistance to PSU.

PennDOT Environmental Remediation Services, Statewide, Pennsylvania - Under this open-end contract, Mr. Hess serves as a principal investigator to direct site characterization and remedial activities for mitigating hazardous and nonhazardous compounds at over 30 PennDOT maintenance facilities across Pennsylvania. This multi-million dollar project, recently extended to a maximum five-year period, entails directing and managing field efforts for soil testing, monitoring well drilling, groundwater sampling, aquifer testing, remedial pilot testing, and remedial alternative selection associated with the cleanup of contaminants at these facilities. Mr. Hess prepares reports for state regulatory review, reports directly to PennDOT representatives regarding the status of activities, and is responsible for negotiating site closures with PA DEP.

Metaltec/Aerosystems Superfund Site, USACE New York District, Franklin, New Jersey - Project Manager. Mr. Hess provided design expertise and technical oversight of groundwater extraction well/monitoring well installations, and packer/aquifer pumping tests. Over 400 feet of wire-line NQ rock coring was completed to assess bedrock permeability and contaminant (TCE/PCE) migration. He directed and managed completion of the extraction/monitoring well, packer testing, and aquifer pumping test programs. A comprehensive Hydrogeologic Investigation Summary Report was developed to delineate the extraction well capture zones, general hydraulic parameters of the aquifer, and hydrogeologic conditions affecting the groundwater recovery system.

South Jersey Clothing Company/Garden State Cleaners Superfund Site, USACE Philadelphia District, Minotola, New Jersey - Project Manager. Multiple projects included management of monitoring and injection well drilling, injection well screen design, and field oversight of soil boring and groundwater observation well installations to characterize/delineate a dissolved chlorinated solvent plume in groundwater. He collected data using split-spoon sampling and hydropunch discrete methods. The project included a hydrogeologic study of existing extraction system and observation well network through a series of pumping tests to delineate groundwater capture zones and aquifer parameters for the affected aquifer.

MARK B. IOOS, P.G., Senior Associate
Department Manager, Site Investigation and Closure

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #3; Senior Geologist and Hydrogeologist

EDUCATION:
M.S., Geology, 1988, University of Missouri

B.S., Geology, 1981, Indiana University of Pennsylvania

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
Professional Geologist, PA (PG# 001471-G); DE (No. S4-0001362)

OSHA HAZWOPER/40 HR/ 8HR Refresher/Supervisor

Mine Safety Training

American Red Cross CPR First Aid Training

PROFESSIONAL AFFILIATIONS:
National Ground Water Association

Pennsylvania Council of Professional Geologists (PCPG)

Society for American Military Engineers (SAME)

YEARS OF EXPERIENCE:
35 Years

Mr. Ioos is responsible for managing the Site Investigation and Closure staff and providing both technical and contractual oversight. He ensures that all work is completed in accordance with governing regulations, project-specific plans, and applicable industry standards with an emphasis on technical quality and cost/schedule control.

As licensed Professional Geologist, Mr. Ioos has over 30 years of experience dealing with regulatory and technical issues associated with environmental projects. This experience has been gained through the management and oversight of geological/hydrogeological studies and site characterization investigations; RCRA and UST investigations; sampling of soils, soil gases, surface water, sediments, and groundwater; drilling of borings and installing monitoring wells; conducting aquifer tests and data analysis; and the design, installation, and operation of soil and groundwater remediation systems. His experience also includes conducting geotechnical investigations, fluorescent dye tracer tests, geochemical groundwater studies, and groundwater resource investigations for the development of public water supplies.

PROFESSIONAL EXPERIENCE

PennDOT Agency-Wide Environmental Remediation Services Contract, Statewide PA – Mr. Ioos has furnished technical assistance and provided program-level support for assigning personnel and resources to perform investigative and remedial services on over 600 work order assignments to PennDOT under multiple agency-wide remedial services contracts since 2005. Services provided have included: UST removals; management and disposal waste materials; management of fill issues; hydrogeologic investigations; asbestos and PCB inspections/abatement; IAQ assessments; mold remediation; emergency response.

Clean Fill Investigations – Mr. Ioos has managed numerous projects as well as provided technical expertise in evaluating and managing soil/rock materials generated during construction projects in accordance with the Pennsylvania Department of Environmental Protection's (PADEP) “Clean Fill Policy”. These investigations have included collecting samples and analytical testing programs for evaluating concentration of organic compounds and inorganic compound (i.e., heavy metals) in soil and rock materials. This information was used to provide recommendations for the management of these materials as waste materials, regulated fill materials, or clean fill materials.

Subsurface and Site Characterization Investigations – Mr. Ioos has performed numerous site investigations to determine the lateral and vertical extent of substances of environmental concern. These investigations have included the sampling and characterization of soils, soil gases, sediments, surface water, and groundwater. These media have been investigated using both conventional and innovative techniques such as: the drilling borings using hollow-stem auger and direct-push methods; the drilling and installation of monitoring wells using air rotary and sonic drilling methods; surface and wellbore geophysical survey methods; the screening of soils and groundwater using membrane interface probe (MIP) technology; and screening of metals in soils using XRF instrumentation. These investigations have been performed for both public and private clients.

Hazardous Waste Management – Mr. Ioos has conducted studies and managed numerous projects involving the characterization, management, and

disposal of hazardous wastes. These projects have involved the management of hazardous waste materials in accordance with federal RCRA rules and regulations; the assessment of costs associated with hazardous waste treatment and disposal options, the comparison of economic alternatives of various treatment and disposal methods, the development of comprehensive spill prevention programs, the preparation of comprehensive reports concerning spills and environmental cleanups, and the preparation of materials for use in legal actions. He has also provided technical assistance for determining environmental impacts and recommended cleanup alternatives for hazardous chemical releases.

Geotechnical Studies – Mr. Ioos is experienced in conducting geotechnical studies. He has served as a Project Manager for performing a geotechnical study to evaluate the condition of the existing stone masonry abutments and subsurface conditions along roadway corridors. In addition, Mr. Ioos has assisted in the evaluation and analysis of geotechnical data for the design of surface water and groundwater infiltration systems.

Geochemical Studies – Mr. Ioos has served as the Project Manager and participated in numerous investigations to characterize groundwater geochemistry. These investigations were used to link groundwater impacts observed in water supply wells to potential sources areas, segregate surface water and groundwater flow regimes, and identify groundwater source areas. Mr. Ioos is familiar with using anion and cation balances, piper diagrams, and stiff patterns to analyze and interpret testing data.

Karst Geologic Studies – Mr. Ioos has performed and managed numerous karst geology assessment studies at sites to determine the potential for the development of sinkholes. These studies have been performed for both public highway transportation and private housing development projects. The investigations have included the review of site topographic maps, published geologic and karst feature maps, and aerial photographs. In addition, detailed fracture trace assessments were also performed to identify areas for the potential karst development. To evaluate the character and stability of the underlying bedrock materials and karst-related features, Mr. Ioos has managed projects that included using non-invasive geophysical survey methods, as well as invasive drilling and rock coring programs.

Expert Witness Testimony and Litigation Support Services – As an experienced groundwater professional, Mr. Ioos has provided expert witness testimony and attended public hearings to assist in presenting technical information regarding site investigation and groundwater studies. He has worked with legal counsel in preparation of depositions, expert reports, and expert testimony. Mr. Ioos has also appeared as a technical expert in public hearings where he successfully defended the results of site investigation studies for gaining the approval of permit applications.

Statewide Storage Tank Services Contract, Pennsylvania Turnpike Commission, Throughout PA – Mr. Ioos has furnished technical assistance and provided program-level support for assigning personnel and resources to perform services ranging from UST removals, assessments, and inspections, management of fill issues, assistance to legal counsel, interaction with PA DEP, and development of a database of the Turnpike's storage tanks as part of a comprehensive tank management plan.

Harrisburg Redevelopment Authority, Allison Hill Site – Mr. Ioos provided hydrogeologic technical assistance and project-level oversight for the investigation of a 5-acre Brownfields site. The investigation included: performing Phase I and Phase II ESAs; geophysical surveying; excavation of test pits; the drilling of soil borings and the collection of soil samples; the installation of monitoring wells and the collection of groundwater samples; soil, groundwater, and vapor intrusion modeling; the removal of four USTs; management of fill materials; and the remediation and disposal of contaminated soils. Based upon the investigation and remedial activities, the site was closed under the PADEP Act 2 program. The project was the recipient of a “Governor's Award for Environmental Excellence”.

Wetlands - Mr. Ioos has completed training under the U.S. Army Corps of Engineers for Identifying and Delineating Jurisdictional Wetlands. In he consulting career, Mr. Ioos has participated in studies for identifying hydrophytic vegetation, hydric soils, and wetland hydrology conditions. Mr. Ioos has participated in numerous projects involving the development of wetland mitigation designs, providing technical guidance for assessing water budgets and surface water/groundwater availability to support the proposed augmented wetland sites.

SHANNON N. EVANS, G.I.T., Geological Scientist

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #14; Environmental Scientist

EDUCATION:
B.S., Geology and Environmental Science – Geology Concentration, 2018, Kutztown University

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
Pennsylvania Geologist-in-Training (G.I.T.) #GT000397

OSHA HAZWOPER 40 HR & OSHA 8HR Refresher

OSHA Permit Required Confined Space Training

Veeder-Root TLS Installer: Level 1; Veeder Root ATG Certification

PA DEP Underground Storage Tank Class A/B Operator

PA DEP Storage Tank Certifications: UMR & AMR (Individual Certification #6061)

Adult First Aid/CRP/AED

PROFESSIONAL AFFILIATIONS:
Pennsylvania Council of Professional Geologists (PCPG)

YEARS OF EXPERIENCE:
4 Years

As a Geologic Specialist, Ms. Evans has assisted with the collection of environmental samples and data for the performance of environmental site investigations along with the oversight and maintenance of remedial systems. Ms. Evans has also been responsible for the collection of groundwater, soil, and air samples throughout Pennsylvania.

PROFESSIONAL EXPERIENCE

Storage Tank Activities - Ms. Evans has provided environmental and construction oversight services during numerous underground storage tank (UST) and aboveground storage tank (AST) removals and replacements. She is responsible for closure sampling, documentation, and ensuring appropriate disposal of impacted soils. She is also responsible for monthly storage tank compliance visits, which includes the maintenance and repair of the tank components, dispenser inspections, as well as documenting that records are being properly maintained both through the Veeder Root monitoring system and in the facility records. As a certified individual through the PA DEP, she serves as the lead on-site supervisor to provide technical support and oversight for state and private projects.

Environmental Site Assessments (ESAs) - Ms. Evans has assisted in the performance of Phase I, II, and III ESAs and preliminary waste site evaluations. Her responsibilities include environmental research and compilation of information. Her involvement with background research efforts for ESAs has included the completion of title searches, city and state record reviews, aerial photography interpretation, site geology and soil reviews, topographical evaluations, and historical mapping reviews. Ms. Evans has also performed site reconnaissance visits and Pennsylvania Department of Environmental Protection (PA DEP) file reviews.

Subsurface Investigations - Ms. Evans has assisted with numerous projects involving groundwater investigations, site characterizations, and remediation activities. Field activities involves in these studies included the installation of groundwater monitoring wells using Geoprobe technology; groundwater well gauging and sampling using low-flow sampling with portable pumps and multi-parameter water quality meters; groundwater contour mapping; data inputation and tabulation; well abandonment; logging Geoprobe borings and soil sampling ; and proper containerization and disposal of investigation-derived wastes. She has assisted in the preparation of documentation associated with quarterly groundwater sampling reports.

Emergency Response - Ms. Evans has assisted with numerous rapid response projects for PennDOT. These projects have included the removal and closure-in-place of abandoned underground storage tanks, spill cleanups for petroleum impacted materials, and performing indoor mold spore sampling. She performs the initial on-site investigation and works with the subcontractor to clean and remove potential impacted material for disposal along with follow- up reporting efforts upon completion of work.

Industrial Hygiene - Ms. Evans has assisted with on-site industrial hygiene air sampling by managing low volume personal air sampling pumps with appropriate sample media on workers within their daily work space along with collecting comfort parameters. Ms. Evans has also assisted with several mold remediation projects, which involved calibrating and operating Zefon Bio-Pumps after remediation work was completed to verify that remediation efforts were successful. She has prepared indoor air quality assessments for private clients.

JESSICA GUMBERT, Environmental Scientist

DESCRIPTION OF SERVICES:
Bid Item #22; Environmental Scientist

EDUCATION:
B.S., Environmental Science, 2019, Juniata College

CERTIFICATIONS:
OSHA HAZWOPER 40 HR/8HR Refresher

YEARS OF EXPERIENCE:
2 Years

Ms. Gumbert is an environmental scientist with approximately two years of relevant work experience in air and water sampling, report writing, and wetland delineation techniques.

PROJECT EXPERIENCE

2020 – Present
Skelly and Loy – Environmental Technician

- Assisted in Phase 1 Environmental Site Assessments (ESAs)
- Completed federal, state, and local agency record reviews for ESAs and waste site evaluations
- Field Data Collection
- Reviewed and edited ESA's, wetland reports, and analytical results
- Coordination with PA DEP

2019-2020
AECOM Engineering Company - Environmental Scientist

- Collect and sample groundwater.
- Performed field tests to measure target pollutants in the air.
- Soil testing.
- Wetland delineation.
- Reviewed and edited customer reports.

2018-2018
Living Coast Discovery Center - Animal Care Intern

- Present interpretive programs to guests.
- Husbandry of reptiles, amphibians, birds, and fish.
- Monitored animals.
- Food preparation for animals
- Water quality testing for aquatic exhibits
- Design, realize, and implement a scale to weigh the Geococcyx species
- Collected biological samples from animal habitats.

2017-2017
Juniata College - Volunteer

- Assisted tracking and monitoring box turtle population using radio telemetry
- Measured turtle habitat range using ArcGIS/ArcMap

SEAN R. JAMES
Field Scientist - Industrial Hygiene/Due Diligence

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #22; Environmental Scientist

EDUCATION:
A.D., Multimedia Technology, Pittsburgh Technical Institute, 2004

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
Air and Waste Management Association

OSHA HAZWOPER/40HR

U. S. EPA Asbestos Building Inspector/Management Planner, PA

Asbestos Building Inspector Refresher Training

Management Planner Refresher Training

Asbestos Inspector, WV

Asbestos Air Clearance Monitor, WV

Asbestos Hazard Evaluation Specialist, OH

YEARS OF EXPERIENCE:
15 Years

Mr. James serves as Field Scientist for the Geo-Environmental Service Group. He has experience in environmental hazards inspections, asbestos abatement oversight, lead based paint sampling, and soil and water testing for disposal. Mr. James also has experience in operating monitoring and extracting equipment including pH water sampler; AHERA, indoor air quality testing and identifying mold migration, and other indoor air hazards; providing preliminary and final reports with interpretation of analytical recommendations; and verifying input data to ensure accuracy of completed work and scanned edits for errors during processing.

PROFESSIONAL EXPERIENCE

Pennsylvania Department of Transportation, Pittsburgh, Pennsylvania – Mr. James has performed multiple inspection and oversight services for asbestos and hazardous materials, including aboveground and underground storage tank removal, lead-based paint; PCBs; mercury-containing fluorescent lamps, thermostats, and equipment; fluorescent tubes; CFCs; NiCad and lead-acid batteries; bio-hazard needles, and various oils. Additional work includes geo-probe monitoring, core drilling, and soil collection, mold assessment and air clearance sampling, asbestos abatement and air clearance monitoring, developing reports and including homogenous area maps and sample locations and quantities, and verification of remediation activities with applicable federal and state regulations.

On-Call Services, Pittsburgh Public Schools, Pittsburgh, Pennsylvania – Mr. James serves as an Environmental Specialist. His responsibilities include sample preparation, coordination and testing school facilities for lead contamination in drinking water, and compiling results reports for the schools. His AHERA inspection responsibilities include review past reports, identifying and collecting bulk samples, maintaining chain of custody forms, creating interactive PDF's, and updating management plans to reflect findings.

Allegheny County Sanitary Authority (ALCOSAN), Pittsburgh, Pennsylvania – Mr. James served as the Environmental Specialist who performed the asbestos inspection and 2 months of asbestos abatement oversight; ambient, personal and final clearance air monitoring for Allegheny County Inspections, hazardous materials abatement and disposal oversite.

Oakland Veterans Administration (VA) Medical Center, Pittsburgh, Pennsylvania – Mr. James was the Environmental Specialist who assisted in the crawlspace investigation and inspection for the Pittsburgh VAMC to help determine quantities of ACM in the soil and pipe runs. The assessment included bulk sampling, drawings, photos, maps and documentation of over 137 grids/sections in the crawlspace.

Lebanon VA Medical Center Asbestos Inspection, Lebanon, Pennsylvania – Mr. James served as an Environmental Specialist. His responsibilities included verifying past reports, identifying and collecting bulk samples, photos, maintaining chain of custody forms, and compiling results reports.

Wilmington VA Medical Center, Wilmington, Delaware – Mr. James was the Environmental Specialist who assisted in the crawlspace vault investigation and inspection for the Wilmington VAMC to help determine quantities of ACM in the pipe runs. The assessment included bulk sampling, confined space permitting, drawings, and photos.

University of Pittsburgh Medical Center (UPMC) - Pittsburgh, Pennsylvania – Mr. James served as the Environmental Technician who performed abatement air monitoring, Dust Trak II monitoring and background monitoring, data logging and graphs, and demolition surveillance for UPMC Presbyterian - DeSoto Wing throughout a 13 month period.

UPMC - Franklin and Oil City, Pennsylvania – Mr. James was the Environmental Technician who conducted oversight services for asbestos and hazardous materials remediation for Venango County Authority. Work included air monitoring, construction and demolition surveillance, and verification of remediation activities with applicable federal and state regulations.

Housing Authority of the City of Pittsburgh (HACP), Northview Heights, Pittsburgh, Pennsylvania – Mr. James served as the Environmental Specialist who performed asbestos inspections and lead based paint inspections for the HACP. The assessment included identifying and collecting bulk samples, photos, maintaining chain of custody forms, and compiling results reports.

Massaro Corporation, Pittsburgh, Pennsylvania – Mr. James was the Environmental Technician who performed four months of asbestos air monitoring for the Hillman Library Renovation Project at the University of Pittsburgh. Sixteen ambient air samples were collected on a daily basis throughout the library to verify ambient concentrations of asbestos in air.

Carmichaels School District, Carmichaels, Pennsylvania – Mr. James has served as the Environmental Specialist who performed 5 months of asbestos abatement and remediation oversight and demolition surveillance; ambient, personal and final clearance air monitoring, hazardous materials abatement and disposal, and additional bulk sampling as needed per project needs.

Statewide Asbestos Inspection Services, West Virginia Department of Highways – Mr. James serves as an Environmental Specialist of an asbestos inspection services contract for WVDOH. Services provided include asbestos inspection and reporting services to support highway and bridge construction, renovation, and replacement.

West Virginia University, Morgantown, West Virginia – Mr. James served as the Environmental Specialist who performed asbestos sampling and oversight during renovations at the WVU Health Science Center. Clearance air sampling was also performed after remediation and abatement activities were completed.

Bayer Material Science, LLC, New Martinsville, West Virginia – Mr. James served as an Environmental Technician who performed an asbestos assessment of Thermal System Insulation (TSI) for the Polyol Department at the Bayer facility in New Martinsville, West Virginia. The assessment included bulk sampling, physical assessment of the TSI, abatement cost estimates, a final report, and an Asbestos Management System (Microsoft Access Database) which provided data handling, manipulation of the information, and the ability to estimate abatement cost, manage future inspections, and track asbestos-containing material conditions.

Youth Service System, Inc., Wheeling, West Virginia – Mr. James was the on-site Environmental Specialist who performed asbestos abatement oversight and air monitoring, hazardous materials abatement oversight including mercury-containing fluorescent lamps, fluorescent tubes, light ballasts containing PCBs; and final clearance inspections and clearance air sampling of work areas following remediation activities.

JOHN M. MALACHOWSKI, Staff Scientist, Tank Management

DESCRIPTION OF SERVICES:
Bid Item #14; Environmental Scientist

EDUCATION:
B.S., Biology with a concentration in Environmental Science, 2017, Millersville University of Pennsylvania

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
40-Hour OSHA HAZWOPER

10-Hour OSHA Construction Safety and Health

Underground Storage Tank Operator Class A and Class B Certification

PROFESSIONAL AFFILIATIONS:
Pennsylvania Association of Environmental Professionals

YEARS OF EXPERIENCE:
8 Years

As a Staff Scientist, Mr. Malachowski has assisted with the completion of Underground Storage Tank (UST) installation oversight, Phase III Environmental Site Assessments (ESAs), and various environmental services for several clients in Pennsylvania.

PROFESSIONAL EXPERIENCE

Staff Scientist - Mr. Malachowski's responsibilities include completion of UST installation oversite and associated field work at multiple sites along the Pennsylvania Turnpike; Participation in a Phase III ESA for the North York Widening Project; Management and tracking of budgets for multiple PennDOT and private projects utilizing technical/price and scoping documents; Coordination with clients and subcontractors to complete projects efficiently, effectively, and in a timely manner; Completion of proposals for various projects involving PennDOT and the PA DEP; Performing Systematic Random Sampling (SRS) and completed associated reports for PennDOT projects; and Conducting soil sampling for the Montgomery County Trail Project.

Environmental Technician - Navarro and Wright Consulting Engineers, Inc. - As an Environmental Technician, Mr. Malachowski:

- Completed underground storage tank installation oversite and associated field work at multiple sites along the Pennsylvania Turnpike.
- Conducted and participated in Phase I, II, and III Environmental Site Assessments for a wide variety of PennDOT projects.
- Performed field work for an Environmental Due Diligence form located along the Pennsylvania Turnpike.
- Completed multiple NEPA documentations including Categorical Exclusion Evaluations, Bridge Replacement Programmatic Agreements, and Scoping Documents.
- Provided leadership and participated in numerous wetland and watercourse delineations for various private and PennDOT projects.
- Conducted and led a macroinvertebrate survey for a PennDOT project, located in Somerset County Pennsylvania.
- Aided in an Asbestos and Lead Based Paint Survey on a bridge in Lancaster County, Pennsylvania.
- Completed Pennsylvania Riverine and Wetland Condition Level 2 Rapid Assessment forms for multiple streams and wetlands along a 13.5-mile corridor located in Somerset County, Pennsylvania.
- Managed and tracked budgets for multiple PennDOT and private projects utilizing tech/price and scoping documents.
- Assisted in a wetland delineation and forest stand delineation for a project located in Rockville, Maryland.
- Utilized a Trimble GPS for multiple PennDOT and private projects.
- Utilized ArcGIS to create mapping for various PennDOT and private projects.
- Coordinated with clients to complete projects efficiently, effectively, and in a timely manner.

Environmental Scientist - KCI Technologies Inc. - As an Environmental Scientist, Mr. Malachowski:

- Conducted mitigation and monitoring surveys based off EPA regulations and policies; specifically, Section 401/404 of the Clean Water Act.
- Evaluated stream mitigation projects across the state of Indiana by utilizing a grade rod and laser level to assess their cross sections and profiles.
- Performed Qualitative Habitat Evaluation Index's (QHEI) and Headwater Habitat Evaluation Index's (HHEI) to determine a stream projects success.

- Identified woody and herbaceous species and categorized them based on their ecological importance.
- Created Floristic Quality Assessments based on the flora data found at the mitigation sites.
- Identified and sprayed invasive species on various stream mitigation projects.
- Delineated wetlands and installed the first floating wetland in Eagle Creek Reservoir and the State of Indiana.
- Utilized Excel to develop figures and tables based off the analyzed data collected in the field.
- Conducted pebble counts to determine the overall flow of the streams on the mitigation sites.
- Identified endangered species and noted them in our mitigation reports.

Engineering Intern - KCI Technologies, Inc. - As an Engineering Intern, Mr. Malachowski:

- Assessed and mitigated streams across the state of Tennessee and North Carolina
- Conducted pebble counts to determine the flow of streams.
- Identified and categorized plant species for various clients.
- Developed figures and tables using Excel, based off data found in the field.
- Utilized ArcGIS to create maps based off future job sites.
- Constructed a stream in western North Carolina utilizing survey equipment.

Safety Intern - Chesapeake Employers Insurance Company - Towson, MD - Responsibilities included:

- Performed construction and environmental safety inspections at policy holder job sites utilizing OSHA regulations.
- Developed spreadsheets and graphs that aided in the productivity of the Safety Services Department.
- Assisted in building the infrastructure for a new software program used to conduct environmental inspections and create graphs based on client data.
- Visited with policy holders to discuss safety policies and safety procedures that could be utilized at their company.
- Completed a 10-hour training course in construction and environmental safety.

JASON T. MCCABE
Project Scientist - Industrial Hygiene/Due Diligence

DESCRIPTION OF SERVICES:
Bid Item #2; Project Manager

EDUCATION:
B.S., Geology, 2003, Juniata College

Graduate Certificate, Geotechnics, 2013, Missouri University of Science & Technology

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
PennDOT Certified Drilling Inspector

PA Certified Lead Risk Assessor/Inspector

USACE Construction Quality Management Training/ Certification

OSHA HAZWOPER 40HR/8HR Refresher

PROFESSIONAL AFFILIATIONS:
Association of State Highway Engineers (ASHE)

Society for American Military Engineers (SAME)

YEARS OF EXPERIENCE:
19 Years

Mr. McCabe is a Project Manager for Skelly and Loy, Inc., with 19 years of experience. He specializes in environmental/stormwater permitting including E&S Control planning, evaluation, and oversight. Through his work with federal and private clientele in more than a dozen states, Mr. McCabe has an intimate familiarity with the operations, regulations, and special need for projects of all shapes and sizes, turning site specific challenges into project highlights.

PROFESSIONAL EXPERIENCE

Urban Redevelopment Authority (URA) Beechnut Drive Property Phase I/II/III Environmental Site Assessments, Pittsburgh, Pennsylvania - Mr. McCabe, as Project Manager, developed and oversaw the full project effort for Phase I/II/III Environmental Site Assessments - completed in accordance with ASTM standards - at the subject site. During development of the Phase I ESA for the property transfer from the URA to a private client, a potential environmental concern from an adjacent property was identified but the site was determined 'clean' during the Phase II/III ESA.

Phase I/II Environmental Site Assessments Open-End for the Mon-Valley Initiative, Allegheny County, Pennsylvania - The MVI entered into a five-year agreement with Skelly and Loy in mid-2017 for Phase I & II Environmental Site Assessments. Mr. McCabe, manages this contract which primarily includes environmental site assessments and asbestos containing material (ACM) inspection services. Properties investigated during the execution of this contract include residential, commercial, and vacant properties. Other properties/ structures that are currently inhabitable due to neglect and/or abandonment are also assessed in order to determine if structures should be purchased or if the environmental liability/risk is too high.

PennDOT Environmental Remediation Services, Statewide, Pennsylvania - Mr. McCabe manages the work orders completed under the western Pennsylvania environmental remediation contract for PennDOT. Services provided include Phase I/Phase II ESAs; soil, groundwater, and waste characterization; site remediation; waste management planning; asbestos and lead paint inspections and abatement; storage tank management, removal, and remediation; and hazardous waste management.

Demolition of Former Allegheny County Sanitary Authority (ALCOSAN) Operation and Maintenance Building, Allegheny County, Pennsylvania - Skelly and Loy is providing environmental and engineering services to complete a demolition plan for ALCOSAN's old O&M building. Skelly and Loy is providing hazardous materials inspection and abatement specifications as well as a site survey and civil engineering services, including a grading plan and civil site specifications.

Preliminary Assessment for ALCOSAN New Laboratory and Industrial Waste Facility, Allegheny County, Pennsylvania - As part of the preliminary site assessment and feasibility study for ALCOSAN's New Laboratory and Industrial Waste Facility building, Mr. McCabe oversaw the Phase I/II Environmental Site Assessment efforts. The Phase I ESA included background research, regulatory review review, and interviews with knowledgeable persons at two off-site locations and a parking lot on ALCOSAN property. Due to environmental constraints identified off-site, ALCOSAN chose to move forward with an on-site location at which the Phase II subsurface investigation was completed which will provide ALCOSAN with construction and waste management recommendations.

ALCOSAN Phase I ESA - Corner of 2nd Avenue and Greenfield Avenue, Pittsburgh, Pennsylvania - Mr. McCabe oversaw the full execution of the project and prepared the Phase I ESA report in accordance with ASTM 1527-13. The project evaluated potential environmental concerns associated with the subject parcel which was targeted as a potential site for green infrastructure within ALCOSAN's catchment. This site was of particular importance to ALCOSAN due to its locale and potential for GI but it is also within 500 feet of the ALMONO site. Following the Phase I ESA a PADEP Certification of Clean Fill form was completed.

Former Snee Dairy Phase I/II/III Environmental Site Assessments, Brentwood, Pennsylvania - As Project Manager, Mr. McCabe oversaw all aspects of the project. He oversaw staff as they completed the field reconnaissance, personal interviews, and background investigation for the property. Mr. McCabe developed the Phase I ESA report, prepared recommendations for a Phase II/III, and oversaw the execution of the Phase II/III. All work was completed in general accordance with ASTM 1527 & 1903.

Phase I Environmental Site Assessments for Confidential Financer, Various Sites throughout Western Pennsylvania - Mr. McCabe serves as Project Manager and develops the proposals, oversees the execution, and writes/approves of the report findings and recommendations for numerous Phase I Environmental Site Assessments on behalf of confidential financier (bank) for real estate transfers and refinancing. The overall purpose of the Phase I ESAs is to determine the environmental liability of the bank upon issuance of a loan. To carry out the Phase I, Mr. McCabe examines existing conditions and investigates the properties for the presence (and historic presence of) hazardous waste/materials including former storage facilities, gasoline stations, dry cleaners, and manufacturing/industrial facilities.

Lead Based Paint and Asbestos Containing Material Inspection Services for the 911th Airlift Wing, Moon Township, Pennsylvania - Mr. McCabe oversaw the cost estimate/proposal preparation and overall project execution from cradle to grave. LBP and ACM inspections at buildings B208, B218, and B418 included a room-by- room analysis and sampling of various media including pipe insulation and window caulking submitted for laboratory analysis and analysis of various painted surfaces using an XRF analyzer. Mr. McCabe analyzed and gathered the field and laboratory results for inclusion into the Findings Report which also offered recommendations for abatement and/or construction/demolition techniques during renovations.

MATTHEW L. NOWLIN
Project Scientist - Industrial Hygiene/Due Diligence

DESCRIPTION OF SERVICES:
Bid Item #14; Environmental Scientist

EDUCATION:
B.S., Applied Industrial Ecology, 2006, Mount Royal College, Calgary, AB

A.E.T., Petroleum Engineering Technology, 2000, SAIT, Calgary, AB

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
U.S. EPA Certified Asbestos Inspector, PA

U.S. EPA Certified Asbestos Supervisor, PA

City of Philadelphia Asbestos Investigator

City of Philadelphia Asbestos Project Inspector

Mine Safety Training

American Red Cross CPR First Aid Training

OSHA HAZWOPER 40HR/ 8HR Refresher

OSHA Confined Space Entrant/Attendant/Supervisor

Veeder Root Technical Training Certifications: Level 1

Aerial Lift Certified

YEARS OF EXPERIENCE:
20 Years

Mr. Nowlin has been involved in the environmental field for 20 years. Mr. Nowlin primarily conducts environmental field work that includes soil and groundwater sampling, oversight of remedial subcontractors, site investigations including asbestos inspections, asbestos monitoring. and health and safety monitoring activities. During these activities, he characterizes the soil type and quality and collects samples where appropriate. He is also responsible for collecting groundwater samples at locations throughout PA and NJ.

PROFESSIONAL EXPERIENCE

Asbestos Inspection and Abatement - As an EPA certified Asbestos Worker, Supervisor, and Inspector, Mr. Nowlin has completed asbestos inspections and abatement monitoring of residential, commercial and industrial facilities. In accordance with industry standards, Mr. Nowlin has collected samples for analyses and determination of asbestos content. Most recently, he supervised the abatement of asbestos along at 37 different parcels that were slated for demolition to facilitate the construction of a major highway improvement project.

Health and Safety Oversight - Mr. Nowlin monitored utility trenching of natural gas, water and storm sewer across a major roadway in Pennsylvania. He managed worker safety while in the trenches and of the petroleum impacted soil and water generated during the excavation. Mr. Nowlin also treated the impacted groundwater through a granular activated carbon treatment system.

Confined Space Entry - Certified as a confined space entrant/attendant/ supervisor, Mr. Nowlin understands the safety requirements for entering and working within a confined space. In the past, he was involved in the oil and gas industry working with compressor and separator stations which required certification.

Groundwater Sampling - Mr. Nowlin conducts quarterly groundwater sampling activities. He has gained a working knowledge of the sampling procedures that include preservation requirements, sample storage, and proper sampling techniques. In addition, he prepares groundwater contour maps to assess the hydrogeology at various sites.

Report Writing - Mr. Nowlin assists the professional staff with report preparation. He has become familiar with the procedure for completing quarterly monitoring and closure reports.

Emergency Response - Mr. Nowlin assisted on rapid response projects for PennDOT regarding discarded and unidentified tanks. He also assisted in the cleanup of a 5 acre PennDOT stockpile which includes waste segregation of drum carcasses, tar blocks and presumed petroleum impacted soils. Mr. Nowlin also interacted with Federal, state and local agencies including US EPA, DEP, Pike County Conservation District and Pennsylvania Game Commission.

Environmental Planner - As an environmental planner, Mr. Nowlin conducted post-reclamation assessments of soil and vegetation along oil and gas pipeline right-of-ways. He was also involved in delineating rare plant populations on a large project in northern British Columbia. Mr. Nowlin conducted wildlife monitoring involving the removal and movement of the western prairie rattlesnake. He was also tasked with the preparation of all reports pertaining to his field work.

Geological Technologist - As a geological technologist, Mr. Nowlin constructed subsurface maps that included stratigraphic and structural cross sections and development of contour maps. He analyzed and interpreted well logs for formation evaluations. His responsibilities also included the logging and analysis of rock cores.

GREGORY A. ORRIS, Project Scientist
Industrial Hygiene/Due Diligence

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #14; Environmental Scientist

EDUCATION:
A.S., Occupational Safety ad Health, Columbia Southern University

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
U.S. EPA Asbestos Inspector, PA and VA

U.S. EPA Certified Asbestos Project Designer, PA and VA

Lead Hazard Risk Assessor, PA

Asbestos Investigator- City of Philadelphia, PA

Certified Commercial Pesticide Applicator, PA

RELEVANT TRAINING:
OSHA 40-HR HAZWOPER Training

OSHA HAZWOPER 8-HR Incident Commander Training

ASTM-PHASE I and Phase II Environmental Site Assessment Training

Environmental Compliance and Lead Auditor Training- Institute of Internal Auditors-Auditing Roundtable

Stormwater Control Measure Visual Screen Inspection Training

Confined Space Entry Training

Pennsylvania One Call System, Inc. WebTicket Entry Training

American Red Cross CPR First Aid Training

OSHA Fall Protection Training

OSHA Scaffolds User Training

OSHA Stairways & Ladders Training

MSHA Part 46 Mine Safety Training

Traffic Control in Urban and Utility Work Areas Training

Understand EPCRA and How to Protect Communities from Chemical Accidents Training

YEARS OF EXPERIENCE:
30 Years

Over the last 30 years as an Project Scientist, Mr. Orris has been actively involved in environmental projects for both public agencies and private clients. His past experience includes environmental site assessments (both Phase I and Phase II), environmental compliance audits, environmental compliance monitoring, waste site evaluations, industrial hygiene services, asbestos management services, and regulatory analysis. As a project manager, he has managed many investigations including proposal preparation, contract execution, and coordination and ensures projects are completed on time, within budget, and with total client satisfaction.

Mr. Orris is currently licensed as an EPA AHERA Asbestos Inspector and Asbestos Project Designer in Pennsylvania and Virginia; certified as a City of Philadelphia Asbestos Investigator, and licensed as a Lead Hazard Risk Assessor. His experience includes performing asbestos building inspections, preparation of asbestos abatement project designs and technical bid specifications. Mr. Orris is licensed by the Pennsylvania Department of Labor and Industry as a Lead Hazard Risk Assessor and manages lead-based paint inspections and completes lead risk assessments.

PROFESSIONAL EXPERIENCE

Asbestos Management - Mr. Orris continuously performs pre-renovation or demolition asbestos inspections for government and private clients. Asbestos inspections and re- inspections for schools have been completed in accordance with the Asbestos Hazard Emergency Response Act (AHERA). He has also completed environmental and personnel air monitoring during asbestos remediation activities, supervised abatement activities and prepares specifications for the removal of asbestos as a certified Asbestos Project Designer.

Environmental Compliance Audits - Mr. Orris completes numerous third-party regulatory compliance audits at coal mining facilities in Pennsylvania, West Virginia, Kentucky, Virginia and Tennessee. Mr. Orris's role is lead auditor which directs the audit team members and coordinates the audit process with the client and site personnel. The third-party audits focus on environmental and waste related concerns including the Clean Air Act; Clean Water Act; Comprehensive Environmental Response, Compensation, and Liability Act; Emergency Planning and Community Right to Know Act; Resource Conservation and Recovery Act; Safe Drinking Water Act; Toxic Substances Control Act; and Surface Mining Control and Reclamation Act. Mr. Orris is responsible for reporting findings into a database which is tracked by the client's corporate headquarters to ensure the non-compliant issues are resolved.

Environmental Compliance Monitor- Mr. Orris currently assists as an environmental compliance monitor for the 12-mile CSVT project between Lewisburg and Selinsgrove, PA. His responsibilities include providing assistance as necessary with another compliance monitor including coordination with PennDOT and contractor personnel on environmental and permit compliance issues including wetland, ARD and T&E species, conducting site inspections of erosion and sedimentation controls, recommendations for implementation of best management practices (BMP's), collection and analyses of water quality samples and waste and borrow area environmental clearance.

Hazardous Waste Site Investigations - Mr. Orris's field experience includes field chemistry; qualification, control, and containment of hazardous materials; supervision of drilling operations; implementation of remedial investigations techniques such as groundwater well construction, and installation; and environmental sampling in accordance with U.S. Environmental Protection Agency (EPA) sampling protocol. He has conducted dye tracer studies in order to determine the outfall/discharge point of storm and floor drains. In addition, he has participated in delineation of soil and groundwater contamination at many sites.

Environmental Site Assessments (ESAs) - For both commercial and public clients, Mr. Orris has managed and participated in all aspects of Phase I and II environmental site assessments (ESAs) and waste site evaluations. He's been involved with performance of file searches, site inspections, personal interviews, and report preparation. For Phase II ESAs, he has prepared site-specific Health and Safety Plans (HASP) and Field Sampling Plans (FSP) prior to field activities. Mr. Orris's experience includes proposal preparation, contract execution, and coordination. Mr. Orris has participated in several multi-site Waste Site Evaluations for the Pennsylvania Department of Transportation (PennDOT) Mr. Orris has also been involved in several multi-site ESA projects for coal mining and aggregate industry clients. Many of these projects are due diligence assessments which include an evaluation of existing permits and compliance history for the sites. Often these projects are completed with expedited schedules to meet our clients' needs.

Integrated Pest Management - As a Certified Commercial Pesticide Applicator, Mr. Orris assists with developing Integrated Pest Management approaches for the management and treatment of invasive and noxious weeds using mechanical and chemical control methods. Based on the types of invasive species plants, Mr. Orris determines the most effective approach to management and implements the use of mechanical and chemical controls. Mr. Orris also applies herbicides to the invasive and noxious weeds using various types of spraying applications.

Confined Space Entry - Trained as a confined space entrant, attendant, and supervisor, Mr. Orris responsibilities on such projects include preparing site-specific Health and Safety Plans including emergency contingencies, training of personnel, supervising confined space entry, and conducting atmospheric testing for toxicity, explosivity, and oxygen deficiency. Mr. Orris ensures that all activities are completed in accordance with OSHA requirements as presented in 29 CFR 1910.146.

NATHANIEL J. RUHL
Environmental Technician , Industrial Hygiene/Due Diligence

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #22; Environmental Scientist

EDUCATION:
Studied Engineering, Computer Science, and Psychology, The Pennsylvania State University, 2004-2009

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
U.S. EPA Asbestos Inspector, PA, WV, IN

U.S. EPA Asbestos Supervisor and Management Planner, PA

U.S. EPA Certified Lead Inspector, PA

Ohio Department of Health Certified Asbestos Hazard Evaluation Specialist

OSHA HAZWOPER/40HR

YEARS OF EXPERIENCE:
8 Years

Mr. Ruhl serves as an Environmental Technician for the Geo-Environmental Service Group. His responsibilities are focused on environmental site assessments (ESAs), asbestos inspections, asbestos air clearance monitoring, and sample collection.

PROFESSIONAL EXPERIENCE

Asbestos Inspections - Mr. Ruhl is a licensed Pennsylvania asbestos inspector. He has performed several asbestos inspections for public and private sector clients in the Pittsburgh area. His responsibilities have included identifying and sampling possible asbestos containing materials (ACMs), logging bulk samples, documenting site conditions, maintaining chain of custody forms, and compiling result reports. He has conducted inspections for various properties in Western Pennsylvania.

Lead Based Paint Inspections - Mr. Ruhl has performed several inspections for lead based paint. His responsibilities include collecting and logging bulk samples, documenting site conditions, maintaining chain of custody forms, and compiling result reports. He conducted several inspections for the Pennsylvania Department of Transportation.

Hazardous Materials Inspections - Mr. Ruhl has performed several regulated hazardous materials surveys. His responsibilities include the identification of possibly regulated environmental materials, documentation of the materials location, and compiling result reports. He has conducted inspections for various properties in Western Pennsylvania

Groundwater and Soil Sampling - Mr. Ruhl has been involved in projects requiring groundwater and soil sampling. He has conducted groundwater sampling and Geo-Probe soiling for the Pennsylvania Department of Transportation.

Remediation - Mr. Ruhl has performed a variety of waste management and remediation projects for the Pennsylvania Department of Transportation and private clients. Work includes asbestos and lead inspections and abatement oversight and contaminated soil removal and disposal.

PROJECT EXPERIENCE

Asbestos Building Inspections for Buildings Slated for Demolition in Various Areas of the City of Pittsburgh, Allegheny County, Pennsylvania - Mr. Ruhl conducted the inspections of seventeen buildings in the East Liberty, Homewood, and Hill District sections of Pittsburgh. Suspected asbestos containing materials were sampled, logged, and sent for analysis. Upon receiving the results, Mr. Ruhl developed final reports that detailed asbestos quantities to be used for abatement.

PennDOT Environmental Remediation Services, Statewide, Pennsylvania - Mr. Ruhl serves as an environmental technician of a western PA environmental remediation contract for PennDOT. Services provided include Phase I/Phase II Environmental Assessments (ESAs), soil groundwater, and waste characterization, site remediation, asbestos and lead paint inspections and abatement, storage tank management, removal, and remediation, hazardous waste management, health and safety monitoring, investigation derived waste management, field operations oversight and documentation, construction monitoring, and geophysical investigations to support highway and bridge construction, renovation, and replacement.

Pittsburgh Public Schools Indoor Environmental Air Quality and Industrial Hygiene On-Call Contracts, Pittsburgh, Pennsylvania - Mr. Ruhl serves as an environmental technician. His responsibilities include review past reports, identifying and collecting bulk samples, maintaining chain of custody forms, compiling result reports, and updating management plans to reflect findings.

Demolition of Former Allegheny County Sanitary Authority (ALCOSAN) Operation and Maintenance Building, Allegheny County, Pennsylvania - Mr. Ruhl served as an environmental technician for the pre-demolition abatement at the ALCOSAN O&M Building. His responsibilities included the collection and analysis of asbestos air monitoring samples, maintaining air sampling logs and chains of custody forms, oversight of the abatement of asbestos containing materials and compiling result reports.

Phase I/II Environmental Site Assessments Open-End for the Mon-Valley Initiative, Allegheny County, Pennsylvania - Mr. Ruhl served as an environmental technician. His responsibilities included identifying and collecting bulk samples, identifying and documenting possibly regulated hazardous materials, maintaining chain of custody forms and compiling result reports.

Pittsburgh Veterans Administration Medical Center Crawlspace #1, #2, and #3 Contaminated Soil Project, Allegheny County, Pennsylvania - Mr. Ruhl served as an environmental technician. His responsibilities included investigating and mapping three crawlspaces, collecting soil samples, maintaining chain of custody forms, and compiling result reports.

Venetia Road Asbestos and Lead Based Paint Inspection, Pittsburgh, Pennsylvania - Mr. Ruhl served as an environmental technician for the Venetia Road project. His responsibilities include collecting and logging bulk samples, identifying possibly regulated hazardous materials, documenting site conditions, maintaining chain of custody forms, and compiling result reports.

Pleasant Hill Wastewater Treatment Plant Asbestos Abatement Oversight, Pittsburgh, Pennsylvania - Mr. Ruhl serves as an environmental technician for the abatement project at the Pleasant Hills Wastewater Plant. His responsibilities include abatement oversight, collection of air quality samples, and compiling result reports.

Parkway Center Mall Asbestos and Hazardous Materials Inspection, Pittsburgh, Pennsylvania - Mr. Ruhl served as an environmental technician. His responsibilities included identifying and collecting bulk samples, Identifying and documenting possibly regulated hazardous materials, maintaining chain of custody forms, and compiling result reports.

Asbestos Inspection, Bid Specification and Project Monitoring for Carmichaels Area School District, Greene County, Pennsylvania - Mr. Ruhl serves as an environmental technician for the abatement project at Carmichaels Junior and Senior High Schools. His responsibilities include abatement oversight, collection of air quality samples, and compiling of result reports.

Boardman School District AHERA Re-inspection and Management Plan Update, Boardman, Ohio - Mr. Ruhl serves as an environmental technician. His responsibilities include review past reports, identifying and collecting bulk samples, maintaining chain of custody forms, compiling result reports, and updating management plans to reflect findings.

Armstrong County School District AHERA Re-Inspection and Management Plan Update, **Pennsylvania** - Mr. Ruhl serves as an environmental technician. His responsibilities include review past reports, identifying and collecting bulk samples, maintaining chain of custody forms, compiling result reports, and updating management plans to reflect findings.

Wilkes-Barre VAMC Kitchen Renovation Project, Wilkes-Barre, Pennsylvania - Mr. Ruhl served as an environmental technician. His responsibilities included verifying past reports, identifying and collecting bulk samples, maintaining chain of custody forms, and compiling results reports.

DANA A. SWORD, G.I.T., Staff Geologist

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #14; Environmental Scientist

EDUCATION:
B.S., Geology, 2016, Bloomsburg University

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
Pennsylvania Geologist-in-Training (G.I.T.) #GT000580

OSHA HAZWOPER 40 HR 8HR Refresher

OSHA 10 Hour Construction Safety Certification

PennDOT Geotechnical Drilling Inspector Certification

NHI Subsurface Investigation Certification

ATSSA Certified Flagger

PROFESSIONAL AFFILIATIONS:
Pennsylvania Council of Professional Geologists (PCPG)

YEARS OF EXPERIENCE:
3 Years

As a Staff Geologist, Ms. Sword assists with the collection of environmental samples and data for the performance of environmental site investigations, geologic and hydrogeologic studies, subsurface and site characterization investigations, clean fill studies, environmental compliance, and providing oversight for the management and disposal of waste materials. Ms. Sword has also been responsible for the collection of groundwater and soil samples at locations throughout Pennsylvania and Maryland.

PROFESSIONAL EXPERIENCE

Phase I Environmental Site Assessments (ESAs) – Ms. Sword has assisted in the performance of Phase I Environmental Site Assessments and waste site evaluations. Her responsibilities include environmental research and compilation of information. In addition, Ms. Sword is involved with performing background research efforts for ESAs, which has included the completion of title searches, city and state record reviews, aerial photography interpretation, site geology and soil reviews, topographical evaluations, and historical mapping reviews. Ms. Sword also performs site reconnaissance visits and PA DEP file reviews.

Phase II Environmental Site Assessments (ESAs) – Ms. Sword is involved with assessing potential impacts to soil, sediments, surface water, and groundwater media; collecting environmental samples; investigating petroleum products, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and metals; using direct push drilling methodologies for the installation of soil borings and monitoring wells; excavating test pits; overseeing the performance of geophysical survey techniques to determine the presence/absence of buried materials; and assisting in the preparation of reports meeting ASTM and U.S. EPA guidelines.

Drilling Experience – Ms. Sword has performed duties associated with the oversight of geotechnical drilling activities within both the state and private sectors. These duties included the documentation of drill rig type and capabilities, soil advancement and rock coring method with specific equipment used, along with describing and analyzing rock and soil recoveries in accordance with USCS, AASHTO and PennDOT Publication 222 Geotechnical Investigation Manual standards. She was also responsible for enforcing the adherence of safety protocols and regulations pertaining to the drilling and traffic control crews, while documenting any worksite related problems or challenges.

Development of Geotechnical Reports – Ms. Sword has assisted in the formulation and development of various geotechnical maps and reports, focusing particularly on researching and investigating site geologic and environmental conditions in preparation for drilling. She has seen reports through to completion adding relevant post- drilling data in addition to reviewing final client reports.

Well Gauging and Sampling – Ms. Sword is involved with the gauging and sampling of groundwater monitoring wells using low-flow sampling with portable pumps and multiparameter water quality meters. She has also performed residential well sampling in both pre- and post- water treatment settings.

PREVIOUS EMPLOYMENT EXPERIENCE

Geotechnical Field Technician
March 2020 – January 2022
Navarro & Wright Consulting Engineers - New Cumberland, PA

LAUREN D. TILLEY, CEP-IT
Project Scientist - Industrial Hygiene/Due Diligence

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #14; Environmental Scientist

EDUCATION:
B.S., Environmental Geoscience, 2004, Shippensburg University

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
Certified Environmental Professional In-Training (CEP-IT)

U.S. EPA Asbestos Inspector, PA and MD

PA Lead Paint Inspector

MSHA Part 46 Certification

City of Philadelphia, Asbestos Investigator

OSHA HAZWOPER 40 HR/8 HR Refresher

RELEVANT TRAINING:
Confined Space Entry Training

Pennsylvania One Call System, Inc. WebTicket Entry Training

American Red Cross CPR/First Aid

Indoor Air Quality and Mold Awareness Training

Phase I and Phase II Environmental Site Assessments for Commercial Real Estate

YEARS OF EXPERIENCE:
18 Years

As a project scientist, Ms. Tilley has been actively involved in environmental projects for both public agencies and private clients. Her experience includes environmental site assessments (Phase I and II) and waste site evaluations as well as field sampling activities.

Ms. Tilley has completed numerous Phase I ESAs and Waste Site Evaluations for PennDOT and MDOT SHA. Projects ranged in complexity from single sites to miles-long corridors for roadway widenings, safety improvements, and intersection realignment projects. Responsibilities included background research, coordination with government agencies and property owners, as well as site reconnaissance efforts. In conjunction with these ESAs, pre-demolition asbestos inspections were often performed. Phase II ESAs often resulted from the initial Phase I ESA. Ms. Tilley has overseen geophysical investigations, UST and AST removal, soil excavations along with soil and groundwater sampling.

PROFESSIONAL EXPERIENCE

Environmental Site Assessments (ESAs) - For both commercial and public clients, Ms. Tilley has completed in the performance of Phase I and II Environmental Site Assessments (ESAs) and waste site evaluations. Her responsibilities include environmental research and compilation of information. Her involvement with background research efforts for ESAs has included the completion of title searches, city and state record reviews, aerial photography interpretation, site geology and soil reviews, topographical evaluations, and historical mapping reviews. Additionally, Ms. Tilley has completed federal, state, and local agency record reviews for ESAs and waste site evaluations. She has also coordinated with state and local agencies on numerous projects as well as conducted interviews with property owners and knowledgeable persons regarding site conditions and site history. Ms. Tilley has also compiled the information obtained as well as prepared summaries of the data and drafted ESA and waste site evaluation reports.

Ms. Tilley has also done site reconnaissance efforts. She has completed photographic logs and site reconnaissance checklists. Her involvement in Phase II ESAs includes geophysical surveys and soil sampling with a Geoprobe.

Asbestos and Lead Based Paint Inspections - As an EPA certified Asbestos Inspector, Ms. Tilley has completed asbestos inspections of residential, commercial and industrial facilities. In accordance with industry standards, Ms. Tilley has collected samples for analyses and determination of asbestos content. Most recently, she was involved with the inspection of 37 structures on 19 different parcels that were slated for demolition to facilitate the construction of a major highway improvement project. As a certified Lead Paint Inspector, Ms. Tilley has also completed numerous bridge inspections for the presence of lead base d paint. In accordance with industry standards, she has collected samples for analysis and determination lead and other heavy metals.

Industrial Hygiene - Whether by complaint or regulatory driven, Ms. Tilley provides Indoor Air Quality (IAQ) assessment services to building owners and employers to help determine if existing employer work practices, engineering controls, and personal protection equipment is adequate in protecting employees or if building heating ventilation and air conditioning systems are operating satisfactorily.

Field Data Collection - Ms. Tilley has conducted groundwater sampling of private wells in the Bear Creek, Pennsylvania, area and oversaw the installation of volatile organic compound (VOC) remediation systems in these private residences. Ms. Tilley's field experience also involved site visits for ESAs and waste site evaluations. She has assisted in the preparation of well logs and soil boring logs. Ms. Tilley is also proficient in computer spreadsheets through the compilation of analytical results as well as compiling background research information.

RYAN R. SHEIDY, Project Scientist - Tank Management

DESCRIPTION OF SERVICES:
Bid Item #14; Environmental Scientist

EDUCATION:
B.S., Environmental Science, 1997, Susquehanna University

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
OSHA Hazwoper 40-HR/8-HR Refresher Training

Veeder Root ATG Technician Certification

OSHA Confined Space Entrant/Attendant/Supervisor Training

PA DEP Storage Tank UMR Certification

PA DEP UST A+B Operator Training

MSHA Part 46 Mine Safety Training

Pennsylvania Land Recycling Program Training

American Red Cross / CPR First Aid Training

YEARS OF EXPERIENCE:
24 Years

Since joining Skelly and Loy, Mr. Sheidy has been actively involved in environmental projects for both public agencies and private clients. His past experiences include, but are not limited to, underground and aboveground storage tank activities, environmental site assessments, site remediation, direct-push drilling, and aquifer testing.

Mr. Sheidy has completed hazardous waste site evaluations and environmental site assessments (Phase I, II, and III) for public and private clients. He has participated in all aspects of site assessments including background research efforts, site visits, and report preparation. Mr. Sheidy has conducted detailed evaluations of present and past land uses of properties in order to evaluate the potential for hazardous or environmentally sensitive site conditions in accordance with ASTM guidelines as well as U.S. EPA's All Appropriate Inquiry. Additionally, he has performed soil, groundwater, and waste sampling/characterization; waste management planning; site remediation; storage tank management, removal, and remediation; hazardous waste management; health and safety monitoring, and overseen geophysical investigations. He has assisted in preparation of health and safety plans (HASPs) and Field Sampling Plans (FSPs) for Phase II and III ESAs prior to field activities.

PROFESSIONAL EXPERIENCE

Pennsylvania Turnpike Commission (PTC) - Mr. Sheidy has completed monthly compliance visits at fuel dispensing facilities with underground storage tank (UST) systems to ensure the tank systems are functioning within basic Pennsylvania Department of Environmental Protection (PADEP) compliance. Mr. Sheidy reviews the tank monitoring systems for alarms and warnings, fuel islands and dispensers for evidence of existing leaks and spills, and ensures that site personnel are keeping the appropriate leak detection documentation onsite, per PADEP requirements. He has also performed underground storage tank operator training for PTC personnel at various locations and facilities. In addition, Mr. Sheidy served as the lead on-site supervisor providing technical support and oversight to the PTC for environmental issues that arise during construction activities. He coordinated field efforts with site contractors to ensure that subsurface materials are being managed in a timely and responsible manner, while minimizing long-term environmental impacts and delays to construction schedules. Mr. Sheidy also supervised the permanent closure and removal of several UST systems across the turnpike in accordance with meeting DEP Closure Requirements for Underground Storage Tanks.

Pennsylvania Department of Transportation (PennDOT) Environmental Remediation Services, Statewide, Pennsylvania - Mr. Sheidy served as the lead Skelly and Loy onsite contact for mass excavation and segregation activities of residual waste across a five-acre area investigated by a geophysical survey. Residual waste materials encountered (drum carcasses, presumed petroleum-impacted soil, tar and tar blocks, etc.) were segregated from the fill, temporarily staged on-site, and properly disposed off-site at permitted facilities. Mr. Sheidy was in charge of the segregation and staging activities, collecting post-excavation soil samples, wetland water sampling, and collecting waste characterization samples, as well as coordinating off-site disposal, wetland restoration, and final grading activities, and final report preparation. Mr. Sheidy interacted with federal, state, and local agencies including the US EPA, PADEP, Pike County Conservation District, and PA Game Commission.

General Technical Assistance Contract 4, PA DEP, Ivy Industrial Park Site, Lackawanna County, Pennsylvania - Mr. Sheidy's responsibilities included the collection of soil and groundwater samples using direct-push drilling techniques, soil gas and sub slab vapor sampling, the collection of surface water and stream sediment samples, technical support to GTAC personnel, resident interviews, and the coordination, collection, and laboratory submission of over 300 private supply well water samples from local residences on a quarterly basis. Mr. Sheidy was responsible for updating and maintaining a database of all sample submissions and analytical results, as well as interacting with US EPA and PADEP representatives, and homeowners.

Pennsylvania Department of Transportation, Tank Removal and Installation Services - Mr. Sheidy served as on-site supervisor providing technical support and oversight to PennDOT for environmental issues that arose during aboveground and underground tank system removals and replacements. Mr. Sheidy has overseen the excavation, dismantling, cleaning, removal, and disposal of material, contents, and appurtenances, as well as the installation of new systems, and completed required PADEP documentation and forms. These efforts include aboveground storage tank systems for road tar, as well as underground storage tank systems for fleet fueling. Removal activities have been completed at PennDOT facilities as well as roadway improvement projects under authority of condemnation by the Commonwealth.

Subsurface Investigations - Mr. Sheidy has assisted with numerous projects involving groundwater investigations, site characterizations, and remediation activities that have been granted Pennsylvania Act 2 Program site closures by PA DEP. Field activities involved with these studies include the installation of groundwater monitoring well using geoprobe, air rotary, and hollow stem auger technology, groundwater sampling using low flow purging procedures as encouraged by the US EPA and PA DEP, groundwater contour mapping, hydraulic aquifer testing, product recovery from monitoring wells (Xitech liquid-phase hydrocarbon recovery system), bioremediation measures including the injection of liquid nutrients and dissolved oxygen [In-Situ Submerged Oxygen Curtain (ISOC) system] into monitoring wells, well abandonment, logging geoprobe borings and soil sampling, overseeing the removal of underground storage tanks and collecting closure samples, remedial excavation of impacted soils and subsequent soil sampling using both bias methodology and systematic random sampling, proper containerization and disposal of investigation-derived wastes, surface water sampling, private supply well sampling, sub-slab vapor sampling, indoor air sampling, fate-and-transport interpretation, and the application. Prepared documentation includes associated Act 2 and Storage Tank and Spill Prevention Program reporting.

The Pennsylvania State University, West Campus Steam Plant UST System, University Park, Pennsylvania - Mr. Sheidy served as on-site supervisor/PADEP UMR providing technical support and oversight to the Prime Contractor for environmental topics that arose during tank demolition and permanent removal activities of two 175,000-gallon heating oil underground storage tanks. Mr. Sheidy oversaw the excavation, cleaning, dismantling, removal, and disposal of material, contents, and appurtenances associated with the underground storage tank system, and collected closure soil samples and completed the respective closure report for documentation.

South Jersey Clothing Company / Garden State Cleaners Superfund Site, New Jersey - Mr. Sheidy provided site aquifer testing involving pump tests on extraction wells using Winsitu mini-trolls. These efforts involved programming, monitoring, and downloading mini-troll data and collecting static water levels from nearby monitoring wells. He was responsible for recording data and maintaining databases during individual pump tests to establish zone of influence and groundwater contour mapping, and interacting with USACE representative. Similar efforts have also been performed with Metaltec / Aerosystems Superfund Site, New Jersey, and several potable water and irrigation systems to evaluate the hydraulic characteristics of individual wells and their pumping effects on the surrounding aquifer to optimize supply well yield.

Industrial Hygiene -Mr. Sheidy has assisted with OSHA compliance noise assessment efforts by overseeing the placement and operation of personal noise dosimeters on workers at an industrial parts facility. He has also assisted with on-site industrial hygiene air sampling by managing low volume personal air sampling pumps with appropriate sample media on workers within their daily work-space. Lastly, Mr. Sheidy served as the lead Skelly and Loy onsite contact and coordinator for mold remediation activities completed for a nine-story housing barracks at Bolling Air Force Base which consisted of 376 living units. Mr. Sheidy was in charge of coordinating daily mold remediation activities and completing and documenting visual inspections of the units upon completion. He also assisted with mold remediation activities and interacted with client personnel.

NATHAN A. BECK, Engineering Technician

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #17; Survey Crew: Includes PA Certified Surveyor

EDUCATION:
B.A., Economics, 2008, Millersville University

YEARS OF EXPERIENCE:
21 Years

Mr. Beck has been with Skelly and Loy, Inc. since 2001, beginning in the Technical Services Department as a Drafting Technician. In 2008 Mr. Beck was promoted to his current position in the Civil Engineering Department within the Engineering Services Group of Skelly and Loy. He is responsible for permitting, assisting in land development and PPC/SPCC plans, and environmental compliance. Mr. Beck also assists with various field work activities, primarily with survey-related projects.

PROFESSIONAL EXPERIENCE

Permitting and Land Development and PPC/SPCC Plans - Mr. Beck has assisted in the preparation of various types of permits relating to mine reclamation, erosion and sediment (E&S) control, and National Pollutant Discharge Elimination System (NPDES) permitting and has experience in air quality permitting as well. His mine reclamation permitting experience includes beneficial use of coal ash, coal refuse reprocessing, application of biosolids, new mining permits, permit renewals, and transferring of permits from one operator to another. His NPDES and E&S permitting experience includes but is not limited to work for individuals with small-scale construction needs, mining clients, and large-scale utility corridors that are several miles long. He also assists in land development plans by performing research and mapping functions as well as initiating the PA One Call process to find utilities within the project area. The PA One Call process also includes follow-up and communication with utility companies. Mr. Beck has also assisted in construction inspections, construction specifications, and bid package preparation. Mr. Beck has developed Preparedness, Prevention, and Contingency (PPC)/Spill Prevention, Control and Countermeasure (SPCC) Plans for clients in fields such as the automotive, mining, and entertainment industries. These plans involve site visits to determine locations and contents of aboveground storage tanks and the development of strategies for the site to implement in case of emergency spills that may occur.

Environmental Compliance - Mr. Beck has been an environmental liaison for coal and noncoal mining operators. Each of these operations must comply with bonding requirements set forth by the Pennsylvania Department of Environmental Protection (PADEP). Mr. Beck calculates the bond of each operation on an annual basis, based on the reclamation status of the operations. He assists the operator with the organization of water monitoring data to ensure that water quality has not been negatively impacted by the mines. He also ensures that the operator remains in compliance by regularly reviewing environmental regulations. Mr. Beck is well versed in performing research-based file reviews at different PA DEP locations throughout the state.

Field Work Activities and Miscellaneous Tasks - Mr. Beck frequently assists in surveying and map verification activities. He is capable of running survey equipment and has vast experience in survey jobs including but not limited to boundary surveys, large-scale topography, stream profiling, mining operations, construction stake outs, road sight distances, and utility location. He has experience in deed research and deed plotting for mapping purposes. In addition to surveying work, Mr. Beck also has experience in percolation testing to determine suitability of soil for septic systems, archaeological digs, water sampling, outfall inspections, and culvert inspections. He has also assisted the Geo-Environmental Service Group with asbestos inspections. In addition to field work, Mr. Beck has performed water quality laboratory testing that is designed to determine better methods of acid mine treatment.

ALBERT J. BUDINSKY, Civil Designer

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #11; Environmental / Sanitary Engineers

EDUCATION:
B.S. Engineering of Mines, 1986, West Virginia University

YEARS OF EXPERIENCE:
35 Years

Mr. Budinsky provides engineering support for drainage and stormwater management, potable water and sanitary designs, construction cost estimates, and bid-proposal preparation. He has an extensive computer background and has developed many plans using AutoCAD, Land Development Desktop, and SurvCADD as well as various hydrology packages. Mr. Budinsky has extensive project experience with stormwater and erosion and sedimentation control for numerous utility linear projects as well as substations. He has worked on a variety of mining assignments, including due diligence investigations, surface and underground mine planning, geologic investigations, acid mine drainage treatment, and permitting.

PROFESSIONAL EXPERIENCE

UTILITY PROJECTS

Senior Designer - FirstEnergy Transmission Projects, Pennsylvania and Maryland – Lead designer responsible with preparing stormwater, erosion and sediment control plans, and NPDES permits for numerous FirstEnergy Transmission Line Projects. Typical project lengths are between 5 and 12 miles of transmission right of ways. Design involves construction of temporary access roads, work pad layout, placement of erosion and sediment controls, and preparation of vegetative restoration plans. Work with FirstEnergy staff in obtaining FERC River Crossing Permits, PA DEP General Permits and project NPDES permitting. In addition, coordination efforts and HOP Permits were obtained through the local office for the Pennsylvania Department of Transportation.

Senior Designer - First Energy Substation Projects, Pennsylvania – Lead Designer involved in preparing stormwater and erosion/sediment control plans and NPDES permits for several sub stations including Lincoln Sub, Adams County, Pennsylvania, North Bangor Sub, Northampton County, Pennsylvania and Roxbury Sub, Franklin County Pennsylvania. Work involved designing stormwater management treatment facilities for the various substations. In the case of the North Bangor Substation, this work included working with PA DEP and the Northampton County Conservation District to resolve an existing compliance issue relating to insufficient stormwater management facilities serving the site. For the Roxbury Sub, a state-of-the-art water quality treatment system was designed and is currently being constructed at the project site. All substation projects involved NPDES permitting through PA DEP and the applicable County Conservation Districts.

Senior Designer - Tenaska Westmoreland Generating Station, Pennsylvania – As Designer for the project, Mr. Budinsky assisted the lead design professional in preparing site and stormwater plans. The Tenaska Westmoreland generating station is a 925MW combined-cycle electric power plant developed in Westmoreland County, Pennsylvania, The power plant is spread across a 50-acre area with a separate building to house the power generating equipment. Responsibilities included site survey of existing features, coordination with local county conservation district, evaluation and peer review of proposed stormwater management facilities, and filing of the Notice of Termination for construction permits associated with the project.

Project Manager and Designer - Tenaska Tioga Well Pad Permitting, Pennsylvania – Designer involved in permitting aspects for existing well pad

locations in Tioga County, Pennsylvania. Assisted Tenaska in obtaining environmental clearances for permit renewal and prepared notice of termination packages for existing E&S permits associated with several project sites.

MINING RELATED PROJECTS

Senior Designer - MEPCO Mine Dewatering Project, Greene County, Pennsylvania – Prepared and coordinated NPDES permit documents for 12,000 feet of pipe. Provided CADD support, developed the erosion control plan and worked with wetland specialists to minimize the impact of crossing several sensitive areas within the project area. Organized and adjusted survey information collected for the project.

Senior Designer - Keyser's Ridge Leachate Removal System, Garrett County, Maryland – Assisted in conceptual design phases and final plan preparation, developed CADD drawings, and performed quantity takeoffs for project cost estimate. Interpreted and corrected site topography mapping from survey data provided from another firm.

Senior Designer - Good Spring South Mine Transfer Permit, Schuylkill County, Pennsylvania – Developed reclamation and mining plan which included project phasing analysis, stream restoration, erosion and sediment control plan, and permit application preparation. Performed volumetric computations for bonding calculations and utilized county GIS data to prepare property owners' mapping used for various aspects of the project.

Senior Designer - Good Spring East Coal Ash Placement and Monitoring Plan, Schuylkill County, Pennsylvania – Developed mine reclamation and erosion control plans for PA DEP module 25 permit submission. Collected field information pertaining to flow and monitoring data at the site's monitoring wells to be incorporated into the overall site monitoring plan.

Senior Designer - Rausch Creek Land Planning Mapping, Schuylkill County, Pennsylvania – Analyzed GIS and site information to prepare a series of maps for client which highlighted coal, water and wind resources. Ten large size maps were developed and accompanied with a general narrative which discussed potential uses for the 12,000 acre tract.

Senior Designer - Broad Top Township, Pennsylvania – Served as the Civil Design Specialist for the design, permitting, and construction of more than a dozen passive AMD treatment systems in Broad Top Township. Assisted in the design and permitting associated with the passive treatment systems. Main focus of related work was associated with the impact of the treatment systems to the existing flood plain and erosion/sediment control plans associated with the project. Some of the projects required the use of mine seals, mine pool manipulation, and treatment technologies capable of treating high flow and/or high level acidity discharges. Treatment systems included flushable limestone beds, settling ponds, aerobic wetlands, etc.

Project Manager and Designer - Northumberland County Conservation District, Anthracite Outdoor Adventure Area, Pennsylvania – Designer who prepared the permit drawings for submissions to the local agencies for approval as well as the construction plans. The plans included design of an AMD Treatment system which included treatment cells consisting of limestone beds and wetlands, repair of an existing system including enhanced spillways for aeration and baffle curtains to drop out suspended metals and dissolved solids prior to entering Carbon Run. Prepared contract documents and oversaw construction of the treatment facilities.

BENJAMIN BURLEW, E.I.T, Field Environmental Engineer

DESCRIPTION OF SERVICES:
Bid Item #11; Environmental / Sanitary Engineers

EDUCATION:
B.S., Engineering, 2021, Messiah University

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
Engineer-In-Training, PA

PennDOT Stormwater Control Measures Visual Screening Inspection Certification

PROFESSIONAL AFFILIATIONS:
American Society of Civil Engineers

YEARS OF EXPERIENCE:
1 Year

As a certified Engineer-In-Training, Mr. Burlew serves as a Field Environmental Engineer for the Environmental Engineering Service Group. His experience includes Erosion and Sediment pollution control planning, water and sewer utility line modeling, stormwater and sewer discharge monitoring, on-lot wastewater treatment plant design, National Pollution Discharge Elimination System (NPDES) planning, location surveying, and Preparedness, Prevention, and Contingency planning.

PROFESSIONAL EXPERIENCE

Erosion and Sediment Pollution Control Planning - Mr. Burlew has designed and completed multiple Erosion and Sediment Pollution Control plans. These designs utilized the Pennsylvania Department of Environmental Protection's Best Management Practices manual and have been included in permit applications.

Water and Sewer Utility Line Modeling - Mr. Burlew has been actively involved with multiple projects that involved the design and construction of new water and sewer utility line systems. He assists in all levels of the project, including slope calculation, cost estimation, stormwater pollution prevention, and completing permit applications.

Stormwater and Sewer Discharge Monitoring - Mr. Burlew has monitored several stormwater and sewer discharge to verify water levels comply with the issued permits. He reviews sample results and calculates any exceedances and surcharges.

Preparedness, Prevention, and Contingency Planning - Mr. Burlew updated a Preparedness, Prevention, and Contingency Plan used to prevent emergencies and accidents and to provide effective response to emergencies and accidents. His work involved surveying stormwater outfalls, developing an emergency response plan and analyzing topographic and aerial imagery.

PROJECT EXPERIENCE

Route 286 East Sewer Extension and Pump Station, White Township, Pennsylvania – This project involves the design and construction of a new sewer line extension and pump station installation. This project consisted of designing nearly 11,500 feet of a new sewer system throughout White Township, Pennsylvania. Mr. Burlew designed the Erosion and Sediment Pollution Control plan and NPDES plan. Mr. Burlew also completed the Chapter 102 and Chapter 105 permit applications for the NPDES permit and wetland impact permit.

MS4 Inspections, Middlesex Township, Pennsylvania – Mr. Burlew conducted the Illicit Discharge Detection and Elimination inspections for the MS4 stormwater discharges. His work involved the location of stormwater discharge points while in the field, an inspection of site conditions, and the recording of outfall characteristics. Mr. Burlew also conducted field measurements to determine if the receiving waters were being negatively impacted by the stormwater.

Bass Pro Shops Oil and Water Separate Improvement, Dauphin County, Pennsylvania – This Bass Pro Shops project involved proposing solution for an odor issue emanating from the oil and water separator used for their vehicle

maintenance hop. Mr. Burlew conducted a site visit to gather site information and determine potential causes for the odor. Mr. Burlew designed solutions to the potential problems and contacted distributors for pricing.

Spring Lane and Hendren Street, Philadelphia Water Department Sewer Design and Outfall Restoration, Philadelphia, Pennsylvania – Mr. Burlew was involved in the design of a new sewer utility line to connect to an existing pump station and the restoration of an existing stormwater outfall. This project consisted of calculating and designing the sewer line system to an existing pump station through gravity. Mr. Burlew also had direct involvement in the design of a stepped infiltration swale to restore the damaged stormwater outfall and prevent further erosion of the stream bank.

Smith Hollow Tank Replacement and Systems Improvement, Town of Rivesville, West Virginia – This project involved the replacement of over 32,500 feet of damaged or clogged water utility pipes throughout the Town of Rivesville, West Virginia. Mr. Burlew was directly involved with the design of the replacement pipe and directly involved in the design of the Erosion and Sediment Pollution Control plan. He also prepared the Public Water Supply permit application for the West Virginia Bureau of Public Health. Other work for this project included the preparation of Technical Specifications.

Alpha Ridge Landfill Rainwater Tank Redesign, Howard County, Maryland – This project required the redesign of the rainwater tank manhole access as surface water runoff was entering the tank through an unsecure manhole lid. Mr. Burlew was directly involved with designing various solutions to prevent surface runoff from entering the manhole. Mr. Burlew also designed the concrete pad that surrounded the redesigned manway using American Concrete Institute standards.

I-99 ERPA Leachate Treatment System, Centre County, Pennsylvania – Mr. Burlew was involved with the research and cost analysis for replacing the existing geotextile and PVC liners. Mr. Burlew contacted various manufacturers to determine the cost of Class 4 Type A geotextile liners as well as 30 MIL PVC liners to replace the existing liners. Mr. Burlew performed a cost analysis to determine what size and cost was the most financially viable.

CALVIN F. BUSH, II, P.E., Project Environmental Engineer

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #5; Senior Environmental / Sanitary Engineers

EDUCATION:
B.S., Civil Engineering, Minor in Environmental Engineering, 2014, Rose-Hulman Institute of Technology

United States Army Chemical School, Ft Leonard Wood, MO (Graduated Commandant's List December 2010)

United States Army Military Intelligence School, Fort Huachuca, AZ (Graduated March 2007)

PROFESSION REGISTRATION AND CERTIFICATIONS:
Professional Engineer, PA

RELEVANT TRAINING:
Rosgen Levels I-IV

PennDOT H&H and Permitting Procedures

PennDOT Stormwater Control Measures (SCM) Visual Inspections

PennDOT SCM Conditions Assessment Inspections

PADEP/PACD Chapter 102 NPDES & PCSM Training for the Regulated Community

OSHA HAZWOPER 40HR/8HR Refresher

Excavations 29CFR1926.620-652

YEARS OF EXPERIENCE:
17 Years

A certified Professional Engineer, Mr. Calvin Bush has 17 years of professional experience. This experience includes technical participation in a broad range of projects including stormwater management, stream restoration, fluvial geomorphology surveying, construction monitoring, water resources engineering, large non-coal mine permitting tasks, hydraulic fracturing technical expertise, and a variety of military operations and assignments.

PROFESSIONAL EXPERIENCE

Stream Restoration Projects - Mr. Bush has been actively involved in numerous stream restoration projects. He participates in many levels of the projects, from initial site assessments and fluvial geomorphological surveying to design and permitting completion, and construction technical oversight. Mr. Bush is adept with the most up-to-date engineering and hydrology/hydraulics software programs such as AutoCAD, HEC-RAS, HEC-HMS, HydroCAD, RiverMorph, and HY-8.

Hydrologic and Hydraulic Engineering - Mr. Bush provided technical assistance with the design and permitting of numerous projects with Skelly and Loy. Projects included, but are not limited to, wetland drainage analysis, stormwater management facility designs, scour protection assessments, and hydraulic analyses of stream restoration projects. Mr. Bush has utilized both traditional calculations and software (such as HEC-RAS, HY-8, HEC-HMS, and AutoCAD extensions) in order to complete engineering reports and provide assistance to project engineers.

Storm Drainage and Stormwater Management - Mr. Bush has been actively involved with several projects involving stormwater drainage and management. He has assisted with both design and analysis of stormwater systems. Mr. Bush is adept with stormwater best engineering practices and applying required client specifications to achieve a functional stormwater system, including green stormwater infrastructure designs.

Erosion and Sediment Pollution Control Design - Mr. Bush regularly prepares compliant erosion and sediment pollution control plans for projects in a wide range of complexity. Past and current projects include stream restorations and relocations, green stormwater infrastructure retrofits, sediment abatement projects, large non-coal mining permits.

Post-Construction Stormwater Management Design and Inspection - Mr. Bush regularly prepares compliant post-construction stormwater management plans for projects in a wide range of complexity. Past and current projects include stream restorations and relocations, green stormwater infrastructure retrofits, and sediment abatement projects. Mr. Bush conducts PennDOT Stormwater Control Measure (SCM) Visual inspections, in accordance with the newest guidance and is trained to conduct the more detailed SCM Conditions Assessment Inspections.

Technical Field Work - Mr. Bush has assisted with field data collection and project construction oversight. Mr. Bush was in-part responsible for providing technical guidance to operators and contractors, with respect to limits of excavation, erosion and sediment pollution control measures, and construction specifications. He has been charged with acquiring critical survey data through the utilization of the latest GNSS real-time kinematic (RTK) survey systems, total stations, and more traditional techniques for engineering surveys.

CALVIN F. BUSH, II, P.E., Project Environmental Engineer

SKELLY AND LOY
A Terracon COMPANY

PROJECT EXPERIENCE

Neill Drive Pumping Station Stream Restoration and Infrastructure Protection, Philadelphia, Pennsylvania - Mr. Bush serves as the design engineer for this stream restoration and sewer/water protection project along 2,000+ feet of a severely impacted and eroded Schuylkill River tributary. Stream gradients range from moderate (3%) to severe (11%), requiring specialized step-pool channel architecture. Fluvial geomorphic survey and measurements, hydrologic (HEC-HMS) and hydraulic (HEC-RAS) analyses, geotechnical investigations, wetland delineations, landowner/stakeholder (PPR) meetings, concept and final design, and permitting are within the scope.

Interstate 83 Mill Creek Stream Restoration, York County, Pennsylvania - This project involves the realignment and restoration of Mill Creek within the Pennsylvania Department of Transportation's (PennDOT) project area for Interstate 83 Exit 18 Interchange construction. Mr. Bush performed construction observation of the stream restoration portion of the project to ensure the stream mitigation portion is constructed in accordance with the plans and specifications. Mr. Bush performed mid-construction surveys of the stream restoration project using global positioning system survey equipment to ensure stream and protection features were constructed to the designed elevation and alignment.

Stream Restoration and Floodplain Expansion, Philadelphia, Pennsylvania - This project involved the daylighting and realignment of a section of Walton Run (a Tributary to Byberry Creek) which was causing localized flooding of area commercial enterprises. Mr. Bush utilized HEC-RAS 5.0.3 modeling software for a detailed two-dimensional floodplain analysis of existing and post-construction conditions for the project as well as HEC-HMS to analyze the hydrology of the project location. Mr. Bush designed the grading of the daylighted channel and the floodplain expansion basin for this project.

Paxtang Parkway Stream Restoration, Dauphin County, Pennsylvania - An unnamed tributary of Spring Creek was encroaching into the embankment of several sites along the Paxtang Parkway, part of the Capital Area Greenbelt system. Mr. Bush analyzed geomorphic data of the separate sites and utilized this information in a natural stream channel design for the affected areas. Design work included the restoration of a stormwater conveyance channel, which required hydrologic and hydraulic analysis of contributing stormwater system and scour pool analysis and design. The restoration efforts will provide a more stable channel while eliminating erosion of the embankments along the parkway.

Pennsylvania Turnpike Commission, MS4 Permit Renewal Assistance, Statewide, Pennsylvania - Mr. Bush is assisting with the Pennsylvania Turnpike Commission's (PTC's) MS4 Permit renewal. Duties include statewide assessment of the PTC's stormwater management facilities with regard to pollutant reduction from stormwater runoff, QA/QC of mapping, sewershed delineations, outfall identification, and identifying potential BMP site locations.

PennDOT PCSM and MS4 Compliant Stormwater Infrastructure Inspections, Pennsylvania - The purpose of this project is to inspect and record the numerous SCM, previously referred to as Stormwater Best Management Practices, infrastructure that falls under PennDOT's responsibility for operation and maintenance. Mr. Bush adapted PennDOT standard forms for inspection and implemented a technology driven method for data collection in the field to increase the efficiency of the inspection completion rate.

Hunting Park Green Streets Construction Project, Philadelphia, Pennsylvania - This Green Streets Green Stormwater Infrastructure (GSI) project in the Hunting Park neighborhood of the city will provided nearly 11 greened acres of stormwater runoff storage volume. Ten individual sites throughout the park are composed of four bioretention rain gardens, three rain gardens coupled with infiltration trenches beneath, four subsurface infiltration trenches utilizing both stone and modular storage, and one subsurface storage trench with slow release. Mr. Bush provided engineering support through the design phase of the project, including, but not limited to, hydrologic and hydraulic analysis, stormwater management practices design, sewer capacity analysis, and conveyance system design and analysis.

GERALD C. (BUD) GROVE, P.E., P.L.S., Senior Civil Engineer

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #17; Survey Crew: Includes PA Certified Surveyor

EDUCATION:
B.S., Civil Engineering, 1971, Indiana Institute of Technology

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
P.E., Pennsylvania #027489E
P.L.S., Pennsylvania

YEARS OF EXPERIENCE:
51 Years

Mr. Grove has a lengthy and diverse portfolio of experience for government and private sector clients, ranging from project surveying, planning, design, and engineering to construction observation and project compliance construction inspections. He has completed boundary surveys, land development designs, and subdivision plans and has prepared construction specifications and cost estimates for both public and private improvement projects. In so doing, he has either designed or supervised designs for improvements requiring state and local permits whether it be from the Pennsylvania Department of Transportation or the Pennsylvania Department of Environmental Protection.

PROJECT EXPERIENCE

Middlesex Township, Cumberland County, Pennsylvania - Mr. Grove provides township engineering services which include subdivision and land development plan reviews, engineering traffic restriction studies, and roadway realignment analysis for Bernheisel Bridge Road and Sherwood Drive which included the realignment design. Mr. Grove performed land use planning for the Carlisle Springs Drainage shed. He authored the township's present Stormwater Management Ordinance and rewrote the township's Subdivision and Land Development Ordinance. He has worked with the township planning commission to develop and prepare a Unified Development Ordinance along the Country Club Road Corridor. He consulted on the Growing Greener Subdivision Ordinance Amendments and also provided zoning officer services on temporary basis.

South Middleton Township, Cumberland County, Pennsylvania - Mr. Grove provided township engineering services to South Middleton Township. Services included subdivision and land development plan reviews. He authored the subdivision and land development ordinance; provided consultation services for a new zoning ordinance; completed dam rehabilitation design and construction management services for Children's Lake in Boiling Springs, Pennsylvania, which is within the township's boundary; performed land survey services; and completed reconstruction designs and construction management services for Rockledge Drive and Wood Lane. In addition, Mr. Grove designed and construction-managed the Pine Road Drainage Improvement project.

Warrington Township, York County, Pennsylvania - Mr. Grove provided township engineering services to Warrington Township, York County, Pennsylvania. Services included subdivision and land development plan reviews, authoring a new subdivision and land development ordinance, and preparing the township's PA DEP Act 537 Plan (Township-wide Sewage Facilities Planning). Mr. Grove also provided design and construction management services for the Poplar Road Bridge Replacement project and performed various land survey services.

Franklin Township, York County, Pennsylvania - Mr. Grove provided township engineering services to Franklin Township. Services included subdivision and land development plan reviews and consultation services for new subdivision and land development ordinance. Mr. Grove designed and construction-managed the Cabin Hollow Road Culvert Replacement Project and performed a hydrologic and hydraulic analysis of a culvert on Range End Road and the Century Lane Bridge.

Carroll Township, York County, Pennsylvania - Mr. Grove provided township engineering services to Carroll Township, York County, Pennsylvania. Services included subdivision and land development plan reviews. Design and

construction management services included the Mill Road Bridge Replacement and Road Realignment and Reconstruction. In addition, Mr. Grove designed and construction-managed a replacement culvert under Carroll Drive.

Middle Paxton Township, Dauphin County, Pennsylvania - Mr. Grove provided township engineering services to Middle Paxton Township, Dauphin County, Pennsylvania. Services included subdivision and land development plan reviews, sewage enforcement officer services, and design and construction management services for the Frog Hollow Road Culvert Replacement project.

GERALD W. LONGENECKER, P.E., Senior Principal
Department Manager - Engineering

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #5; Senior Environmental and Sanitary Engineer

EDUCATION:
M.S., Agricultural Engineering, 1980, The Pennsylvania State University

B.S., Agricultural Engineering, 1979, The Pennsylvania State University

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
Professional Engineer, WV #018491, PA, NJ, MD, DE, TN, NC, and NM

Erosion and Sediment Control Certification, MD

RELEVANT TRAINING:
Rosgen Level I, “River and Stream Classification/Fluvial Geomorphology Stream Restoration” Short Course, Dave Rosgen, Professional Hydrologist, 1996

Rosgen Level II, “River Morphology and Applications” Short Course, Dave Rosgen, Professional Hydrologist, Pagosa Springs, Colorado, 1997

Rosgen Level III, “River Assessment and Monitoring” Short Course, Dave Rosgen, Professional Hydrologist, Pagosa Springs, Colorado, 1997

Rosgen Level IV, “River Restoration and Natural Channel Design” Short Course, Dave Rosgen, Professional Hydrologist, Pagosa Springs, Colorado, 1997

YEARS OF EXPERIENCE:
41 Years

A licensed Professional Engineer, Mr. Longenecker has 41 years of engineering experience in the environmental consulting field. This experience has been gained through the management and technical participation in a broad range of projects including stormwater management, MS4 permitting and compliance, stream restoration, watershed assessments, solid waste handling, industrial and sanitary wastewater treatment, dam safety, water resources engineering, and wetland-related evaluations. As Senior Principal/Department Manager of Engineering, Mr. Longenecker has oversight and management responsibilities for all engineering work performed by the firm in its multiple offices.

PROFESSIONAL EXPERIENCE

Stormwater Management – Mr. Longenecker has been actively involved in numerous stormwater management projects for the purposes of meeting MS4 permit and TMDL requirements, improving water quality, managing rates of stormwater runoff, sequestering sediment, and treating pollutant loads. He participates in aspects of these projects (Minimum Control Measures (MCM's), Illicit Discharge Detection and Elimination inspection, Pollutant Reduction Plan) and throughout all levels of the projects, from initial site assessment for concept design, coordination with regulatory agencies, and ultimately through final design and construction. He has managed numerous stormwater planning and conceptual management studies, Stormwater NPDES PCSM permit compliance, BMP construction inspection and oversight, CSO stormwater separation and MS4 projects. He has supervised numerous watershed modeling projects using HEC- RAS, SWMM and HEC-HMS models for stormwater retrofit projects and floodplain analysis, AVGWLF and BayFAST for BMP performance for pollutant removal and development of Pollutant Reduction Plans. This project experience has included involvement in public meetings and public education and outreach efforts, volunteer coordination efforts, providing assistance to comply with EPA and state regulatory agency compliance audits, developing watershed improvement plans to meet TMDL pollutant reduction targets, performing BMP concept development and prioritization studies and final design/permitting of stormwater BMPs. Mr. Longenecker directed the analysis and design of stormwater control facilities where the analysis was focused on evaluating innovative and alternative techniques which would enhance groundwater recharge while controlling pollutant loads.

Watershed Assessments and Natural Stream Restoration – Completed numerous watershed assessments, watershed restoration plans, watershed implementation plans and approximately 150 natural stream restoration projects using fluvial geomorphology (FGM) methodologies for stream restoration, stabilization and relocation. Provided training sessions to introduce Department of Transportation (DOT) personnel to FGM principles in both Pennsylvania and New York. Served as Project Manager for mitigation projects throughout the Northeast and MidAtlantic states. Mr. Longenecker's experience in this area includes providing assistance to clients for grant applications from various grant sources inclusive of Growing Greener, NFWF, gaming funds and other sources.

Stormwater Retrofit Projects – Managed stormwater retrofit projects including all phases of the projects from site assessment, design, NPDES permitting, and construction inspection and oversight. Projects consisted of stormwater retrofit facilities including wet ponds, infiltration systems, bioretention ponds, rain gardens, and other Best Management Practices (BMPs). In completing these services, responsibilities included obtaining property owner approvals, reviewing design drawings, coordinating with all applicable permitting agencies, and overseeing construction contractor performance.

PROJECT EXPERIENCE

Pennsylvania Turnpike Commission (PTC) MS4 Permit Renewal and Compliance, Statewide, Pennsylvania – Mr. Longenecker is currently serving as Project Manager for the Pennsylvania Turnpike Commission on a state-wide effort to identify GSI BMP solutions to meet their MS4 permit requirements. This effort is applicable to their facilities contained with the regulated Urbanized Areas, which consist of approximately 33% of all Commission land holding. This effort entails performing watershed-scale modeling to quantify target stormwater and pollutant runoff reductions, quantifying the number and size of GSI systems to meet target stormwater goals, and developing conceptual sighting of these GSI systems.

Kemble Park Green Stormwater Infrastructure Construction Project, Philadelphia, Pennsylvania – Mr. Longenecker served as Project Manager for this Philadelphia Water Department Green Streets GSI project within a heavily utilized urban greenspace park within the northcentral portion of the city. Two rain gardens in series connected by a green swale have been constructed to infiltrate runoff from several city streets. An intensive landscaping plan was prepared for the rain gardens with input from the neighboring active community interest group. Three subsurface modular stormwater infiltration trenches were also designed to provide high volume storage and to minimize footprints. These modular systems were required to allow for the restoration of turf lawns following construction, at the request of Philadelphia Parks and Recreation.

Hunting Park 'Green Streets' Green Stormwater Infrastructure Design, Philadelphia, Pennsylvania – Located in the Hunting Park Neighborhood of Philadelphia, the 87-acre Hunting Park straddles the Tookany-Tacony/Frankford Creek and Delaware Direct Watersheds. As part of Philadelphia's Green City, Clean Waters program, the park was selected by the Philadelphia Water Department (PWD) for retrofitting with LID SWM facilities. As currently designed, the proposed LID SWM facilities within the park will provide 10.8 acre-inches of storage volume to treat runoff from 241,000 square feet of impervious surfaces. Ten individual sites are dispersed around the park. These consist of four simple rain gardens, three rain gardens sited atop infiltration trenches, four subsurface infiltration trenches underneath restored lawn, and one subsurface storage trench with slow release. Mr. Longenecker serves as Project Manager for this diverse Philadelphia Water Department Green Streets GSI project.

Wissahickon Valley Stormwater Mitigation and Sediment Reduction Project, Philadelphia, Pennsylvania – Friends of the Wissahickon (FOW) retained Skelly and Loy to provide site-specific restoration plans, specifications, and construction implementation and oversight services for work on several sites (two are detailed below) in Wissahickon Valley Park, Philadelphia, Pennsylvania. These work efforts involve improvements to a number of streams, stormwater drainage systems, gullies, and trail systems within Wissahickon Valley Park. Mr. Longenecker served as the Project Manager and had responsibilities related to overall project direction and technical review, scheduling, manpower allocations, and client coordination.

Fountain Street Stormwater Management Project, Philadelphia, Pennsylvania – The Fountain Street Steps are a series of steep public stairways providing a neighborhood pedestrian connection from Umbria Street in the Manayunk/Roxborough area of Philadelphia to the historic Manayunk Canal. Intense rainstorms in July and August 2009 overwhelmed the area's stormwater conveyance system and severely damaged the pedestrian corridor undermined the concrete stairways, damaged adjacent planting beds, and carried away large portions of the granite pavers along the footway. Skelly and Loy's design introduce green stormwater infrastructure (GSI) that utilizes vegetation and/or infiltration to mitigate stormwater runoff impacts. The solution combined GSI and conventional stormwater inlets, pipes and endwalls at this project to yield a sustainable improvement that substantially enhances the base minimum of infrastructure repair. The design features two large planter boxes that capture flow from the granite-lined gutters along either side of the steps. Bio-retention soil, herbaceous plants and shrubbery are planned for the recently constructed planter boxes. These beds will provide storage and infiltration opportunity for stormwater runoff, dampening the erosive velocities of the overflow from Umbria Street and its adjacent urban setting. Coordination and communication with highly vested neighborhood community groups was vital to the successful implementation of the project. Several public outreach meetings were held with The Umbria Street Neighbors Association (USNA). Mr. Longenecker served as Project Manager for this innovative Philadelphia Water Department Green Streets GSI project.

MICHAEL E. LOWER, P.E., Principal
Department Manager - Environmental Engineering

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #5; Senior Environmental and Sanitary Engineer

EDUCATION:
B.S., Chemical Engineering, 1996, The Pennsylvania State University

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
Professional Engineer, PA, MD, TX

RELEVANT TRAINING:
Rosgen Level I, “Applied Fluvial Geomorphology” short course, Wildland Hydrology, Pagosa Springs, Colorado, February 2003

Rosgen Level II, “River Morphology and Applications” short course, Wildland Hydrology, Pagosa Springs, Colorado, August 2003

Rosgen Level III, "River Assessment and Monitoring", Lubrecht Forest, August 2004

Rosgen Level IV, “River Restoration and Natural Channel Design”, Elkin, North Carolina, April 2005

YEARS OF EXPERIENCE:
25 Years

As a Professional Engineer, Mr. Lower concentrates on designing potable water and wastewater treatment solutions for industrial, municipal, and residential clients. As a result, his project experience encompasses a broad range of treatment systems both in size and complexity. On such engineering projects, Mr. Lower has determined the physical, biological, and chemical characteristics of the influent including flow rates and constituents concentrations. His responsibilities have included evaluating flow data in regard to hydraulics, effluent requirements, mass loading and solids balance, environmental constraints, equipment availability, O&M and construction costs, and personnel and energy requirements.

He has completed design plans and specifications, which included process flow diagrams and design criteria, piping and instrumentation diagrams, and plan layout. In addition to designing new systems, Mr. Lower has increased efficiencies, corrected malfunctions, and retrofitted existing systems with new technologies.

Mr. Lower has extensive experience in the design and implementation of various transportation-based water resource projects involving stream restoration, stream relocation, stream mitigation, wetland mitigation, municipal stormwater planning, hydrologic and hydraulic studies, floodplain encroachments, and infrastructure improvements. Transportation agencies that have benefited from these services include the Pennsylvania Department of Transportation (PENNDOT), the Pennsylvania Turnpike Commission (PTC), the Maryland Department of Transportation State Highway Administration (MDOT SHA), and the West Virginia Department of Transportation (WVDOT). As a licensed professional engineer and department manager, Mr. Lower oversees all environmental engineering work activities on transportation improvement projects, including: field data reconnaissance activities; completion of the required design calculations; preparation of engineering design reports; and the development of construction drawings, specifications, and cost estimates. His participation is key in all levels of the projects, from initial site assessment into concept design and coordination with approving agencies through final design and construction. Mr. Lower also has extensive experience in construction inspection and has provided construction oversight on most of the projects he has designed. Mr. Lower is adept with the most up-to date engineering and hydrology/hydraulics software programs such as AutoCAD, HEC-RAS, HEC-HMS, and HY-8.

PROJECT EXPERIENCE

Philadelphia Water Department, St. Martin's Bridge, Philadelphia, Pennsylvania - Mr. Lower was the staff engineer responsible for design of this project involving a new 100-foot span pedestrian bridge over Cresheim Creek which also supports a sanitary sewer pipeline, relocation of a 20 inch potable water line routed underneath the stream channel and protected with cross rock vane grade control structures, and hydraulic analysis of the new bridge opening to model the reduced 100- and 500-year flood elevations that resulted from the increased hydraulic opening of the new bridge which replaced a deteriorating stone arch bridge. Concrete thrust blocks and concrete encasement were included in the water main design.

Philadelphia Water Department, Cathedral Road, Philadelphia, Pennsylvania - Mr. Lower designed the relocation and burial of a 30 inch diameter potable water transmission main. The original 30 inch main was exposed within the barrel of a tributary culvert, and the design focused on the relocation of the main outside of the limits of the culvert while providing the

minimum burial depth to meet regulatory requirements. Manual air valves and chambers, concrete anchors and thrust blocks, and concrete encasement of the water transmission main were included within the design.

Philadelphia Water Department, Upper Cresheim Tunnel Outlet, Philadelphia, Pennsylvania - Mr. Lower is the design engineer for this project that focuses on the relocation and burial of an exposed 36 inch steel water main. Conceptual relocation options were prepared and investigated. The final design will relocate the water main immediately upstream of its current location, buried below a concrete tunnel outlet structure.

Commissioning of Well No. 3 South Mountain Restoration Center, Franklin County, Pennsylvania - The project included the design and construction of a drinking water supply well (30 GPM) drilled immediately west of the driveway to Vision Quest along PA Route 233 prior to proposed removal of Carbaugh Run Dam. Mr. Lower assisted with design scoping activities, concept development, and oversight of general engineering. The design was completed in accordance with the Bureau of Engineering and Architecture Project Procedure Manual and the PA DEP construction permit.

Caron Foundation, Wernersville, Pennsylvania - Designed the connection system and pumps to connect additional water sources to the existing potable water system at this site. Design drawings and specifications were prepared for the connection of two additional wells to the existing potable water system. An upgrade of the chlorine injection system and the controls for the potable water system were also included in this design.

Getty Property Corp., Intercourse, Pennsylvania - Prepared three transient noncommunity public water supply permit applications for the installation of activated carbon units to remove methyl tertiary butyl ether (MTBE) from potable water sources at two small restaurants and a convenience store in the village of Intercourse. An investigation of the existing systems was performed, system sketches were prepared, and drawings and specifications concerning the proposed treatment systems were prepared. Meetings with PA DEP were conducted to assure that the provided systems would meet regulatory requirements.

Orbisonia-Rockhill Joint Municipal Authority (ORJMA), Orbisonia, Pennsylvania - Skelly and Loy is the consulting engineer for ORJMA for its potable water system and provides engineering as needed and requested by the authority. To date, Skelly and Loy has evaluated the connection of an existing well to the ORJMA system, piping and pumps at the existing well, capacity of the existing well and pumps, storage tank level sensor and well pump control replacement, distribution system water conveyance and leakage problems, and well pump emergency power issues. A capital improvements plan has been developed and the cost of connected an alternate well source was evaluated. Skelly and Loy also provided budget assistance and rate evaluation.

Pennsylvania State University, Mont Alto Campus, Mont Alto, Pennsylvania - Skelly and Loy evaluated, performed design, and prepared construction bid documents for various upgrades to the existing potable water system at this site. Upgrades included replacement of an existing altitude valve, installation of bypass piping around the existing altitude valve, replacement of chlorine feed piping, and relocation of a flow meter and readout. In addition, Skelly and Loy evaluated the water storage and distribution system and recommended piping changes to increase water turnover in the stand pipe and to assist flow through the distribution system.

REFERENCES

David Weld, P.E., Assistant Manager - Plant Projects, Philadelphia Water Department Design Branch, 215-685-6289, David.Weld@phila.gov

David Brightbill, Orbisonia Rockhill Joint Municipal Authority, 814-447-5414, orjma@embarqmail.com

Rick Howley, Ecological Restoration Manager, Philadelphia Water Department Green Stormwater Infrastructure Implementation Unit, 215-685-6034, Rick.Howley@phila.gov

JUSTIN T. MATINCHECK, P.E.
Senior Engineer - Environmental Engineering

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #5; Senior Environmental and Sanitary Engineer

EDUCATION:
B.S., Environmental Engineering, 2009, The Pennsylvania State University

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
Professional Engineer, PA, MD

YEARS OF EXPERIENCE:
14 Years

Mr. Matincheck's experience in environmental, civil, and construction related projects has been gained through involvement in the planning, process design, preliminary design, and detailed design for numerous engineering projects. Mr. Matincheck has provided technical input on acid rock drainage (ARD), domestic and industrial wastewater, surface water quality, stormwater management, stream restoration projects, rainwater harvesting and reuse, potable water, and Spill Prevention, Control, and Countermeasures (SPCC).

PROFESSIONAL EXPERIENCE

Mr. Matincheck provided Acid Rock Drainage (ARD) remediation engineering services for PennDOT for the I-99 project in Centre County, Pennsylvania. Services included, but were not limited to, preparation of operation and maintenance plans, construction cost estimates, pump and pump station design, capacity (source treatment, distribution, and storage) evaluations, preparation of design drawings and special provisions, and preparation of various permit application packages. Mr. Matincheck is also serving as the Project Engineer for a PennDOT Agency-Wide remediation services contract. Activities under this contract have included providing planning and conceptual design, environmental permitting, detailed design, and construction administration for storage tank and remediation projects for PennDOT. Mr. Matincheck is currently serving as the Engineer of Record for various Pennsylvania Turnpike Commission (PTC) underground storage tank replacement projects at various maintenance facilities and rest-stops. Services have included the preparation of detailed construction plans and specifications for underground fuel storage tanks removal and replacement, process piping, and associated fuel equipment. Mr. Matincheck is currently the Engineer of Record for a five year open-end contract for the Maryland State Highway Administration (MD SHA). Proposed engineering tasks for this contract include the development of plans, technical specifications, and construction estimates for the replacement of oil/water separators at maintenance facilities.

ARD Remediation Projects - Mr. Matincheck has provided ARD remediation engineering services for both ground water and storm water. Remediation services included design, preparation of operation and maintenance plans, estimating costs, pump and pump station design, capacity (source, treatment, distribution, and storage) evaluations, and preparation of design drawings for the collection, treatment, and storage facilities for acid rock drainage from road cuts. Mr. Matincheck has also completed the NPDES and WQM permit applications required for these projects.

Domestic Wastewater Systems Engineering - Mr. Matincheck has provided wastewater system engineering consulting for existing municipal and privately owned permitted wastewater systems. Services performed include infrastructure management, evaluation of collection system infiltration and inflow, capacity expansion (both collection and treatment) evaluations, PA DEP National Pollutant Discharge Elimination System (NPDES) permit renewals, evaluation of impacts due to new regulatory requirements, the design of new facilities or modification to the system infrastructure, and PA DEP Water Quality Management (WQM) permit applications.

Mr. Matincheck has also evaluated options and designed wastewater systems to serve new developments or existing neighborhoods that exist outside of a central wastewater service area. Services include option evaluation, equipment selection and system design and implementation. System design included but is

not limited to estimating costs, pump and pump station design, capacity (source and treatment) evaluations, and preparation of design drawings, specifications, erosion and sedimentation plans, and detailed quantities for contractor bid. Mr. Matincheck has prepared PA DEP applications such as sewage planning modules and WQM, NPDES, and General permits.

Mr. Matincheck has also completed PA DEP Chapter 94 reports and has reviewed and provided assistance with completion of discharge monitoring reports.

Industrial Wastewater and Waste Management - Mr. Matincheck has provided industrial wastewater services to industries including the identification and quantification of contaminants of concern and wastewater volumes. Mr. Matincheck has also been involved in the preparation or modification of required permits.

Surface Water Quality - Mr. Matincheck has provided technical input on the presentation of stormwater and wastewater discharge (NPDES) permit applications. Application preparation included review and compilation of historical discharge sampling results, sampling of existing outfalls, projection of future outfall parameter concentration, and completion of application forms.

Stormwater Management - Mr. Matincheck has provided municipal stormwater management services. Services include design calculations, implementation of best management practices, and field evaluation of water body obstructions and points of concern. Services also include the design of collection systems to separate wash water from washpads and building trenches from stormwater.

Stream Restoration Projects - Mr. Matincheck has provided stream restoration services to numerous clients. Services include the assessment and design of streams using natural stream channel techniques. Mr. Matincheck has also been involved in field evaluation and surveying of the stream channel and problem areas.

Rain Water Harvesting and Reuse - Mr. Matincheck has performed conceptual and detailed design of rainwater harvest systems with treatment and storage and with ultimate reuse as wash or irrigation water at over 15 sites. The work included evaluating the feasibility of rainwater collection and storage, and providing a cost estimate for construction. Design of the rainwater harvesting systems included preparation of detailed construction drawings and specifications including quantities tables for contractor bidding. Applications for zoning, plumbing, and land development permits were also prepared. Services for contractor bid assistance and construction monitoring were also included.

Potable Water Systems Engineering - Mr. Matincheck has provided potable water system engineering consulting for existing municipal and privately owned public water systems. Services performed include operations consulting, capacity expansion (source, treatment, distribution, and storage) evaluations, Pennsylvania Department of Environmental Protection (PA DEP) permit modifications, evaluation of impacts due to new regulatory requirements, and design of new facilities or modifications to system infrastructure.

Mr. Matincheck has also developed new sources and designed new systems for existing areas and new developments not currently served by a public water system. These services include identification of potential sources, evaluation of the source options, testing of the selected source, PA DEP Public Water Supply permit application preparation, and preparation of design drawings for the construction of source, treatment, distribution, and storage facilities.

Mr. Matincheck has also provided construction oversight for potable water systems. Services include construction inspections, water sampling oversight and review, and construction certification.

Spill Prevention Control and Countermeasures (SPCC) plans - Mr. Matincheck has developed numerous spill response plans for various industrial, commercial, and institutional (schools and universities) clients. The plans included spill prevention and response planning and provided detailed instructions on location and types of oil collection devices required to contain spills and protect wildlife sensitive areas as well as instruction on the required downstream notifications.

DONALD W. POLLY, E.I.T., Mining Planner

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #11; Environmental / Sanitary Engineer

EDUCATION:
Certificate, Accounting, King's College and Harrisburg Area Community College

Certificate, Civil Engineering Program, The Pennsylvania State University

PROFESSIONAL REGISTRATIONS:
Engineer-in-Training, PA

RELEVANT TRAINING:
Short Courses: Technical Elements of Surface Coal Mining and Land Reclamation; Elements of Underground Coal Mining, The Pennsylvania State University

Blasting Seminar, American Society of Civil Engineers

YEARS OF EXPERIENCE:
55 Years

Mr. Polly has a combined total of 55 years of mining and civil engineering project experience. His mining responsibilities include mine planning; reclamation plans; equipment selection and comparisons; preparation of illustrative and technical mining manuals; property evaluations; regulatory compliance cost evaluations; detailed mine design; unit operations scheduling; owning and operating costs determination; cash flow analysis; assessment of geology and reserves quantity and quality; and preparation of coal mining and quarry permits. His civil engineering activities have included the design and preparation of construction and right-of-way plans for several interstate, state, and local highway projects.

PROFESSIONAL EXPERIENCE

Mr. Polly has several years of experience in the transportation industry. His experience was related to projects for several State and private clients. Clients include the Pennsylvania Department of Transportation, Pennsylvania Turnpike Commission, Maryland Department of Transportation, Maryland State Highway Administration, contractors, developers, and other private companies . Mr. Polly was engaged in the preparation of Construction and Right-of-Way Plans for numerous highway construction projects for State, Interstate, and Rest Area Facilities. His work efforts consisted of field surveys, deed research, property plans, preparation of alternative road alignments, preparation of cross sections and profiles, drainage design including ditches, storm sewers, culverts, etc., horizontal and vertical geometry design, materials quantity computations, cost estimates, and the preparation of Final Plans packages.

During his 50 years with Skelly and Loy, Mr. Polly has been involved in a variety of mining related projects for both private and government clients. The areas of concentration have been detailed short and long term mine planning, sequenced reclamation planning, preparation of mining permits for both coal and noncoal operations, in-place and minable reserve assessments, due diligence evaluation planning, and mining and bonding costs for private clients. He has also been involved in a variety of research and development projects for government clients. Mr. Polly has served as the Project Manager on numerous projects during his tenure at Skelly and Loy. In this role, he was responsible for all communications with clients and the internal project team, work assignments to other project team members, providing individual task budgets and deadlines, status reports to client, providing QA/QC for all deliverable products, adherence to overall budget and report due date, and meeting deadlines for deliverables to the client.

Mine Planning - During his tenure at Skelly and Loy, Mr. Polly has been involved in numerous coal and quarry mining projects throughout the country. He has prepared detailed mining plans for coal operations in all of the mining regions throughout the United States. Planning activities have included unit operation scheduling of equipment and manpower, equipment owning and operating costs, reclamation planning, and mine closure activities. He has participated in several feasibility analyses, resource development evaluations, reserve estimates, coal transportation plans, and permits. Mr. Polly has also prepared numerous Yearly and Life-of-Mine Plan Reserve Estimates and Permits for quarry companies.

Reclamation Planning - Mr. Polly's experience in reclamation projects has been extensive. He has involvement with the development of numerous reclamation plans, construction specifications, erosion and sedimentation

control plans, and cost estimates for several Abandoned Mine Land (AML) reclamation projects in Pennsylvania, West Virginia, and Wyoming. He has also been engaged in monitoring and inspection of the same. Mr. Polly has prepared and reviewed reclamation plans and cost estimates including ongoing and final reclamation requirements for several coal mine and quarry operations throughout the country. Activities associated with these operations include ongoing and final pit grading; topsoil and subsoil handling; disposal of unsuitable materials; removal of existing haulroads; highwall reduction; facilities removal and disposal; erosion and sedimentation control plans; and revegetation.

Due Diligence and Reserve/Resource Evaluation - Mr. Polly has experience in these types of projects. His work with Due Diligence projects has involved the collection of all available mine site data including, but not limited to, property ownership data, existing permit information, all available drilling information, site specific geological data, site and surrounding hydrological information, current topographic mapping, all available environmental information, state and local mining regulations, annual production rates, and any other information that is pertinent for the project. Utilizing provided data and any other collected research information, the required due diligence work for numerous projects was completed. He has also been involved or managed many Reserve/Resource Evaluation projects for existing mining operations or properties that are potential new mining operation sites. Collected data included current site topographic mapping, property information, any available drilling that had been completed, mining criteria from client, any environmental or other limitations to mining, and any other relevant site information. With this information, we were able to utilize our vast array on mining software to determine in-place resources by category, minable reserves to various depths, and ultimate reclamation requirements.

Mr. Polly has also prepared and evaluated numerous regulatory related “reclamation cost claims” that have resulted from changing regulations. Clients included both mining and utility companies.

During his five years as a technician/designer for Rummel, Klepper and Kahl, Mr. Polly was engaged in the preparation of construction and right-of-way plans for numerous highway construction projects. His work consisted of drainage design, horizontal and vertical geometry, quantity computation, cost estimates, and assistance in the drafting of final plans and cross sections. Mr. Polly also participated in the design and preparation of plans for several roadside rest facilities for the interstate system in Pennsylvania. This assignment included the determination of sites for all buildings and parking areas.

AMY L. BRUGGEMAN, Staff Scientist, Regulatory Compliance

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #22; Environmental Scientist

EDUCATION:
B.S., Wildlife and Fisheries Science, Pennsylvania State University, 2005

Associate's Degree, Wildlife Technology, Pennsylvania State University - Dubois, 2003

PROFESSIONAL AFFILIATIONS:
Pennsylvania Association of Environmental Professionals

Society of Women Environmental Professionals – Capital Chapter

YEARS OF EXPERIENCE:
9 Years

Mrs. Bruggeman is a member of Skelly and Loy, Inc.'s Environmental Services Natural Resources Group. Her academic background and former experiences provide her with the skills necessary to perform well for Skelly and Loy. Mrs. Bruggeman has been assisting with environmental projects since 2015. Her responsibilities include assisting in stream assessments, wetland delineations, waterways permitting, and threatened and endangered species surveys.

PROFESSIONAL EXPERIENCE

Waterways Permitting – Mrs. Bruggeman has been responsible for the preparation, coordination, and submission of Pennsylvania Department of Environmental Protection (PA DEP) General Permits, PA DEP Submerged Lands License Agreements (SLLA), PA DEP and U.S. Army Corps of Engineers (USACE) Joint Permits, Individual Permits, Nationwide Permits, and Emergency Permits on behalf of state governments and private companies/individuals for transportation, pipeline, and development projects.

Wetland Identification/Delineation – Mrs. Bruggeman has experience assisting in wetland identification/delineation investigations for the West Virginia Department of Transportation, Pennsylvania Department of Transportation (PennDOT), and private projects. She has assisted with monitoring wetland mitigation sites for PennDOT and Pennsylvania Turnpike projects. She has experience in wetland functional evaluation using the United States Army Corps of Engineers Wetland Evaluation Technique II and the Pennsylvania Wetland Condition Level 2 Rapid Assessment Protocol. She has used Global Positioning Systems (GPS) to collect data points for the purpose of mapping wetlands and collected field data to prepare wetland datasheets. She has also drafted and finalized Wetland Identification and Delineation Reports for various projects and wetland mitigation sites.

Stream Assessment – Mrs. Bruggeman has experience evaluating streams using the United States Environmental Protection Agency Rapid Bioassessment Protocols for streams and rivers, the Pennsylvania Riverine Condition Level 2 Rapid Assessment Protocol, and the West Virginia Hydrogeomorphic Headwater Stream Assessment. She has also assisted with benthic macroinvertebrate sampling for projects in West Virginia and Pennsylvania.

Threatened and Endangered Species Surveys – Mrs. Bruggeman has assisted in numerous threatened and endangered species surveys. She has experience with Phase I, II, and III bog turtle assessments in Pennsylvania. She has also assisted with bog turtle compliance monitoring during a pipeline maintenance project. She has assisted in surveys for the Small Footed Myotis bat species.

REPRESENTATIVE PROJECTS

Valley View Business Park Phase 2, Lackawanna County, Pennsylvania – Mrs. Bruggeman assisted with bat hibernacula surveys, using harp traps, in 2018 as part of a long-term monitoring effort for the Valley View Business Park development.

South Valley Parkway Emergence Survey, Luzerne County, Pennsylvania – Mrs. Bruggeman assisted as a bat surveyor for the Small Footed Myotis survey in 2017 that was required as part of a 3-year, post construction monitoring project for PennDOT's South Valley Parkway construction project.

West Virginia Department of Transportation Wetland and Watercourse Investigations, Tucker County, West Virginia – Mrs. Bruggeman assisted in wetland identifications/delineations, high gradient and low gradient stream assessment surveys, and macroinvertebrate sampling for the Corridor H project in West Virginia.

Norfolk Southern Bridge Rehabilitation, Westmoreland County, Pennsylvania – Mrs. Bruggeman was responsible for the assembly and submission of the GP-11 needed for the rehabilitation of NS Bridge PT295.04.

National Fuel Gas Supply Corporation Pipeline Replacement, McKean County, Pennsylvania – Mrs. Bruggeman was responsible for the assembly of the GP-11 needed for a section of pipeline replacement in McKean County.

Weary Mitigation Site, Cumberland County, Pennsylvania – Mrs. Bruggeman was responsible for using GPS to survey replacement tree saplings and shrubs at the Weary Mitigation Site.

Snitz Creek Mitigation Site, Lebanon County, Pennsylvania – Mrs. Bruggeman assisted in the development of the Monitoring and Remediation Status Reports for the Snitz Creek Mitigation Site for the past three years.

Nixon Park Mitigation Site, York County, Pennsylvania – Mrs. Bruggeman assisted in the post construction wetland delineation of the Nixon Park wetland mitigation site. She also drafted and finalized monitoring reports for the spring and fall of 2017.

I-79 Exit 155 Development Project, Monongalia County, West Virginia – Mrs. Bruggeman assisted with stream assessment surveys for the I-79 Exit 155 Development Project in Morgantown, WV. She also assisted with preparing and submitting permits to USACE and WV DEP for the project.

St. Mary's Villa Stream Restoration Project, Montgomery County, Pennsylvania – Mrs. Bruggeman assisted with the preparation of various permits for the St. Mary's Villa Stream Restoration Project. She also assisted with a habitat evaluation procedure (HEP) to analyze the existing lake environment and collected biological data from the lake that was used in HEP analysis for this project.

Gibraltar Windstream Aerial Crossing Project, Berks County, Pennsylvania – Mrs. Bruggeman was responsible for the preparation and submission of a Submerged Lands License Agreement that was required for the Windstream cable river crossing.

Rapid Bridge Replacement Project, Statewide, Pennsylvania – Mrs. Bruggeman assisted in preparing permit resubmission packages in response to DEP, USACE, and CCD technical deficiency letters for various bridge replacement projects throughout the state of Pennsylvania.

PennDOT District 8-0 Culvert Maintenance Projects, Southcentral Counties, Pennsylvania – Mrs. Bruggeman has assisted in preparing emergency permits, General Permits, and Joint Permits for various culvert replacement projects in Adams, Cumberland, Dauphin, Franklin, Lancaster, Lebanon, Perry, and York Counties.

PennDOT District 8-0 S.R. 0181 North George Street and Exit 22 Project, York County, Pennsylvania – Mrs. Bruggeman assisted with preparing an Environmental Assessment package and coordination of developing impact maps for the permit application submission of this project.

RELEVANT TRAINING

While at the Pennsylvania State University, Mrs. Bruggeman gained experience in tree and wetland plant identification, animal identification, data analysis, and more through classes such as Dendrology, Wetland and Fisheries Management, Animal Identification, Aerial Photo Interpretation/GIS, Forestry Biometrics, and Landscape/Soils/Water Management.

MAUREEN R. EGNER, Senior Project Manager - NEPA

DESCRIPTION OF SERVICES:
Bid Item #2; Project Manager

EDUCATION:
B.A., Policy and Management Studies, 1988, Dickinson College

Environmental Science Certificate, Dickinson College

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
U.S. EPA Certified Asbestos Inspector, PA

U.S. EPA Certified Asbestos Management Planner, PA

OSHA HAZWOPER/40HR/ 8HR Refresher/Supervisor

ISO 14000 for Auditors Training

YEARS OF EXPERIENCE:
34 Years

As a Senior Project Manager, Ms. Egner has been actively involved in environmental projects for both public agencies and private clients. Her past experience includes environmental site assessments (both Phase I and Phase II), environmental audits, environmental impact statements, waste site evaluations, industrial hygiene services, asbestos management services, and regulatory analysis. As a project manager, she has managed many investigations including proposal preparation, contract execution, and coordination and ensures projects are completed on time, within budget, and with total client satisfaction.

Ms. Egner has managed transportation projects involving bridge rehabilitations as well as new roadway construction projects. She has been involved with the preparation of several environmental documents for compliance with NEPA while specializing in waste site evaluations (Phase I, II, and III Environmental Site Assessments) for PennDOT, the PTC, and MDOT. She has supervised projects from initiation to completion and has prepared site-specific Health and Safety Plans (HASPs), Waste Investigation Plans (WIPs), and Field Sampling Plans (FSPs) prior to field activities as well as all types of ESA reports. Ms. Egner has also managed many asbestos inspections and prepared abatement specifications for PennDOT. Often, inspections for PennDOT were completed prior to demolition of buildings or prior to the demolition or renovation of bridges impacted by a highway project. She has also completed asbestos inspections and reinspections for schools in accordance with the Asbestos Hazard Emergency Response Act (AHERA). Ms. Egner has also developed Management Plans for clients and she has provided “asbestos awareness” training for workers and employees in areas with known asbestos. She has also collected environmental and personnel air monitoring during asbestos remediation activities.

PROFESSIONAL EXPERIENCE

Asbestos Management - Ms. Egner has managed numerous asbestos inspections for several public and private clients. Often, inspections for PennDOT were completed prior to demolition of buildings impacted by a highway project. Asbestos inspections and reinspections for schools have been completed in accordance with the Asbestos Hazard Emergency Response Act (AHERA). Ms. Egner has also developed Management Plans for clients where asbestos materials remain in place. She has provided “asbestos awareness” training for workers and employees in or near areas of known asbestos. She has also completed environmental and personnel air monitoring during asbestos remediation activities and prepared specifications for the removal of asbestos as an Asbestos Project Designer.

Environmental Compliance Audits - Ms. Egner has completed several regulatory compliance audits and developed compliance manuals for both public and private clients. Her role in these audits primarily focused on waste related concerns; however, she has assisted in the evaluation of other environmental issues. Ms. Egner completed a third party audit for an industrial client and a regulatory compliance audit of a phosphate mining operation in North Carolina. She developed a regulatory compliance manual which included applicable federal, state, and local regulations and permit applications, a compliance schedule, and a summary of pending legislation that may impact the facility's operation. On another project, Ms. Egner was involved with the development of a Corporate Environmental Compliance Manual for a national aggregate company focusing on the development of waste management,

storage tanks, and property acquisition and disposition guidelines.

Ms. Egner developed a compliance document for a client detailing the applicability of the wide range of environmental regulations to their operations and activities. Areas covered in this document included hazardous waste, air quality, drinking water, wastewater, toxic materials, and storage tanks requirements. She has also evaluated waste streams for compliance with RCRA, SARA Title III, and OSHA Hazard Communication and Right-to-Know regulations. Ms. Egner also managed a project in which we identified regulated waste streams, assessed current hazardous waste management practices, and reviewed hazardous waste disposal records for compliance. Based on the results of these audits, recommendations concerning proper labeling, storing, and reporting as well as general housekeeping improvement procedures were provided.

Environmental Site Assessments (ESAs) - For both commercial and public clients, Ms. Egner has managed and participated in all aspects of Phase I and II environmental site assessments (ESAs) and waste site evaluations. As a Project Manager for numerous Phase I ESAs, she has supervised projects from initiation to completion including performance of file searches, site inspections, personal interviews, and report preparation. For Phase II ESAs, she has prepared site-specific Health and Safety Plans (HASP) and Field Sampling Plans (FSP) prior to field activities. Ms. Egner's experience includes proposal preparation, contract execution, and coordination. Ms. Egner has conducted several multi-site Waste Site Evaluations for the PennDOT and Initial Site Assessments (ISAs) for the Maryland Department of Transportation. She routinely manages ESAs for private clients that often require expedited schedules to meet the clients' needs.

Ms. Egner has also managed several multi-site ESA projects for coal mining and aggregate industry clients. Many of these projects are due diligence assessments which include an evaluation of existing permits and compliance history for the sites. Often these projects are completed with expedited schedules to meet our clients' needs.

PROFESSIONAL AFFILIATIONS

Pennsylvania Association of Environmental Professionals
Society for Women Environmental Professionals

LUKE M. GAIDOS, Field Scientist

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #11; Environmental / Sanitary Engineers

EDUCATION:
B.S., Biology, 2018, The Pennsylvania State University

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
PADI Open Water Diver Certification - Certified Scuba Diver to the Depth of 40 ft.

MSHA Part 46 Training

YEARS OF EXPERIENCE:
4 Years

Mr. Gaidos' project experience has focused primarily in the area of jurisdictional wetland identification and delineation, but also includes the study and evaluation of aquatic ecosystems, water quality monitoring, and threatened/endangered/rare species investigations.

PROFESSIONAL EXPERIENCE

Wetland Identification/Delineation - Mr. Gaidos has participated in many wetland identification / delineation projects for transportation and energy projects in Pennsylvania and transportation projects in West Virginia. He has experience in wetland identification and delineation using the USACE Wetland Evaluation Technique II, Hydrogeomorphic Classification, and New England USACE Descriptive Method. Mr. Gaidos also has experience with Trimble handheld GPS survey/post-processing correction and export and mapping composition.

Bog Turtle Survey Experience - Mr. Gaidos has been a part of numerous potential habitat evaluations and field surveys for the bog turtle *(Glyptemys muhlenbergii)*, a Federally listed threatened species and State listed endangered species. Investigations conducted include assisting with potential habitat investigations (Phase 1 Surveys), field surveys for the species (Phase 2 Surveys), trapping surveys (Phase 3 Surveys), and radio telemetry research for the species in Pennsylvania. This includes characterization of the existing vegetative community, hydrologic regime, evaluation of the soils composition, metapopulation analysis, and hydrologic connectivity assessments.

PROJECT EXPERIENCE

PennDOT, Wetland and Watercourse Investigations, Pennsylvania – Mr. Gaidos assisted with numerous wetland and watercourse investigations throughout Pennsylvania for roadway improvement and bridge/culvert replacement projects. Activities associated with these projects include wetland and watercourse delineation, GPS survey/post-processing correction and export, threatened and endangered species investigations and habitat assessments, and report preparation.

Overhead Powerlines, Wetland and Watercourse Investigations, Pennsylvania – Mr. Gaidos assisted with numerous wetland and watercourse investigations throughout Pennsylvania for right-of-way and substation improvements/expansions. Activities associated with these projects include wetland and watercourse delineation, GPS survey/post-processing correction and export, threatened and endangered species investigations and habitat assessments, environmental compliance monitoring, and report preparation.

WVDOH, Wetland Investigations, West Virginia – Assisted with wetland investigations for U.S. 0220-93/US 0050 roadway construction project. Activities associated with this project include watercourse delineation and GPS survey/post-processing correction and export.

Assistant, Phase 2 Bog Turtle Surveyor, Pennsylvania – Team participant on Phase 2 Bog Turtle Surveys for various transportation and pipeline projects in Berks, Bucks, Chester, Monroe, Northampton, and York Counties.

Assistant, Phase 3 Bog Turtle Survey, Interstate 78 Bridge, Berks County, Pennsylvania – Team participant on Phase 3 Bog Turtle Surveys in wetlands for a bridge improvement project on Interstate 78 in Berks County, Pennsylvania. Activities included daily trap checking, positively identifying herptofauna, and report composition.

Assistant, Bog Turtle Compliance Monitoring, Natural Gas Pipeline Project, Lancaster County, Pennsylvania – Mr. Gaidos assisted in a monthly monitoring of horizontal direction drilling (HDD) activities at a known bog turtle location for a pipeline project. Activities included monthly water quality monitoring and data collection at shallow wells on-site and tracking turtle movements with radio telemetry and GPS surveying of their locations.

Assistant, Bog Turtle Compliance Monitoring, Natural Gas Pipeline Project, Berks County, Pennsylvania – Mr. Gaidos assisted the Qualified Bog Turtle Surveyor (QBTS) in active monitoring for a project in proximity to an occupied bog turtle wetland. Activities included surveying pipeline workspace of amphibians and reptiles, providing bog turtle safety training to workers on site, and daily inspection of exclusion barriers.

Assistant, Environmental Compliance Monitoring, FirstEnergy, Berks, Dauphin, and Lebanon Counties, Pennsylvania – Mr. Gaidos conducted environmental compliance monitoring for overhead powerline transmission rebuild projects. Activities included overseeing construction operations daily to ensure for environmental compliance. Inspections included the use of an ESRI-based monitoring system, weekly compliance reports, and coordination with construction contractors.

Assistant, Bat Emergence Surveys, Luzerne County, Pennsylvania – Assisted on bat emergence count surveys to monitor activity of bats at a mitigation site in order to determine bat occupancy in the potential habitat. Activities included the use of infrared camera equipment and Anabat audio recording devices.

Assistant, Potential Bat Hibernacula Survey, Luzerne County, Pennsylvania – Assisted in identifying potential bat hibernacula locations for the Partnership 81 Project in Luzerne County, PA. Potential hibernacula were evaluated for criteria as determined by the Pennsylvania Game Commission to be suitable as overwinter bat habitat.

Assistant, Phase 2/3 Spadefoot Toad Surveyor, Adams, Northumberland, and Northampton Counties, Pennsylvania – Team participant on a presence/absence survey for eastern spadefoot toad *(Scaphiopus holbrookii)*, a Pennsylvania listed endangered species, for a bridge replacement project in Adams County, Pennsylvania, and night time presence/absence surveys with drift fencing with pitfall trap installation and checking on development projects in Northumberland and Northampton Counties.

Assistant, Plant Surveyor, Greene County, Pennsylvania – Team participant on a field investigation for plant species of special concern along a proposed 10.5 mile long water line on a pipeline project. Activities included plant and habitat identification.

Assistant, Plant Surveyor, Tucker County, West Virginia – Team participant on a field investigation for federally endangered plant species, running buffalo clover *(Trifolium stoloniferum)* and small whorled pagonia *(Isotria medeoloides)*, along Corridor H for the West Virginia Department of Transportation. Activities included plant and habitat identification.

Assistant, Freshwater Mussel Surveyor, Venango County, Pennsylvania – Team participant on Phase 1 freshwater mussel surveys in Venango County, Pennsylvania. Activities included surveys to determine the presence or absence of state and federally listed species in northwestern Pennsylvania.

Assistant, Wetland Mitigation Monitoring, Corridor H, Tucker County, West Virginia – Team participant in monitoring constructed wetlands for viability for the West Virginia Department of Transportation along Corridor H of Route 90. Activities included wetland delineation, GPS survey, and replacement wetland monitoring through assessing hydrology and vegetation.

Assistant, Wetland Monitoring, Pike County, Pennsylvania – Team participant on wetland monitoring in Pike County, Pennsylvania. Activities included assessment through individual plant species counts and identifying percent cover of plant species.

Stream Restoration, Quaker Valley, Berks County, Pennsylvania – Team participant in a stream restoration project for bank credits. Activities included the collection of soil substrate data using a soil probing instrument for the purpose of stream reconstruction.

Stream Restoration, Harrisburg, Dauphin County, Pennsylvania – Team participant in a stream restoration project along the Paxtang Parkway. Activities included planting trees and shrubs along the riparian buffer zone of the stream and adjacent uplands.

Assistant, Phase 1 Archaeological Surveys, Pennsylvania – Team participant in multiple Phase 1 archaeological surveys. Activities included digging shovel test pits and sifting the test pit material through a screen.

ELIZABETH B. GRIETZER, Field Scientist

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #22; Environmental Scientist

EDUCATION:
M.S., Biology, 2018, Montclair State University

B.S., Biology, 2016, Delaware Valley University

YEARS OF EXPERIENCE:
4 Years

As a Field Scientist in our Harrisburg Environmental Services Group, Elizabeth Grietzer assists with environmental research and review for PennDOT Bridge and Roadway projects that obtain NEPA approval. Her primary experience includes Categorical Exclusion Evaluations and Bridge and Roadway Programmatic Agreement (BRPA) reviews.

PROFESSIONAL EXPERIENCE

NEPA – Ms. Grietzer's main responsibility includes assisting with NEPA projects, particularly those covered under PennDOT's and the Federal Highway Administration's Bridge and Roadway Programmatic Agreement (BRPA) and Categorical Exclusion Evaluations. Her experience has also included additional studies associated with the research and approval for Aids to Navigation (ATON), Section 4(f) documentation, agricultural evaluations, Pennsylvania Natural Diversity Inventory (PNDI) reports, and completion of the physical NEPA dcouments

Ms. Grietzer completes the environmental background research for numerous PennDOT Statements of Interest opportunities. Her efforts require a working understanding of natural, cultural and social resource constraints and protections that can affect a project.

Threatened and Endangered Species – Ms. Grietzer gained threatened and endangered species experience with her thesis work centered on Allegheny Woodrats. She has also completed research on other non-threatened species, including the wood turtle and red backed salamander. She is currently assisting with Phase 2 Bog Turtle surveys, bat emergence counts, and bat mist-netting for a variety of projects.

PROJECT EXPERIENCE

PennDOT District 5-0, I-78 Lenhartsville, Berks County, Pennsylvania – The structure carrying SR 0078 over SR 0143 and Maiden Creek in Berks County was replaced by the Pennsylvania Department of Transportation. Additionally, the roadway approaches to the structure were widened to provide a consistent typical section along the SR 0078 corridor. Ms. Grietzer drafted the wetland impacts, the accompanying NEPA documentation and assisted with wetland identification for the project.

PennDOT District 5-0, SR 12 and SR 73 Intersection, Ruscombmanor Township, Berks County, Pennsylvania – Skelly and Loy was contracted to develop an alternatives analysis to evaluate additional turn lanes on all 4 approaches or a roundabout; traffic signal plan; traffic analysis and data collection; required Right-of-Way and Right-of-Way plan determination; drainage improvements throughout intersection; and maintenance and protection of traffic during construction. Ms. Grietzer prepared the required NEPA documents.

PennDOT District 4-0, S. R. 115, Section 303, Luzerne County, Pennsylvania – Skelly and Loy is providing environmental studies for this project. Ms. Grietzer assisted with wetland identification and is preparing the NEPA documentation for the project.

PennDOT District 5-0, U.S. 22, Road Widening Project, City of Allentown and Whitehall, South Whitehall, and Hanover Townships, Lehigh County, Pennsylvania – Skelly and Loy, Inc. was contracted to provide a full range of environmental services for the project. Specific tasks include natural resource assessments, cultural and historic resource evaluations, NEPA documentation and socioeconomic impact assessments. Ms. Grietzer was responsible for NEPA documentation and assisting with Section 4f evaluation, Threatened and Endangered Species coordination, assisting with Phase I ESAs, and resource identification and impact analysis.

PennDOT District 8-0 Supergroup B Bridge Replacements – Skelly and Loy was contracted to provide full range of environmental services for the project. Specific tasks include cultural and historic resource services, hazardous materials assessments, natural resource and threatened and endangered species studies, NEPA documentation, and permitting services. For this project, Ms. Grietzer was responsible for preparing the Bridge and Roadway Programmatic Agreement (BRPA) - NEPA documentation, Threatened and Endangered Species coordination, Aids to Navigation (ATON) plans, and Environmental Commitments and Mitigation Tracking Signature Sheets.

Eastern Small-footed Myotis (*Myotis leibii*) Post-Construction Emergence Survey, S.R. 0029 in Luzerne County, Pennsylvania – Ms. Grietzer assisted with the post-construction emergence surveys at 4 artificial rock habitats and SR0029 rock cut for M. leibii. Activities included collection of data, video recordings, and acoustic recordings which subsequently analyzed and summarized in reports submitted to the Pennsylvania Game Commission.

RICHARD S. JOHNSTON
Project Scientist - Regulatory Compliance

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #17; Survey Crew: Includes PA Certified Surveyor

EDUCATION:
B.S., Environmental Management, 2006, University of Maryland

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
Trimble Certified GPS Operations Instructor

Certified Trimble UX5 Aerial Imaging Rover Pilot

FAA Part 107 UAV Operator's Certificate

YEARS OF EXPERIENCE:
31 Years

Mr. Johnston currently serves as Project Scientist and wetland mitigation designer for Skelly and Loy. His duties include supervising and managing the data collection and map production from Skelly and Loy's unmanned aerial vehicle (UAV) aerial mapping systems. As well as, conducting GPS survey and producing mapping. This includes topographic mapping, engineering design, base map production, GIS data collection. In addition to his duties as GPS Supervisor and Director of Aerial Services, Mr. Johnston also serves as the wetland mitigation design coordinator. He has experience with wetland mitigation design including site selection, site evaluation, conceptual design, and construction monitoring.

PROFESSIONAL EXPERIENCE

I-83 Exit 18 Wetland Replacement Project, York County, Pennsylvania - Mr. Johnston was the wetland designer for the project. The project required 2 acres of replacement habitat. Mr. Johnston located and designed the wetland replacement area, the Nixon Park Wetland Replacement Area. In addition to wetland design, Mr. Johnston was responsible for construction oversight of the wetland area.

District 8-0 Wetland Mitigation Sites Aerial Mapping - Utilizing the Trimble UX-5 Aerial Imaging Rover, Mr. Johnston prepared aerial mapping of several District 8-0 wetland replacement sites including;

SGL-169 Site A
SGL-169 Site B
Snitz Creek Park, and
The as-built survey for Nixon Park

CSVT Aerial Mapping Ground Control Survey, PennDOT District 3-0 - Mr. Johnston oversaw the GPS control network that was established for the aerial mapping of the 3,000-acre CSVT project area. The project involved establishment of three primary control points and 200 aerial control points within the project area.

Survey Coordinator, U.S. Route 220 Improvement Project, Blair and Centre Counties, Pennsylvania - Mr. Johnston coordinated the survey work required for the completion of environmental studies. This included stakeout of 30 miles of study corridor, the mapping of more than 1200 wetland systems, and the mapping of different forest habitats.

Construction Inspector, Whitetail Ski Resort, Franklin County, Pennsylvania - Mr. Johnston served as the construction inspector for eight acres of replacement wetlands.

Replacement Wetland Designer, U.S. Route 15, Section D51, Tioga County, Pennsylvania - Mr. Johnston was responsible for the design of 15 acres of replacement wetlands. His duties included performing preliminary site assessment on potential replacement sites, performing detailed soils and hydrology testing on selected sites, and the compilation of the conceptual plan.

Survey Coordinator, Intercon Systems, Dauphin County, Pennsylvania - Mr. Johnston served as survey coordinator for the preparation of topsoil and property mapping of an 18-acre parcel of land. Duties included the conduction and oversight of topographic and property mapping to be used for the compilation of land development plans.

Survey Coordinator and Data Manager, U.S. Route 15, Tioga County, Pennsylvania and Steuben County, New York - Mr. Johnston's duties included the conduction and oversight of all survey work related to the environmental study. This included stakeout of 27 miles of study corridor centerline and the survey of more than 600 individual wetland systems. In addition, Mr. Johnston was responsible for the oversight of the flow of data: processing of survey data, inclusion of the data into project CADD mapping, and transfer of data from CADD to GIS for use in calculating impacts.

Erosion and Sediment Plan Preparer, CSVT Center Site, Snyder County Pennsylvania - Mr. Johnston prepared the Erosion and Sedimentation Control plan for a 325 acre environmental restoration area constructed by the Pennsylvania Department of Transportation

Construction Inspector, Whitetail Ski Resort, Franklin County, Pennsylvania - Mr. Johnston served as the construction and erosion and sedimentation control inspector for eight acres of replacement wetlands.

Erosion and Sediment Plan Preparer, Montidale Subdivision, York County, Pennsylvania - Mr. Johnston prepared the Erosion and Sedimentation Control plan for the Montidale Subdivision and the associated wetland mitigation area.

Erosion and Sediment Plan Preparer, Hillendale Egg Facility Stormwater Management Wetland, Adams County, Pennsylvania - Mr. Johnston prepared the Erosion and Sedimentation Control plan for the Hillendale stormwater wetland construction project. Additionally, he served as erosion and sedimentation control inspector for the construction of the project

RYAN R. SHEIDY, Environmental Specialist

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #14; Environmental Scientist

EDUCATION:
B.S., Environmental Science, 1997, Susquehanna University

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
OSHA Hazwoper 40-HR/8-HR Refresher Training

Veeder Root ATG Technician Certification

OSHA Confined Space Entrant/Attendant/Supervisor Training

PA DEP Storage Tank UMR Certification

PA DEP UST A+B Operator Training

MSHA Part 46 Mine Safety Training

Pennsylvania Land Recycling Program Training

American Red Cross / CPR First Aid Training

YEARS OF EXPERIENCE:
24 Years

Since joining Skelly and Loy, Mr. Sheidy has been actively involved in environmental projects for both public agencies and private clients. His past experiences include, but are not limited to, underground and aboveground storage tank activities, environmental site assessments, site remediation, direct-push drilling, and aquifer testing.

Mr. Sheidy has completed hazardous waste site evaluations and environmental site assessments (Phase I, II, and III) for public and private clients. He has participated in all aspects of site assessments including background research efforts, site visits, and report preparation. Mr. Sheidy has conducted detailed evaluations of present and past land uses of properties in order to evaluate the potential for hazardous or environmentally sensitive site conditions in accordance with ASTM guidelines as well as U.S. EPA's All Appropriate Inquiry. Additionally, he has performed soil, groundwater, and waste sampling/characterization; waste management planning; site remediation; storage tank management, removal, and remediation; hazardous waste management; health and safety monitoring, and overseen geophysical investigations. He has assisted in preparation of health and safety plans (HASPs) and Field Sampling Plans (FSPs) for Phase II and III ESAs prior to field activities.

PROFESSIONAL EXPERIENCE

Pennsylvania Turnpike Commission (PTC) - Mr. Sheidy has completed monthly compliance visits at fuel dispensing facilities with underground storage tank (UST) systems to ensure the tank systems are functioning within basic Pennsylvania Department of Environmental Protection (PADEP) compliance. Mr. Sheidy reviews the tank monitoring systems for alarms and warnings, fuel islands and dispensers for evidence of existing leaks and spills, and ensures that site personnel are keeping the appropriate leak detection documentation onsite, per PADEP requirements. He has also performed underground storage tank operator training for PTC personnel at various locations and facilities. In addition, Mr. Sheidy served as the lead on-site supervisor providing technical support and oversight to the PTC for environmental issues that arise during construction activities. He coordinated field efforts with site contractors to ensure that subsurface materials are being managed in a timely and responsible manner, while minimizing long-term environmental impacts and delays to construction schedules. Mr. Sheidy also supervised the permanent closure and removal of several UST systems across the turnpike in accordance with meeting DEP Closure Requirements for Underground Storage Tanks.

Pennsylvania Department of Transportation (PennDOT) Environmental Remediation Services, Statewide, Pennsylvania - Mr. Sheidy served as the lead Skelly and Loy onsite contact for mass excavation and segregation activities of residual waste across a five-acre area investigated by a geophysical survey. Residual waste materials encountered (drum carcasses, presumed petroleum-impacted soil, tar and tar blocks, etc.) were segregated from the fill, temporarily staged on-site, and properly disposed off-site at permitted facilities. Mr. Sheidy was in charge of the segregation and staging activities, collecting post-excavation soil samples, wetland water sampling, and collecting waste characterization samples, as well as coordinating off-site disposal, wetland restoration, and final grading activities, and final report preparation. Mr. Sheidy interacted with federal, state, and local agencies including the US EPA, PADEP, Pike County Conservation District, and PA Game Commission.

General Technical Assistance Contract 4, PA DEP, Ivy Industrial Park Site, Lackawanna County, Pennsylvania - Mr. Sheidy's responsibilities included the collection of soil and groundwater samples using direct-push drilling techniques, soil gas and sub slab vapor sampling, the collection of surface water and stream sediment samples, technical support to GTAC personnel, resident interviews, and the coordination, collection, and laboratory submission of over 300 private supply well water samples from local residences on a quarterly basis. Mr. Sheidy was responsible for updating and maintaining a database of all sample submissions and analytical results, as well as interacting with US EPA and PADEP representatives, and homeowners.

Pennsylvania Department of Transportation, Tank Removal and Installation Services - Mr. Sheidy served as on-site supervisor providing technical support and oversight to PennDOT for environmental issues that arose during aboveground and underground tank system removals and replacements. Mr. Sheidy has overseen the excavation, dismantling, cleaning, removal, and disposal of material, contents, and appurtenances, as well as the installation of new systems, and completed required PADEP documentation and forms. These efforts include aboveground storage tank systems for road tar, as well as underground storage tank systems for fleet fueling. Removal activities have been completed at PennDOT facilities as well as roadway improvement projects under authority of condemnation by the Commonwealth.

Subsurface Investigations - Mr. Sheidy has assisted with numerous projects involving groundwater investigations, site characterizations, and remediation activities that have been granted Pennsylvania Act 2 Program site closures by PA DEP. Field activities involved with these studies include the installation of groundwater monitoring well using geoprobe, air rotary, and hollow stem auger technology, groundwater sampling using low flow purging procedures as encouraged by the US EPA and PA DEP, groundwater contour mapping, hydraulic aquifer testing, product recovery from monitoring wells (Xitech liquid-phase hydrocarbon recovery system), bioremediation measures including the injection of liquid nutrients and dissolved oxygen [In-Situ Submerged Oxygen Curtain (ISOC) system] into monitoring wells, well abandonment, logging geoprobe borings and soil sampling, overseeing the removal of underground storage tanks and collecting closure samples, remedial excavation of impacted soils and subsequent soil sampling using both bias methodology and systematic random sampling, proper containerization and disposal of investigation-derived wastes, surface water sampling, private supply well sampling, sub-slab vapor sampling, indoor air sampling, fate-and-transport interpretation, and the application. Prepared documentation includes associated Act 2 and Storage Tank and Spill Prevention Program reporting.

The Pennsylvania State University, West Campus Steam Plant UST System, University Park, Pennsylvania - Mr. Sheidy served as on-site supervisor/PADEP UMR providing technical support and oversight to the Prime Contractor for environmental topics that arose during tank demolition and permanent removal activities of two 175,000-gallon heating oil underground storage tanks. Mr. Sheidy oversaw the excavation, cleaning, dismantling, removal, and disposal of material, contents, and appurtenances associated with the underground storage tank system, and collected closure soil samples and completed the respective closure report for documentation.

South Jersey Clothing Company / Garden State Cleaners Superfund Site, New Jersey - Mr. Sheidy provided site aquifer testing involving pump tests on extraction wells using Winsitu mini-trolls. These efforts involved programming, monitoring, and downloading mini-troll data and collecting static water levels from nearby monitoring wells. He was responsible for recording data and maintaining databases during individual pump tests to establish zone of influence and groundwater contour mapping, and interacting with USACE representative. Similar efforts have also been performed with Metaltec / Aerosystems Superfund Site, New Jersey, and several potable water and irrigation systems to evaluate the hydraulic characteristics of individual wells and their pumping effects on the surrounding aquifer to optimize supply well yield.

Industrial Hygiene -Mr. Sheidy has assisted with OSHA compliance noise assessment efforts by overseeing the placement and operation of personal noise dosimeters on workers at an industrial parts facility. He has also assisted with on-site industrial hygiene air sampling by managing low volume personal air sampling pumps with appropriate sample media on workers within their daily work-space. Lastly, Mr. Sheidy served as the lead Skelly and Loy onsite contact and coordinator for mold remediation activities completed for a nine-story housing barracks at Bolling Air Force Base which consisted of 376 living units. Mr. Sheidy was in charge of coordinating daily mold remediation activities and completing and documenting visual inspections of the units upon completion. He also assisted with mold remediation activities and interacted with client personnel.

STANLEY S. ATTICK
Water/Wastewater Operator

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #9; Technician and Hazardous Materials

EDUCATION:
Harrisburg Area Community College, Electrical Courses

RELEVANT TRAINING:
OSHA 40-Hour Hazardous Waste Operations and Emergency Response

OSHA 8-Hour Hazardous Waste Operations and Emergency Response Annual Refresher

OSHA Excavation/Trenching Safety and Competent Person

OSHA Lockout/Tagout

OSHA Fall Protection and Aerial Lift Training

OSHA Confined Space Entry Training

CPR/First Aid Training

YEARS OF EXPERIENCE:
27 Years

Mr. Attick performs operations and maintenance services at a number of potable water, sewage groundwater, landfill leachate, and acid rock drainage treatment systems serving residential, municipal, commercial, institutional, transportation, and industrial clients. His responsibilities include taking flow readings, performing chlorine residual checks, running field tests, collecting compliance samples, making process adjustments, completing routine maintenance/minor repairs, troubleshooting, performing preventative maintenance, and inspecting mechanical/electrical systems for proper operation. Mr. Attick is also experienced in setting up and conducting aquifer pumping tests and most electrical applications.

DANIEL R. AUNGST, P.E., Senior Associate
Department Manager - Construction/Operations & Maintenance

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #5; Senior Environmental and Sanitary Engineer

EDUCATION:
B.S., Environmental Engineering, 2001, The Pennsylvania State University

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
Professional Engineer, PA (#Pe078654)

RELEVANT TRAINING:
OSHA 40-Hour HAZWOPER/ 8-Hour Refresher

OSHA Permit Required Confined Space - Entrant/ Attendant/Supervisor

OSHA Lockout/Tagout Training

OSHA Excavation Training

OSHA Aerial Lift Operator - Articulating Boom and Scissor Lift

OSHA Fall Protection Competent Person

OSHA Bloodborne Pathogen Training

CPR/First Aid Training

Rosgen Levels I-IV
(Levels II-IV were in-house training courses)

YEARS OF EXPERIENCE:
22 Years

Mr. Aungst has extensive experience working on environmental-related infrastructure projects along highway corridors, including bridge crossings, rest stops, maintenance facilities, stormwater management systems, and water/wastewater treatment systems. Mr. Aungst has worked on multiple projects for PennDOT, Maryland Environmental Service, and the Pennsylvania Turnpike Commission.

PROFESSIONAL EXPERIENCE

Environmental Remediation - Provided technical input on the evaluation, process design, permit application preparation, and installation of several soil and groundwater treatment systems. Designs included detailed plans and specifications for installation of dewatering wells, monitoring wells, air injection equipment, extraction equipment, conveyance piping, process controls, and other treatment equipment. Developed detailed plans and specifications for the removal of contaminated soils, dismantling of an industrial waste treatment facility, decommissioning of numerous industrial waste sumps, and upgrade of existing underground storage tank systems.

Wastewater Design and Management - Managed and/or provided technical input during the evaluation, planning, design, permitting, and construction phases of numerous wastewater treatment projects. These systems have ranged from residential systems to package treatment systems to large cast-in- place municipal treatment systems. Evaluated treatment options and costs for new systems, along with upgrades to existing systems. Designed and permitted numerous on-lot subsurface sewage disposal systems for residential and commercial applications in accordance with local and state guidelines.

Designed and permitted numerous package treatment systems to serve residential developments, utilities, commercial establishments, recreational facilities, and small municipalities. Utilized various effluent disposal methods in conjunction with these package treatment systems, including drip irrigation, spray irrigation, stream discharge, on-site subsurface disposal, and discharge to evapotranspiration greenhouses. Designed and prepared permit applications for numerous upgrades to existing wastewater collection systems, pump stations, force mains, and treatment systems. Designed and permitted numerous collection and conveyance facilities to serve new land development projects. For all of these projects, the required sewage planning modules and permit applications were prepared and submitted to the appropriate regulatory agency for approval.

Potable Water Systems Engineering - Provided technical input for numerous potable water treatment system design projects. Projects have ranged from preparation of design plans and technical specifications for the construction of new water mains to minor modifications and upgrades to existing treatment systems serving small communities to large multi-source community water supplies. For these projects, potable water permit applications were prepared and permits were issued by the state regulatory agency. Engineering bid packages were prepared to publicly bid construction of the water systems.

Designed and permitted multiple potable water treatment systems including a filtration system for a potable water supply under the influence of surface water, an activated carbon treatment system for the removal of methyl tertiary butyl ether from an existing potable water supply, a filtration system for the control of manganese from an existing potable water supply, and a filtration system for the removal of arsenic from an existing potable water supply (in order to meet new regulatory standards). Designed and permitted upgrades to an existing treatment facility for the removal of nitrates from the potable water supply in order to meet regulatory standards. This project also required the design and installation of water softening equipment prior to treatment. Designed and permitted a new community water system consisting of multiple supply wells, well pumps and controls, distribution piping and appurtenances, treatment and monitoring equipment, finished water storage tank, and system controls. Evaluated and designed miscellaneous upgrades for numerous water sources, well piping systems, storage tanks, treatment systems, and distribution systems.

TOBY L. GOOD
Water/Wastewater Operator

DESCRIPTION OF SERVICES:
Bid Item #9; Technician and Hazardous Materials

EDUCATION:
A.A., Electronic and Computer Technology, 1987, Electronic Institute, Inc.

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
PA Wastewater System Operators License: Class C,E, Subclass: 1, 2, 3, 4

PA Water System Operators License: Class B, Subclass: 12

RELEVANT TRAINING:
OSHA 40-Hour Hazardous Waste Operations and Emergency Response

OSHA 8-Hour Hazardous Waste Operations and Emergency Response Annual Refresher

OSHA Excavation/Trenching Safety and Competent Person

OSHA Lockout/Tagout

OSHA Fall Protection and Aerial Lift Training

OSHA Confined Space Entry Training

CPR/First Aid Training

YEARS OF EXPERIENCE:
37 Years

Mr. Good performs operations and maintenance services at a number of potable water, sewage groundwater, landfill leachate, and acid rock drainage treatment systems serving municipal, commercial, institutional, transportation, and industrial clients. His responsibilities include taking flow readings, performing chlorine residual checks, running field tests, collecting compliance samples, making process adjustments, completing routine maintenance/minor repairs, troubleshooting, performing preventative maintenance, and inspecting mechanical/electrical systems for proper operation. Mr. Good is also experienced in setting up and conducting aquifer pumping tests and flowmeter studies.

JOHN R. NYE, II
Senior Water/Wastewater Operator

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #9; Technician and Hazardous Materials

EDUCATION
Associated Degree, Emergency Management, Community College of the Air Force

PROFESSIONAL REGISTRATIONS AND CERTIFICATIONS:
PA Sewage Treatment Plant Operators License Class A, E, Subclass: 1, 2, 3, 4

PA Water Treatment Plant Operators License, Class A, E, Subclass: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Certified Back Flow Prevention Device Tester, New England Water Works Association, February 1995

Licensed Pump Installer, State of New Jersey, August 1994

YEARS OF EXPERIENCE:
41 Years

Mr. Nye's professional experience in the area of Landfill Leachate Remediation includes past project experience at Pottstown, Cresswell, Waste Management of York, Harmony Grove, Milton Grove, and Lancaster Solid Waste Authority landfills. At these sites, work involvement dealt primarily with the operation of leachate capture and pump and treat systems. These systems also included air and water quality monitoring, well bacteria remediation and prevention, pump installation and maintenance, air stripping towers and tray operations, and other leachate treatment systems.

PROFESSIONAL EXPERIENCE

Water and Wastewater Operations – Skelly & Loy Inc- 1997 to Present. Oversees and manages more than 25 water and wastewater treatment systems. Responsibilities include scheduling and training of field service personnel and water and wastewater plant operators; job estimating (e.g., equipment, labor, time, and expenses); Operation and maintenance of Type I wastewater treatment facilities, activated sludge package plants, oxidation ditches, and aerated lagoon systems; operation and maintenance of collection systems and pump stations; performing various field lab tests and collecting and testing water and wastewater samples. Landfill leachate remediation treatment system operations and maintenance. Installation and maintenance of environmental remediation systems including air stripping towers and trays. Installation and maintenance of recovery well systems including controllers, product recovery and water depression pumps, wellhead cycle valves, air compressors, and associated equipment. Installation and maintenance of vapor extraction systems, in-well pumps and controls, oil-water separation units, electropneumatic valves, and servicing floating hydrocarbon auto skimmers. Set up and maintained various recorders. Testing and repair of Back Flow Prevention Devices. Performs mathematical calculations relative to duty assignments (such as chemical feed calculations, Flow rates; Tank volumes). Performs the following on a routine basis:

- Immediate Supervision of Multiple Operators
- Detail Operational Testing for Daily Monitoring Reports and Monthly Compliance Reports for the EPA and PA DEP
- Infiltration studies
- Instrumentation calibrating and troubleshooting
- Preventive maintenance and scheduling
- Yard and plant piping installation
- Care and use of safety equipment
- On-lot Sewer Inspections
- Minor Carpentry Work
- Grounds Keeping at all Plant Locations
- Continuing Education for Water and Wastewater Certification (30 Hours each certification every 3 years)

Emergency Management Superintendent – 193 Special Operations Wing, Middletown Pennsylvania – 2008 – Present **-** Administers MAJCOM and Installation Emergency Management Programs. Prepares, plans, trains, educates, and equips personnel and installation leaders on ways to prepare for, prevent, respond to, maintain mission capability and recover from threat events including major accidents, natural disasters, weapons of mass destruction and wartime chemical, biological, radiological, nuclear and high-yield explosive (CBRNE) attacks. Performs detection, monitoring, sampling, warning and reporting of chemical, biological, radiological, nuclear (CBRN) events. Provides

expert advice for commanders to make risk-based decisions during all phases of emergency response operations. NFPA Certified HazMat Technician.

Environmental Support - Pennsylvania Air National Guard, Fort Indiantown Gap, Pennsylvania, 1990 - 2008 **–** Environmental Support Specialist/Utilities Instructor and an Emergency Management Instructor for the 201st Civil Engineering Red Horse Squadron at the Regional Training Site, Fort Indiantown Gap, Pennsylvania. Duties included the following: operating and maintaining Reverse Osmosis (RO) Water Purification Unit; training personnel on RO operation and maintenance; analysis problems installing; operating, repairing, and modifying fixed and field water treatment plants, wastewater treatment plants, and solid waste disposal operations; installing, operating, modifying, troubleshooting, and repairing field and fixed water plants, wastewater processing plants, and systems as well as solid waste collection and disposal systems. Expedient repair of damaged fuel lines. Participated in the Hurricane Andrew clean-up efforts.

Environmental Support Specialist – United States Air Force, Dover Air Force Base, Dover, Delaware – 1982 - 1985 - Environmental Support Specialist with the U.S. Air Force in Dover. Operated and maintained water and waste treatment systems and facilities including industrial waste, water well systems, sewage lift stations, and swimming pool operations and maintenance. Collecting and tested water samples. System pressure and flow meter readings; Operation and maintenance of field and water purification units (erdalator and reverse osmosis); Solved mathematical calculations relative to duty assignments; Other duties as assigned.

RELEVANT TRAINING

- OSHA 40-Hour Hazardous Waste Operations and Emergency Response, 1990
- OSHA 8-Hour Hazardous Waste Operations and Emergency Response Refresher, Annual
- OSHA Fall Protection
- OSHA Confined Space Entry, 1997
- Liquid Waste Course, Maryland Waste Water Operator Short Course, 1996
- Intermediate Waste Course, Maryland Wastewater Operator Short Course, Chesapeake Section AWWA,
- Chesapeake Water Environment Association, Water and Wastewater Operators Association, 1995
- Back Flow Device Repair and Maintenance Course, New England Water Works Association, 1995
- Hazardous Material Handling Course, U.S. Department of Defense, A.S.A.F., 193rd S.O.G. PaANG, Middletown, PA, 1995
- Cross Connection Control and Back Flow Device Testing Course, New England Water Works Association, 1995
- DC Electric Fundamentals Course (36 Hours), Lebanon County Vo-Tech, 1992
- Confined Space Entry Training (8 Hours), Shafer Environmental Associates, LTD, 1992
- NPDES Lab Course, PA Department of Community Affairs, Municipal Training Division, 1990
- Wastewater Operator Training II, PA Department of Community Affairs, Municipal Training Division, 1986
- Wastewater Operator Training I, PA Department of Community Affairs, Municipal Training Division, 1986
- Environmental Support Specialist Course (285 Hours), U.S.A.F., Sheppard Air Force Base, TX, 1982
- Water Fluoridation Course Center for Disease Control, 1983
- United States Air Force, 1981-1985: Water and Waste Purification Course; NCO Orientation Course (Leadership School); Government Motor Vehicle Operator Training; Advanced Traffic Techniques; On-The-Job Training Orientation Course

PROFESSIONAL AFFILIATIONS

- Water Environment Federation (Wastewater), Member
- American Water Works Association, Member
- Pennsylvania Rural Water Association

MICHAEL P. WEATHERBY
Equipment Operator, Remediation Construction Services

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #9; Technician and Hazardous Materials

EDUCATION:
Lower Dauphin High School, 1985

Dauphin County Vocational-Technical School, 1985, Machinist

RELEVANT TRAINING:
OSHA 40-Hour HAZWOPER/ 8-Hour Refresher

OSHA Permit Required Confined Space - Entrant/ Attendant/Supervisor

OSHA Lockout/Tagout Training

OSHA Excavation and Trenching Competent Person

OSHA Aerial Lift Operator - Articulating Boom and Scissor Lift

OSHA Fall Protection Competent Person

OSHA Bloodborne Pathogen Training

CPR/First Aid Training

YEARS OF EXPERIENCE:
37 Years

Mr. Weatherby has extensive experience in the construction of stream, gully, and trail restoration projects. He also routinely performs excavation activities for stormwater infiltration testing, archaeological investigations, and subsurface wastewater disposal projects. Mr. Weatherby is a very experienced heavy equipment operator(including backhoes, trackhoes, mini-excavators, bulldozers, front-end loaders, cranes/lifts, forklifts, and dump trucks) and can perform any excavation, backfilling, or final grading activities according to design specifications. He has a very wide breadth of knowledge and experience in environmental construction work and is very competent in the operation of gasoline/diesel engines and electrical-powered tools and equipment.

PROJECT EXPERIENCE

Paxtang Parkway Watershed Restoration, Dauphin County, Pennsylvania - An unnamed tributary of Spring Creek was encroaching into the embankment of several sites along the paved Paxtang Parkway trail, part of the Capital Area Greenbelt system. Work for this design-build project included reconstruction of a stormwater outfall/conveyance channel and approximately 700 linear feet of stream channel restoration incorporating natural stream channel design techniques at three separate locations along the trail. Six cross rock vane structures were installed for grade control along with approximately 245 linear feet of boulder bank/toe revetments to stabilize the streambanks. The restoration efforts provided a more stable natural channel and improved sediment transport at these locations while eliminating erosion of the embankments along the parkway. Final site stabilization was achieved by planting over 1,300 native trees and shrubs along with over 400 livestakes. Mr. Weatherby served as the on-site construction supervisor and primary equipment operator for the project.

Valley Green Road Stream Channel Stabilization, Philadelphia, Pennsylvania - Over a half century of piped stormwater discharge exacted its toll on a small unnamed tributary to the Wissahickon Creek. Located within the picturesque Wissahickon Valley Park (part of the celebrated and world-renowned Fairmount Park system), extreme erosion was threatening to undermine a heavily used parking area auxiliary to the Valley Green Inn. The Skelly and Loy team designed and constructed a step-pool stream channel that stabilized the creek and allowed for restoration of the parking lot. Teaming efforts with Philadelphia Water Department and Friends of the Wissahickon were instrumental to the success of this design-build project. Mr. Weatherby served as the on-site construction supervisor and primary operator for the construction of this project.

Black Run Stream Restoration, Harrisburg, Pennsylvania - Mr. Weatherby served as the on-site construction supervisor and primary operator for this project, which consisted of the repair of several cross-rock vanes and a portion of boulder bank revetment originally constructed by others.

Nesquehoning Creek Stabilization Project, Carbon County, Pennsylvania - Skelly and Loy provided design-build services for this project designed to stabilize a severely impaired stream reach along Nesquehoning Creek. Following receipt of the required regulatory permits and approvals, Mr. Weatherby served as the on-site construction supervisor for the initial construction phase of the project, which included approximately 1,100 linear feet of streambank/berm regrading along with extensive clearing and grubbing, installation of erosion and sediment controls, establishment of the design bankfull channel width, installation of approximately 1,100 linear feet of rock toe revetment, and site stabilization measures (seeding and erosion control matting).

FRANCIS T. WHITE, Environmental Technician
Construction/Operations Maintenance

DESCRIPTION OF SERVICES:
Bid Items #9; Technician and Hazardous Materials

EDUCATION:
Newport High School

Harrisburg Area Community College, Mechanical Engineering Technology

RELEVANT TRAINING:
OSHA 40-Hour HAZWOPER/ 8-Hour Refresher

OSHA Excavations Training

OSHA Aerial Lift Operator - Articulating Boom and Scissor Lift

OSHA Fall Protection Competent Person

OSHA Permit Required Confined Space - Entrant/ Attendant/Supervisor

OSHA Bloodborne Pathogen Training

CPR/First Aid Training

YEARS OF EXPERIENCE:
8 Years

Mr. White provides assistance on a variety of environmental construction projects. His responsibilities include checking grades, running excavation equipment, landscaping, installing erosion and sediment controls, installing and operating pump around systems, seeding/mulching, and performing maintenance/troubleshooting/repair of equipment.

PROJECT EXPERIENCE

Paxtang Parkway Watershed Restoration, Dauphin County, Pennsylvania - An unnamed tributary of Spring Creek was encroaching into the embankment of several sites along the paved Paxtang Parkway trail, part of the Capital Area Greenbelt system. Work for this design-build project included reconstruction of a stormwater outfall/conveyance channel and approximately 700 linear feet of stream channel restoration incorporating natural stream channel design techniques at three separate locations along the trail. Six cross rock vane structures were installed for grade control along with approximately 245 linear feet of boulder bank/toe revetments to stabilize the streambanks. The restoration efforts provided a more stable natural channel and improved sediment transport at these locations while eliminating erosion of the embankments along the parkway. Final site stabilization was achieved by planting over 1,300 native trees and shrubs along with over 400 livestakes. Mr. White served as a construction field technician and operator for the project.

Nesquehoning Creek Stabilization Project, Carbon County, Pennsylvania - Skelly and Loy provided design-build services for this project designed to stabilize a severely impaired stream reach along Nesquehoning Creek. Following receipt of the required regulatory permits and approvals, Mr. White served as a construction field technician and equipment operator for the initial construction phase of the project, which included approximately 1,100 linear feet of streambank/berm regrading along with extensive clearing and grubbing, installation of erosion and sediment controls, establishment of the design bankfull channel width, installation of approximately 1,100 linear feet of rock toe revetment, and site stabilization measures (seeding and erosion-control matting).

Gorgas Lane Design-Build Stormwater Channel Remediation and Habitat Restoration Project, Philadelphia, Pennsylvania - In order to address chronic stormwater runoff and erosion issues along approximately 1,010 feet of former trail segments located in the Gorgas Run drainage basin within the Wissahickon Valley Park in Philadelphia, Skelly and Loy was retained by The Friends of the Wissahickon to complete a design-build trail closure and restoration project. The completed project included 1) closure and obliteration of existing trail surfaces that were serving as important runoff source areas; 2) construction of multiple shallow depressions within the trail closure to capture and infiltrate runoff from adjacent upslope forested areas; 3) construction of stable pedestrian crossings to connect the new trail segments; 4) renaturalization of the trail closure areas with woody debris; and 5) planting of native trees and shrubs. Mr. White provided construction services for this design-build project. Construction was completed in September 2015.

Spring Creek and Parkway Creek Stream Debris Removal, Dauphin County, Pennsylvania - In order to alleviate flooding and erosion issues along the stream channels adjacent to the Capital Area Greenbelt parkway trails and protect existing infrastructure (sewer crossings, trails), Skelly and Loy removed problematic woody debris and log jams. The woody debris was cut into manageable size pieces and placed alongside the parkway to rot in place or be removed by volunteers for firewood. Mr. White served as a construction field technician and operator for the project.

JOHN HARRY FRANK, Senior GIS Analyst

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #16; Draftsperson/CADD Operator

EDUCATION:
M.A., Geography and Environmental Planning (Environmental Concentration), 2018, Towson University, Towson, Maryland

B.S., Geography and Environmental Planning (GIS Concentration), 2013, Towson University, Towson, Maryland

PROFESSIONAL CERTIFICATIONS:
Maryland Department of the Environment Erosion and Sediment Control (Green Card #RPC008314)

MD SHA Erosion and Sediment Control (Yellow Card)

USDA NRCS HEC-RAS 2D - Water Surface Modeling Training

MD Forest Conservation Training

FHWA Traffic Noise Model 2.5 and Traffic Noise Fundamentals Training

RELEVANT TRAINING:
ESRI Suite including ArcGIS online, ArcGIS for Server, and ArcGIS Enterprise

Bentley MicroStation and InRoads

AutoCAD and Carlson

IDRISI Raster Analysis

TR-55

HEC-RAS

Hydraulic Toolbox

Database Management

Cartography and Graphics

Visual Basic, Python, HTML and CSS languages

Microsoft Office with Macro Development

Windows Command Prompt and Power Shell Batch Script Development

YEARS OF EXPERIENCE:
7 Years

Mr. Frank has seven years of GIS, environmental engineering, and consultation experience. The roles he performs for Skelly and Loy include Geographic Information Systems (GIS) management, development, analysis, and production; computer aided drafting (CAD); environmental assessments, impacts analysis, and modeling hydraulic, hydrological, water quality, and traffic noise variables. He is proficient in ESRI products and extensions, Database design and maintenance, Bentley Systems, Carlson, and Autodesk software as well as FHWA's TNM 2.5, HEC-RAS, EPA's SWMM 5, and HSPF. Mr. Frank's previous experience includes recreation planning and management, reforestation, highway drainage design, and attendance at public meetings and agency field views.

PROFESSIONAL EXPERIENCE

Geographic Information Systems – Mr. Frank is proficient in ESRI software and conversion between GIS, CAD, and various third-party modeling formats such as HEC-RAS, TNM2.5, and EPA SWMM. He has designed and maintained geodatabases from production services to enterprise components of state-wide stormwater inventories and inspections. He has experience in maintaining Skelly and Loy's enterprise GIS, training personnel, refining standards, managing projects, drafting proposals, developing advanced workflow modeling/automation, applications, and various field tools.

Environmental Analysis – Mr. Frank performs geomorphic stream surveys, natural resources assessments, hydraulic/hydrological modeling, impact assessments, forest conservation planning, traffic noise measurements and modeling, and water quality modeling.

Computer Aided Drafting and Design Experience – Mr. Frank has used Bentley InRoads and Carlson for open channel grading, topographic and 3D mapping from drone imagery, planform design, and creating HEC-RAS and TNM 2.5 inputs. He has used Bentley Microstation and AutoCAD to create erosion and sediment, grading, geometry, forest conservation, landscaping, groundwater pump-down, conceptual and impacts plan sheets.

PROJECT EXPERIENCE

Pennsylvania Turnpike Commission Municipal Separate Storm Sewer System (PTC MS4) Permit Renewal and Compliance, Statewide, Pennsylvania - Mr. Frank was responsible for the scheduling, coordination, and execution of GIS tasks including application development, reporting, asset tracking, database development and administration, data conflation, web hosting, and map production. One of the main deliverables included an Illicit Discharge Detection and Elimination (IDDE) field tool using Collector for ArcGIS and Survey123 with custom reporting based on agency required forms. The IDDE field tool also allowed for the identification of structural deficiencies. A stormwater inventory was created based on aerial imagery and elevation data, geometrically verified using a topology network, and related to state and federal secondary data with related unique ID's. Map production included traditional PDF's and interactive hosted web mapping of the stormwater network and IDDE results.

MS4 GIS Services, Middlesex Township, Washington City, Pennsylvania Turnpike Commission, Pennsylvania - Point of contact for GIS services pertaining to the MS4 permits of Municipalities and the PTC. General services

included inventory of stormwater features, PA DEP regulated mapping, impervious surface analysis using supervised and unsupervised remote sensing techniques, conflating data form various sources including multiple field efforts, topography, and as-built PDFs, coordination and assistance with schema conflation, developing and maintaining inspection applications and automating PA DEP required reports.

Maryland 219 to I-68 Mitigation Project, BCS 2012-03F, Garrett County, Maryland – Mr. Frank performed desktop GIS analysis and prioritization of possible sites for mitigation purposes; prepared cartographic, analytic, and logistic field resources for the assessment of mitigation sites; and populated MD SHA's geodatabase with parcel ownership and site analysis data. Additional analysis included potential fish passage and acid rock mitigation opportunities. During the span of this project, Mr. Frank provided cartographic support for owner notifications, field work, site summaries, and director meetings while collecting field data and developing alternative analyses.

SHA Full Delivery Soil Amendment Site Search, Anne Arundel County, Maryland – The purpose of this study was to find sites in Anne Arundel County that would respond best to Bio-Char tilling amendments based on the criteria of saturated hydraulic conductivity, water capacity, water storage, drainage category, and percent organic material as determined by the NRCS web soil survey. Based on current literature and by using fuzzy membership logic, a weighted overlay raster analysis was performed to find the most suitable sites for large scale soil amendments.

SHA Full Delivery Stream Restoration Site Search, Maryland – The purpose of this study was to find sites in Baltimore, Carroll, Cecil, Frederick, Howard, and Washington Counties that would meet the criteria stream restoration based on land use/land cover, parcel size, stream length, stream sinuosity, access, stream order, and estimated entrenchment and erosion.

Central Susquehanna Valley Transportation, Pennsylvania – Maintaining and updating archived data, calculating and automating agricultural and environmental impacts based on constantly changing highway design alternatives and limits of disturbance. Quality assurance of existing and updated data.

I-83 North York Widening, Pennsylvania – Managing internal data sources of various socio-economical/ environmental resources, design alternatives, surveyed infrastructure, and proposed restoration efforts. Internal feature services were hosted to project managers in different groups to populate, view, and QA/QC features used in mapping and analysis.

I-64, VA-7 Widening Noise Analysis, Virginia – Monitoring noise receptors for the highway widening project, summarizing data from field efforts, digitizing 3D features for noise modeling from survey and design files, building existing condition models in TNM 2.5, mapping noise analysis figures for reports and public meetings.

MICHELLE A. GANDY, CAP, TA, MOS Expert
Administrative Assistant

DESCRIPTION OF SERVICES:
Bid Item #15; Clerical / Secretarial Personnel

EDUCATION:
A.A., Administrative Office Specialist, 2010, Harrisburg Area Community College

PROFESSIONAL CERTIFICATIONS:
Certified Administrative Professional (CAP)

Technology Applications (TA) Certification

RELEVANT TRAINING:
Microsoft Office (Word, Excel, Outlook, PowerPoint, OneNote)

Adobe InDesign

Adobe Acrobat

PROFESSIONAL AFFILIATIONS:
International Association of Administrative Professionals (IAAP)

YEARS OF EXPERIENCE:
36 Years

For more than 30 years, Ms. Gandy has offered administrative support to Skelly and Loy, Inc.'s Service Groups and corporate officers.

PROFESSIONAL EXPERIENCE

Clerical Services

Ms. Gandy is responsible for proofreading, typing, editing, and formatting company materials including letters, reports, and proposals for specific projects and preparing documents for final submission. Specific clerical services include the following:

- Coordinating with the company's owners, Service Group Managers, and Market Sector Champions to prepare and publish the annual Business Plan
- Preparing the department's quarterly submission to the company's newsletter
- Updating the company's consumables and equipment lists and associated field forms
- Distributing interoffice mail
- Submitting weekly reproduction logs to Accounting

On an as-needed basis, Ms. Gandy assists at the reception desk and provides technical support to company employees with Microsoft and Adobe software issues. She is also responsible for maintaining corporate files.

PROJECT EXPERIENCE

Ms. Gandy has provided project support to the Pennsylvania Department of Transportation's (PennDOT) Agency-Wide Remediation Contracts since 2001. She also recently coordinated with the Department of General Services to modify the current contract's status report to present outstanding Purchase Orders (for rapid response projects) and invoices (for both normal response and rapid response projects) in a colorful manner. Ongoing project support services for the PennDOT Agency-Wide Remediation Contract include the following activities:

- Typing, formatting, proofreading, editing, and finalizing normal response proposals and change orders in the approved layout
- Submitting Confirmation of Service Forms for both normal response and rapid response projects to the appropriate PennDOT representatives so they can be processed for payment of invoices
- Coordinating with project managers and accounting staff to generate a status report for proposals and projects and submitting it to PennDOT Central Office in addition to submitting individual, project-specific status reports to the appropriate PennDOT representatives
- Directing project-specific questions and/or comments from PennDOT representatives to the appropriate Skelly and Loy staff
- Setting up project managers' project files as directed

DANIEL J. JOHNSTON, Senior GIS Analyst

DESCRIPTION OF SERVICES:
Bid Item #16; Draftsperson / CADD Operator

EDUCATION:
Continuing Graphic Design Degree

YEARS OF EXPERIENCE:
28 Years

Mr. Johnston was promoted to Senior GIS Analyst after a 28 year career as a CAD Designer. His exceptional computer aptitude allows Skelly and Loy to diversify his knowledge among all types of computer applications. He is experienced in all CAD platforms as well as in most graphic software applications. He is proficient with Civil 3D, Carlson Civil and Mining, InRoad Design, AutoCAD, and MicroStation. Mr. Johnston is accustomed to applying his knowledge to overcome challenges presented by client demands. He is experienced in compiling and updating Planimetric and Topographic databases from orthophotography and LIDAR. In addition to his CAD technical skills, Mr. Johnston is extremely knowledgeable in many of the ESRI GIS products.

PROFESSIONAL EXPERIENCE

Viewshed Analysis and Computer Rendering - Mr. Johnston is responsible for collecting and organizing project data and building the computer model for viewshed analysis for major infrastructure and development projects. He uses the latest software and technology in the industry.

- **Photographic Computer Renderings** - Project photographs of very important viewsheds can be modified to incorporate the proposed design. These illustrations are valuable for communicating the true impact of a proposed design to a viewshed. Mr. Johnston can also develop illustrations that require complete background reconstruction of the viewshed, which usually requires several photographs from different angle and positions. The photographs are then pulled apart and repositioned to proper angle and perspective for the final illustrations.

- **3D Computer Model Renderings** - For some projects, a 3D computer model is required for the viewshed analysis. This type of model allows a complete 360° view of the project area plus the proposed project design. Mr. Johnston incorporates the CAD data from the design team and supplements the surrounding areas by incorporating GIS data (including DEM data). Once the model is built, still images can be generated for any view for paper production and a computer animation file can be generated for replay on computer, web, or DVD. The animation may be a flyover of the site or follow a certain corridor path like a road, transmission line, or trail.

Project Mapping Coordinator - Mr. Johnston is responsible for organizing and cataloging various layers of project information. His coordination of projects allows seamless development of work between GIS Specialists and CAD Operators. This ensures quality control of data that are being developed in an organized and speedy process.

- **Central Susquehanna Valley Transportation (CSVT) Project - Pennsylvania Department of Transportation (PennDOT)** - The proposed highway was developed to cross Snyder, Union, and Northumberland Counties. Mr. Johnston was in charge of all CAD file development and GIS integration. The project required development of approximately 60 different environmental constraint features, which were incorporated into GIS layers for impact analysis. Due to the large size of the study area, there were several different base mapping structures developed to present information at public events and in the project NEPA documents as clearly and accurately as possible.

Data Analyst - Mr. Johnston is a key person in developing different methods of data analysis for our engineering and environmental staff. His ability to integrate multiple computer applications allows him to develop new methods for old problems.

- **Corridor O Project Potential Subsidence - PennDOT** - The proposed highway would connect State College with Interstate 80. Our engineering staff collected large amounts of mining data from various sources. Mr. Johnston, along with our GIS Specialist and our engineering staff, developed a method that accounted for all of the information collected. Mr. Johnston's role in the process was to develop a methodology to identify potential subsidence zones that were acceptable to our engineers and GIS Specialist.

Graphics Coordinator - Mr. Johnston is responsible for coordinating all graphics for agency and public involvement activities. Graphics range from designing meeting displays to managing a dual-screen computer projection for meeting presentations.

- **CSVT Project - PennDOT** - Mr. Johnston was responsible for developing a digital version of both the draft and final Environmental Impact Statements. These digital versions were constructed using a web-based format that allowed distribution of the document on a compact diskette. These versions also enabled the Environmental Impact Statements to function as searchable documents. As part of the project, Mr. Johnston also developed a 3D Animation of a proposed bridge overpass near a group of concerned citizens and developed several before-and-after photographs of impacted viewsheds in the study area.

- **Long-Term Acid Mine Drainage (AMD) Treatment - Mining Client in Tennessee** - Mr. Johnston developed a valley dam to hold water for a low maintenance AMD treatment system. As part of the design process, earthwork volumes and incremental water volumes were calculated at different elevations. The client then directed us to produce a five-minute 3D animation showing what the potential lake would look like after completion. This animation was used to explain the idea to the client and other environmental state and federal agencies for approval.

- **Interstate 81, Exit 17 - PennDOT** - This proposed exit reconfiguration required impacting several historic farms in the area. Skelly and Loy was directed to develop a public display illustrating the history of farming in the area as mitigation for the impacted farms. Mr. Johnston created and produced the display that incorporated historic maps, photographs, and text. The board is on display at the Welcome Center along Interstate 81 near Chambersburg.

KIRA SHAFFIR-LUPO, Administrative - Accounting

DESCRIPTION OF SERVICES:
Bid Item #15; Clerical / Secretarial Personnel

EDUCATION:
B.A., Business Management, 2015, Goucher College

YEARS OF EXPERIENCE:
6 Years

Ms. Shaffir-Lupo is a Billing Liaison in the Skelly and Loy Accounting Department. Her responsibilities include: Managing billing of labor, expenses, and fees for our Environmental Services Group, Coordinating with Project Managers to ensure accurate billing and delivery of invoices, ensuring the best customer service to our clients. Employing Deltek Vision® applications to review billing information, run reports, and ensure accurate setup of project data, using Pennsylvania Department of Transportation (PennDOT) Engineering and Construction Management System (ECMS) to invoice in compliance with PennDOT standards, and reviewing contracts.

PROFESSIONAL EXPERIENCE

November 2018-Present, Skelly and Loy, Inc., Harrisburg, Pennsylvania
Billing Liaison
Manages the billing of labor, expenses and fees totaling over $850,000 for the Environmental sector of the company; trains new associates on invoicing and record keeping processes; Coordinates with Project Managers to ensure accurate billing and delivery; Utilizes Deltek Vision ® applications to review billing information, run reports, and ensure accurate setup of project data; Utilizes ECMS to invoice in compliance with PennDOT standards, and review contracts.

October 2015-November 2018, Aerotek Inc., Hanover, Maryland
Business Operations Associate
Managed a diverse book of accounts that totaled over $2.5 million in Accounts Receivable that included accounts both locally and Nationwide; Utilized advanced Excel techniques including pivot tables, macros, V-lookups, and concatenation formulas to manage client accounts, apply client payments to open invoices, resolve discrepancies, and provide forecasts; Created reports to ensure compliance with FLSA laws as well as minimal wage requirements for Continental United States and Puerto Rico; Utilized Peoplesoft applications and a variety of Vendor Management Systems to audit accounts to ensure accurate client billing in accordance to service agreements and statements of work Served as a liaison for corporate headquarters, and field offices in regards to questions on accounts that included: client billing, payment policies, spending/hiring trends, and ad hoc financial reports as needed; Audited and reported on all field offices and payroll attributes to ensure compliance with proper payroll reporting and client billing; Assisted in management of client accounts by running and analyzing financial reports to include auditing required reports to support in the making of business decisions and deepen customer relationships.

August 2015-October 2015, Campbell Financial Services, Glen Burnie, Maryland
Administrative Assistant
Temporary employment through Robert Half Staffing Company; Immediate assistant to the owner; Managed calendar and responsible for scheduling appointments for owner of company; Acted as the liaison between clients and vendors in regards to financial documents; Organized client and company documents with data entry of sensitive information to include personal and financial.

January 2015-July 2015, Massmutual, Hunt Valley, Maryland
Financial Services Representative
Intern position; obtained clients through references or cold calling; Assessed financial needs of clients through fact finding utilizing probing questions in order to find end goal of client.

BRADLEY S. REESE, GIS Manager

SKELLY AND LOY
A Terracon COMPANY

DESCRIPTION OF SERVICES:
Bid Item #16; Draftsperson / CADD Operator

EDUCATION:
B.A., Urban Planning, 2004, University of Pittsburgh (Minor, Architectural Studies)

RELEVANT TRAINING:
The American Institute of Architects:
32 Continuing Education Learning Units

Bentley Institute: MicroStation Essentials V8i – 32 Learning Units
28 Contact Hours Siteops Fundamentals – 2 IACET Units
20 Learning Units

ESRI ArcGIS Desktop:
3 Continuing Education Units

YEARS OF EXPERIENCE:
18 Years

Mr. Reese has 18 years of experience in the engineering and environmental consulting profession in the public and private sectors throughout five states. He performs a variety of roles for Skelly and Loy including Geographic Information Systems (GIS) management and analysis; computer aided design (CAD); and management and administration of the IT systems in the Pittsburgh, Pennsylvania and Morgantown, West Virginia offices. He is proficient in ESRI and Bentley Systems software and has significant experience in mapping production and GIS data analysis. He also supervises, monitors, and evaluates work performed by junior GIS staff to ensure that organization standards and quality assurance are met. Mr. Reese is experienced in website design and excels in document control, field survey logistics, and data collection. Mr. Reese's previous experience includes transportation planning, municipal planning, socioeconomic analyses, environmental document preparation, and attendance at public meetings and agency field views.

PROFESSIONAL EXPERIENCE

Geographic Information Systems - Mr. Reese is proficient in ESRI software and has developed, analyzed, and formulated data into GIS to develop mapping for a variety of projects. He serves as the point of contact on GIS matters in the Pittsburgh and Morgantown offices. Mr. Reese is also the coordinator of GIS activities between all departments.

Computer Aided Design - Mr. Reese routinely employs Bentley MicroStation, CorelDraw Graphics Suite, and Adobe Systems software in his work. His deliverables include mapping of aquatic resources, archaeological surveying and testing sites, profiles and plan views of archaeological sites, soil profiling, historic site plans and building floor plans, plan views delineating hazardous waste sites, and others.

Information Technology - Mr. Reese is responsible for the IT systems management and administration of the Pittsburgh and Morgantown offices of Skelly and Loy. This includes employee computer systems, network servers, VoiP phones, and reproduction systems. He also serves as the IT help desk, assisting colleagues with hardware and software problem resolution.

Environmental Planning (Transportation and Municipal) - Mr. Reese's previous experience included assistance with planning studies for local communities aimed at improving various aspects of municipal services and local quality-of-life issues, as well as highway and public transit projects. His work has included feasibility studies, corridor analyses, transit studies, and capital improvements programming. Mr. Reese has assisted with the preparation of several NEPA documents for large- and intermediate-sized projects. He has contributed to public involvement efforts for large transportation improvement programs and participated in public meetings and public hearings.

Transportation Projects - Mr. Reese's recent project experience in a principle CAD and GIS operator capacity includes: the multi-million dollar WVDOH Corridor H project, Mon/Fayette Expressway, Route 51 to I-376 project; City of Pittsburgh South Side Park Greenspace Management Plan, Indian Creek Valley Hike-Bike Trail Feasibility Study (serving as principal planner); NYSDOT Route 531 Farmland Analysis; US Route 220, I-68 to Corridor H Improvement Study; Rock Run Recreation Area Master Plan (producing all public meetings graphics); SR 0062 Traffic and Land Use Study; City of Altoona Transportation Improvements Project; Delaware's Western Parkway; and the Pennsylvania Turnpike Determination of Eligibility.

D. Subcontractors. Provide a subcontracting plan for all subcontractors, including small diverse business and small business subcontractors, who will be assigned to the Project. The selected Offeror is prohibited from subcontracting or outsourcing any part of this Project without the express written approval from the Commonwealth. Upon award of the contract resulting from this RFP, subcontractors included in the proposal submission are deemed approved. For each position included in your subcontracting plan provide:

1. Name of subcontractor;
2. Primary contact name and email;
3. Address of subcontractor;
4. Description of services to be performed;
5. Number of employees by job category assigned to this project; and
6. Resumes (if appropriate and available).

Offeror Response

I-2.D Services to be Subcontracted

As presented in Section I-2.B (Prior Experience) Skelly and Loy has professional qualifications to provide the environmental and remediation services under the Remediation Contract. Based on our demonstrated experience furnishing environmental and remediation services to PennDOT for the past 24 years under the Remediation Contract, we understand that the work order assignments may require specialty services not offered by Skelly and Loy. Accordingly, we have developed a subcontracting plan to retain a stable of teaming partners that offer niche services that are expected to be needed under the Remediation Contract. Our subcontracting plan includes firms situated geographically across the Commonwealth. This functionality will allow our team to reduce response times and lower costs while supporting work order assignments. Having multiple subcontractors on our team that can provide the same services also gives us redundancy in the event of multiple similar projects needing to occur simultaneously. Given our familiarity with the scope of the Remediation Contract, Skelly and Loy is confident that we can provide the necessary services with the through the resources of our team to support work order assignments.

Non-core services will be subcontracted as needed to support work assignments under the Remediation Contract. The following services are typically subcontracted:

- Drilling of soil borings
- Well drilling services, including well abandonment
- Traffic control
- Site security
- Laboratory analysis of groundwater, soil, soil gas, sediments, surface water, and waste samples
- Laboratory analysis of asbestos and LBP samples
- Asbestos, mold, and LBP abatement
- Geophysical surveying
- Disposal of waste materials
- Excavation services
- Removal/installation of storage tanks

Skelly and Loy is strongly committed to the Commonwealth's Bureau of Diversity, Inclusion and Small Business Opportunities (BDISBO) program for Small Business utilization on a professional level during the implementation of work order assignments under the Remediation Contract. To meet the small diverse business subcontracting goals for the Remediation Contract, we have included Small Diverse Business (SDB) and Veteran Business Enterprises (VBE) firms on our team. Skelly and Loy has a history of subcontracting services to small businesses, SDBs, and VBEs and supporting their growth. Based on the number of SDB and VBE firms included on the Skelly and Loy team and the types of services which are to be provided, we are confident that the small business subcontracting goals of 9% for SDB firms and 3% for VBE firms will be achieved.

Skelly and Loy/Terracon establishes Master Services Agreements (MSA) with our subcontractors. The agreements establish the terms of services and expectations for payment. Work order assignments involving subcontractors under the Remediation Contract will be managed internally by Skelly and Loy through our established MSAs. This contracting procedure will be a value to DGS and PennDOT by allowing Skelly and Loy to utilize the niche services to be provided by our subcontractors for providing timely responses to work order assignments (i.e., no haggling over contractual terms and conditions).

For successfully supporting and complementing our services, Skelly and Loy has strategically added the firms listed in Table I-2.D-1a and Table I-2.D-1b to our team for furnishing niche services to support project assignments under the Remediation Contract.

Table I-2.D-1a
List of Subcontractors Providing Labor Bid Item Services

Subcontractor Business Name	Small Business Designation			Contact Name and Email	Subcontractor Address	Description of Services To Be Performed	3 Sr Geol (Std)	5 Sr Env. Eng (Std)	9 HazMat Tech (Std)	11 Env. Eng (Std)	14 Env. Sci (Std)	16 CADD (Std)	17 Survey Crew (Std)	22 Env. Sci (Std)	23 HazMat Tech (Std)	24 LBP Insp Tech (Std)	29 HazMat Tech (Emer)	34 Env. Sci (Emer)	39 LBP Insp Tech (Emer)	40 Env. Sci (Emer)	41 HazMat Tech (Emer)
	SB	SDB	VBE																		
ACV Enviro				Kami Labell klabell@acvenviro.com	500 Industrial Road Lewisberry, PA 17339	Storage Tank Removals, Waste Disposal, Spill Response and Biohazard Cleanup	0	0	10	0	5	0	0	5	10	0	10	5	0	5	10
Allprobe				Greg Barker gb@allprobeenvironmental.com	2622 Cole Road Wexford, PA 15090	Soil Core Drilling and Sampling, Monitoring Well Installation and Abandonment	0	0	0	0	2	0	0	1	0	0	0	2	0	1	0
Advanced Geological Services				Robert Mundt bmundt@advancedgeo.com	3 Mystic Lane Malvern, PA 19355	Geophysical Surveying	2	0	0	0	5	4	0	0	0	0	0	5	0	0	0
American Engineers Group		x		Brent J. Bason bbason@aegroup-llc.com	441 Friendship Road Harrisburg, PA 17111	Engineering, Surveying	1	2	0	1	2	2	1	1	0	0	0	0	0	0	0
ALS Global				Fiona Adamsky fiona.adamsky@alsglobal.com	301 Fulling Mill Road Middletown, PA 17057	Environmental Sample Analytical Testing Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Batta Environmental Associates		x		Neeraj Batta neeraj@battaenv.com	Delaware Industrial Park 6 Garfield Way Newark, DE 19713	Industrial Hygiene Sample Analysis Including Asbestos	2	1	9	0	10	2	0	2	0	0	0	2	0	2	0
Bristol Environmental				Dave Brogan dbrogan@beigroup.com	1123 Beaver Street Bristol, PA 19007	Asbestos Abatement and Hazmat Disposal	0	0	3	0	5	0	0	5	3	0	3	5	0	5	3
Coventry Environmental, Inc.				Steve Ohrwaschel steveo@covenv.com	PO Box 1052 Kiberton, PA 19442	Storage Tank Removals, Waste Disposal, Spill and Biohazard Cleanup	0	0	8	0	2	0	0	6	2	0	8	2	0	6	8
Eagle Towing and Recovery, Inc.				Eric Summey eagle.services@hotmail.com	1049 South Eagle Valley Road Bellefonte, PA 16823	Waste Disposal, Truck Recovery and Site Restoration	0	0	16	0	2	0	0	0	4	0	16	2	0	0	16
EcoServices, LLC		x		Linda DeNenno ldenenno@eco-pa.com	303B National Road Exton, PA 19341	Asbestos Abatement and Hazmat Disposal	0	0	8	0	0	0	0	0	8	0	8	0	0	0	8
Elk Environmental Services				Jestyn Newswanger jestynn@elkenv.com	1440 Carbon St. Suite B Reading, PA 19601	Storage Tank Removals, Spill Response, General Environmental Remediation	0	0	15	0	5	0	0	5	15	0	15	5	0	5	15
Enginuity, LLC				Randy Klase rklase@enginuity-llc.com	203 Lyndale Street Mechanicsburg, PA 17050	Refrigerant Gasses and Compressor Oils Recovery	0	0	0	0	4	0	0	4	0	0	0	4	0	4	0
Eurofins Lancaster Laboratories Environmental				Patrick McCarthy patrick.mccarthy@eurofinset.com	2425 New Holland Pike Lancaster, PA 17601	Environmental Sample Analytical Testing Services	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
Fairway Laboratories, Inc.				Robert McNair rmcnair@fairwaylaboratories.com	2019 9th Avenue Altoona, PA 16603	Environmental Sample Analytical Testing Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GemChem, Inc.				Gordon Young gyoung@gemchemsolutions.com	53 N. Cedar Street Lititz, PA 17543	Waste Transportation and Disposal	0	0	4	0	0	0	0	0	0	0	4	0	0	0	4
Gundy Excavating and Paving, Inc.			x	Steve Gundy gundyexca@yahoo.com	681 Knight Road Harrisburg, PA 17111	Earthmoving and Excavation	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Hafer Petroleum Equipment, LTD				Scott Hafer scott.hafer@hafers.com	34 Angstadt Lane Birdsboro, PA 19508	Storage Tank Removals, Contaminated Soils Excavation and Disposal	0	0	2	0	2	0	0	2	2	0	2	2	0	2	2
International Asbestos Testing Laboratories, Inc.				Eric Snyder ericsnyder@iatl.com	9000 Commerce Parkway Suite B Mt. Laurel, NJ 08054	Industrial Hygiene Sample Analysis Including Asbestos	0	0	0	0	4	0	0	4	0	0	0	4	0	4	0
KLA Roofing and Construction, LLC				Ken Tewell ken.klac@gmail.com	14280 Lincoln Highway Everett, PA 15537	Asbestos Abatement and Hazmat Disposal	0	0	0	0	4	0	0	6	5	0	5	4	0	6	5
Lewis Environmental				Rob Hilliard rhilliard@discoverlewis.com	155 Railroad Plaza Royersford, PA 19468	Storage Tank Removals, Spill Response, General Environmental Remediation	0	0	212	0	6	0	0	6	12	0	12	6	0	6	1
McCutcheon Enterprises, Inc.				Bryan Billick bryanb@completewastemgmt.com	250 Park Road Apollo, PA 15613	Storage Tank Removals, Spill Response, General Environmental Remediation	0	0	20	0	8	0	0	0	30	0	20	8	0	0	20

Table I-2.D-1a
(continued)

Subcontractor Business Name	Small Business Designation			Contact Name and Email	Subcontractor Address	Description of Services To Be Performed	3 Sr Geol (Std)	5 Sr Env. Eng (Std)	9 HazMat Tech (Std)	11 Env. Eng (Std)	14 Env. Sci (Std)	16 CADD (Std)	17 Survey Crew (Std)	22 Env. Sci (Std)	23 HazMat Tech (Std)	24 LBP Insp Tech (Std)	29 HazMat Tech (Emer)	34 Env. Sci (Emer)	39 LBP Insp Tech (Emer)	40 Env. Sci (Emer)	41 HazMat Tech (Emer)
	SB	SDB	VBE																		
Navarro & Wright Consulting Engineers, Inc.				Kyle Brubaker kbrubaker@navarrowright.com	151 Reno Avenue New Cumberland, PA 17070	Asbestos Inspections, Engineering, Surveying, General Environmental Scientist Services	2	6	0	6	2	8	4	6	0	3	0	2	3	6	0
Odyssey Environmental Services, Inc.				Jason Miller jason@odysseyenv.com	1111 Gap View Road Dauphin, PA 17018	Soil Core Drilling and Sampling, Monitoring Well Installation and Abandonment	0	0	10	0	6	0	0	4	2	0	10	6	0	4	10
Pace Laboratories				Tonya Hironimus tonya.hironimus@pacelabs.com	1638 Roseytown Road Suites 2, 3 & 4 Greensburg, PA 15601	Environmental Sample Analytical Testing Services	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prism Response/Alloy Group				Gary Skuba gskuba@prismresponse.com	70 Hillside Drive, Suite 200 Drums, PA 18222	Asbestos Abatement and Hazmat Disposal	0	0	0	0	15	0	0	5	5	0	15	15	0	5	15
Rhea Engineers & Consultants, Inc.		x		Brad McCalla brad.mccalla@rhea.us	333 Rouser Road, Suite 301 Moon Township, PA 15108	Geophysical Surveying, Release Investigation, General Environmental Scientist Services	3	3	5	2	4	3	3	4	0	0	0	4	0	4	0
Richard T. Wimer, Inc.				Richard Wimer info@richardtwimerinc.com	431 Springville Road Quarryville, PA 17566	Storage Tank Removals and Installations, Contaminated Liquids and Soil Disposal	0	0	0	0	2	0	0	2	0	0	0	2	0	2	0
SciTek Consultants, Inc.		x		Charles Toran ctoran@scitekanswers.com	655 Rodi Road, Suite 303 Pittsburgh, PA 15235	Asbestos and LBP Inspections, General Environmental Scientist Services	2	1	6	2	3	5	5	6	0	1	0	6	1	6	0
Supreme Safety, Inc.		x		Annette Patchell amy@supremesafetyinc.com	21 Richard Road Warminster, PA 18974	Safety Supplies and Personal Protective Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Tank Works				Sean Tosadori sean@totaltankworks.com	PO Box 303 East Butler, PA 16029	Storage Tank Removals and Installations, Contaminated Liquids and Soil Disposal	0	0	2	0	2	0	0	1	2	0	2	2	0	2	2
Urban Terrain, LLC			x	Amy Hopkins ahopkins@urbanterrain.net	4091 Saltsburg Road Murraysville, PA 15668	Professional Surveying	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

Table I-2.D-1b
List of Subcontractors Providing Non-Labor Bid Item Services

Subcontractor Business Name	Small Business Designation			Contact Name and Email	Subcontractor Address	Description of Services To Be Performed	42-182 Various Tests	193-184 Level B & C PPE	203-209 Soil Core Drilling	210 GPR & Mag Survey	225-247 General Equipment	259-262 ACM Abatement	263-270 Tank Removal	271-282 Waste Disposal
	SB	SDB	VBE											
ACV Enviro				Kami Labell klabell@acvenviro.com	500 Industrial Road Lewisberry, PA 17339	Storage Tank Removals, Waste Disposal, Spill Response and Biohazard Cleanup		X			X		X	X
Allprobe				Greg Barker gb@allprobeenvironmental.com	2622 Cole Road Wexford, PA 15090	Soil Core Drilling and Sampling, Monitoring Well Installation and Abandonment		X	X		X			
Advanced Geological Services				Robert Mundt bmundt@advancedgeo.com	3 Mystic Lane Malvern, PA 19355	Geophysical Surveying				X				
ALS Global				Fiona Adamsky fiona.adamsky@alsglobal.com	301 Fulling Mill Road Middletown, PA 17057	Environmental Sample Analytical Testing Services	X							
Batta Environmental Associates		x		Neeraj Batta neeraj@battaenv.com	Delaware Industrial Park 6 Garfield Way Newark, DE 19713	Industrial Hygiene Sample Analysis Including Asbestos	X							
Bristol Environmental				Dave Brogan dbrogan@beigroup.com	1123 Beaver Street Bristol, PA 19007	Asbestos Abatement and Hazmat Disposal		X				X		X
Coventry Environmental, Inc.				Steve Ohrwaschel steveo@covenv.com	PO Box 1052 Kiberton, PA 19442	Storage Tank Removals, Waste Disposal, Spill and Biohazard Cleanup		X			X		X	X
Eagle Towing and Recovery, Inc.				Eric Summey eagle.services@hotmail.com	1049 South Eagle Valley Road Bellefonte, PA 16823	Waste Disposal, Truck Recovery and Site Restoration					X			X
Ecoservices, LLC		x		Linda DeNenno ldenenno@eco-pa.com	303B National Road Exton, PA 19341	Asbestos Abatement and Hazmat Disposal		X				X		X
Elk Environmental Services				Jestyn Newswanger jestynn@elkenv.com	1440 Carbon St. Suite B Reading, PA 19601	Storage Tank Removals, Spill Response, General Environmental Remediation		X			X		X	X
Enginuity, LLC				Randy Klase rklase@enginuity-llc.com	203 Lyndale Street Mechanicsburg, PA 17050	Refrigerant Gasses and Compressor Oils Recovery								X
Eurofins Lancaster Laboratories Environmental				Patrick McCarthy patrick.mccarthy@eurofinset.com	2425 New Holland Pike Lancaster, PA 17601	Environmental Sample Analytical Testing Services	X							
Fairway Laboratories, Inc.				Robert McNair rmcnair@fairwaylaboratories.com	2019 9th Avenue Altoona, PA 16603	Environmental Sample Analytical Testing Services	X							
GemChem, Inc.				Gordon Young gyoung@gemchemsolutions.com	53 N. Cedar Street Lititz, PA 17543	Waste Transportation and Disposal								X
Gundy Excavating and Paving, Inc.			x	Steve Gundy gundyexca@yahoo.com	681 Knight Road Harrisburg, PA., 17111	Earthmoving and Excavation					X			
Hafer Petroleum Equipment, LTD				Scott Hafer scott.hafer@hafers.com	34 Angstadt Lane Birdsboro, PA 19508	Storage Tank Removals, Contaminated Soils Excavation and Disposal							X	X
International Asbestos Testing Laboratories, Inc.				Eric Snyder ericsnyder@iatl.com	9000 Commerce Parkway, Suite B Mt. Laurel, NJ 08054	Industrial Hygiene Sample Analysis Including Asbestos	X							
KLA Roofing and Construciton, LLC				Ken Tewell ken.klac@gmail.com	14280 Lincoln Highway Everett, PA 15537	Asbestos Abatement and Hazmat Disposal		X				X		X
Lewis Environmental				Rob Hilliard rhilliard@discoverlewis.com	155 Railroad Plaza Royersford, PA 19468	Storage Tank Removals, Spill Response, General Environmental Remediation		X			X		X	X
McCutcheon Enterprises, Inc.				Bryan Billick bryanb@completewastemgmt.com	250 Park Road Apollo, PA 15613	Storage Tank Removals, Spill Response, General Environmental Remediation		X			X		X	X
Navarro & Wright Consulting Engineers, Inc.				Kyle Brubaker kbrubaker@navarrowright.com	151 Reno Avenue New Cumberland, PA 17070	Asbestos Inspections, Engineering, Surveying, General Environmental Scientist Services								

Table I-2.D-1a
(continued)

Subcontractor Business Name	Small Business Designation			Contact Name and Email	Subcontractor Address	Description of Services To Be Performed	42-182 Various Tests	193-184 Level B & C PPE	203-209 Soil Core Drilling	210 GPR & Mag Survey	225-247 General Equipment	259-262 ACM Abatement	263-270 Tank Removal	271-282 Waste Disposal
	SB	SDB	VBE											
Odyssey Environmental Services, Inc.				Jason Miller jason@odysseyenv.com	1111 Gap View Road Dauphin, PA 17018	Soil Core Drilling and Sampling, Monitoring Well Installation and Abandonment		X	X		X			X
Pace Laboratories				Tonya Hironimus tonya.hironimus@pacelabs.com	1638 Roseytown Road Suites 2, 3 & 4 Greensburg, PA 15601	Environmental Sample Analytical Testing Services	X							
Prism Response/Alloy Group				Gary Skuba gskuba@prismresponse.com	70 Hillside Drive, Suite 200 Drums, PA 18222	Asbestos Abatement and Hazmat Disposal		X				X		X
Rhea Engineers & Consultants, Inc.		x		Brad McCalla brad.mccalla@rhea.us	333 Rouser Road, Suite 301 Moon Township, PA 15108	Geophysical Surveying, Release Investigation, General Environmental Scientist Services				X				
Richard T. Wimer, Inc.				Richard Wimer info@richardtwimerinc.com	431 Springville Road Quarryville, PA 17566	Storage Tank Removals and Installations, Contaminated Liquids and Soil Disposal					X		X	X
SciTek Consultants, Inc.		x		Charles Toran ctoran@scitekanswers.com	655 Rodi Road, Suite 303 Pittsburgh, PA 15235	Asbestos and LBP Inspections, General Environmental Scientist Services								
Supreme Safety, Inc.		x		Annette Patchell amy@supremesafetyinc.com	21 Richard Road Warminster, PA 18974	Safety Supplies and Personal Protective Equipment		X						
Total Tank Works				Sean Tosadori sean@totaltankworks.com	PO Box 303 East Butler, PA 16029	Storage Tank Removals and Installations, Contaminated Liquids and Soil Disposal					X		X	X

I-3. **Training.** If appropriate, indicate recommended training of agency personnel. Include agency personnel to be trained, the number to be trained, duration of the program, place of training, curricula, training materials to be used, number and frequency of sessions, and number and level of instructors.

Offeror Response

I-3 Training

Skelly and Loy provides training to a large number of public and private sector clients to enhance their understanding of specific scientific and technical issues affecting regulatory compliance. Training of PennDOT staff will be largely dependent on specific project goals and objectives; therefore, recommendations for future training and program evaluations will be made on a project-specific basis. These training programs will generally involve PennDOT staff tasked with performing evaluations of existing regulatory programs or providing evaluations of specific technical issues required for regulatory compliance (e.g., permit compliance inspections). The training will benefit those agency personnel involved with coordination or management of project assignments, completing permit applications, and field staff directly involved with field operations related to site investigations or construction oversight involving the voluntary cleanup, hazardous sites cleanup, or storage tank programs.

Annual HAZWOPER 8-Hour Refresher Training

Examples of training that Skelly and Loy has provided to public clients (PennDOT, PTC, and PA DEP) and private clients (mining companies, consulting firms, the Pennsylvania Council of Professional Geologists [PCPG], schools, etc.) include the following.

- Annual OSHA HAZWOPER (Health and Safety) Refresher Training
- Asbestos Awareness
- Confined Space Entry
- Public Involvement
- Technical Training for Professional Development through the PCPG Related to Hydrogeologic Investigations and Aquifer Testing
- Storage Tank Regulations (PA DEP-certified UST A and B Operator Training)
- Storage Tank System Inspections (Monthly Requirements)
- Management of Fill
- Management of Waste Materials and Waste Reduction
- Water Quality Monitoring and Modeling (MapShed and EPA SWMM5.1)
- Stormwater Counter Measures Plan (SCM)
- Water Surface Modeling (HEC-RAS)
- Erosion and Sedimentation Control

- Cultural Resource Professional Training
- NPDES Permitting
- Highway Noise Analysis (TNM 2.5)
- Drone (Unmanned Aerial Vehicle; UAV) Data Collection and Mapping Applications
- Wetland Identification and Delineation
- 404/105 Permitting and Compliance
- Invasive Species (e.g., Spotted Lanternfly, Zebra Mussels)
- Threatened and Endangered Species (e.g., Bog Turtles, Bats, Timber Rattlesnakes, Mussels, Spadefoot Toad, Bullrushes)
- Software Integration, Spatial Analysis, Database Development, and Information Visualization
- GIS, Digital Technology, CADD, Desktop Publishing, and Data Management Capabilities

Because the majority of these training sessions involved focused learning to achieve well-defined project objectives, they can typically be completed in a single eight-hour business day. More advanced and/or longer-duration training programs are available depending on specific project needs and curricula. These training programs can be coordinated and hosted at our Harrisburg and Pittsburgh offices, remotely through the use of large-format video conferencing, or by renting an off-site venue with the location determined based on the number of attendees. These program offerings will typically be presented by one to three of our most experienced senior professional staff with participation by mid-level staff with specific knowledge of a particular project site or specialized experience with certain field procedures.

The Storage Tank Regulations require that UST operators be trained and be designated by tank owners. There are three distinct classes or operators: Class A, B, and C. Class A and Class B operators require formal training, testing, and certification of training completed. Our training program for this certification has been approved by PA DEP since 2015, and we have completed numerous training requests for clients, both at our office locations and at clients' sites. This has proven to be a great time savings to our clients by eliminating unnecessary off-site travel to attend training. The option of completing this training virtually is also available.

The number, duration, and frequency of each training session will be determined based on PennDOT's needs and will be specially tailored to address key learning objectives identified by both the agency and Skelly and Loy. Training materials may include, but will not be limited to, the following.

- Large-format video conferencing touch screens (in-house)
- Interactive electronic whiteboards
- PowerPoint presentations (slides)
- Prepared hard copy, full-color handouts (text and graphics)
- Interactive computer display demonstrations (e.g., 3D groundwater flow model simulation results)
- Visualizations: 3D renderings, graphics, and animations of proposed projects (before and after images) for public displays (e.g., terrain, aquifer surfaces, buildings, bridges, miscellaneous structures)

- Site mapping of noise, air quality, wastes, ecological distributions, and other areas of concern produced with specialized modeling platforms in addition to ArcGIS Desktop and Mobile Applications

- Imagery from aerial photo reconnaissance fixed wing and copter drone (UAV) platforms that can be used to develop topographic base mapping

- Real-time field observations and recordation of activities in high-risk observation areas (e.g., beneath bridges, highly congested traffic areas, hazardous waste disposal sites, construction site operations, accident scenes, emergency response cleanups)

- Secure web-based information and geospatial management applications to include web development, data sharing, database development, and data storage sites customized to accommodate the specific needs of Departmental staff and other agency personnel

I-4. Financial Capability. Describe your company's financial stability and economic capability to perform the contract requirements. The Commonwealth reserves the right to request additional information to evaluate an Offeror's financial capability.

Offeror Response

I-4 Statement of Financial Ability and Economic Resources for Remediation Contract

Skelly and Loy was founded in 1969 and has offices in Harrisburg, Pittsburgh, and State College, Pennsylvania and Hunt Valley, Maryland. On February 1, 2020, Skelly and Loy became part of Terracon Consultants, Inc. (founded in 1965), a 5,000+ employee-owned international consulting firm. Terracon is headquartered in Olathe, Kansas. Skelly and Loy is proud of our Pennsylvania history (now in our 52nd year of providing professional consulting services). Our firm is competent, experienced, and prepared to demonstrate our abilities to deliver the required environmental and remediation services for the Remediation Contract.

Consistency and stability are a testament of a company's quality of work and its professional staff. Such qualities will benefit PennDOT by providing remediation services with sound professional judgments and information. This stability is a reflection of the sound oversight provided by our corporate officers/managers and the dedication of our professional staff. We feel that these qualities will greatly benefit DGS and PennDOT and support work order assignments under the Remediation Contract.

February 25, 2022

Maurice Kujat, Issuing Officer
Commonwealth of Pennsylvania
Department of General Services
515 North Office Building
Harrisburg, Pennsylvania 17125

Re: Financial Capacity Letter
RFP# 6100052061 – Environmental Remediation Services

Dear Mr. Kujat:

Skelly and Loy, Inc., *A Terracon Company* certifies that it has the personnel resources and financial capacity required to provide the services under this contract. As of December 31, 2020, our most recent audited financial statements, Terracon's total assets were $314,026,950, net worth was $167,000,000, and working capital was $128,000,000.

If you need any additional financial information, please contact me.

Sincerely yours,

SKELLY and LOY, Inc., *A Terracon Company*

Sandra K. Basehore
Senior Principal/Regional Manager

cc: PJN217494
File: Financial Capacity letter.docx

I-5. Requirements.

A. Emergency Preparedness. To support continuity of operations during an emergency, including a pandemic, the Commonwealth needs a strategy for maintaining operations for an extended period of time. One part of this strategy is to ensure that essential contracts that provide critical business services to the Commonwealth have planned for such an emergency and put contingencies in place to provide needed goods and services.

1. Describe how you anticipate such a crisis will impact your operations.

Offeror Response

I-5 Requirements

I-5.A Emergency Preparedness

I-5.A.1 Crisis Impact

The possibility of a crisis impacting operations is a potential event that every manager and staff member at Skelly and Loy is prepared to address. Crises can occur on the job site, in the office, or in the community at large. Skelly and Loy/Terracon has developed a Disaster Response Plan and a Pandemic Response Plan which provides specific responsibilities and required actions of our employees at the local and corporate level in response to a potential pandemic that would significantly impair the ability of the office to operate. Pandemic and catastrophic events include natural disasters and environmental concerns (such as pandemics, tornadoes, hurricanes, fires, large chemical spills, long-term power failures, and work-related fatality or multiple injuries). The first step our staff take in preparing for an unexpected incident is reading and understanding our Pandemic Response and Disaster Response Plans. The plans provide specific responsibilities and required actions of our employees at the local and corporate level.

As an example, over the past two years since the start of the COVID-19 pandemic, Skelly and Loy was forced to make internal changes to our business practices to address federal, state, and local health department recommendations/guidelines for protecting our employees and clients. Changes made have included:

- Obtaining a waiver from the Commonwealth of Pennsylvania for Skelly and Loy to be deemed an essential business to stay open for furnishing environmental and remediation services to our clients.
- Requiring employees to work from home and limit staff in the office to only when necessary.
- Using electronic media to conduct video conferencing with employees and clients to reduce face-to-face meetings.
- Establishing travel guidelines for employees to attend meetings, training, and conferences.

- Developing a PennDOT-approved COVID-19 safe workplan to allow our employees to resume prescheduled fieldwork activities, including the establishment of a Pandemic Safety Officer

- Continuing to modify and adjust our internal policies and procedures based on subsequent variants of the COVID-19 virus, including the Delta and Omicron strains

Skelly and Loy was successful in quickly changing our business practices to remain a fully operational consulting firm throughout the ongoing COVID-19 pandemic. As a testimony to our resourcefulness, **Skelly and Loy has continuously furnished remediation services to PennDOT during the COVID-19 pandemic** (emergency services were still needed, and we did not shut down). Internally, we continue to utilize a pandemic task force with defined roles and responsibilities for preparedness and response planning. At a minimum, the team includes representatives from our internal Safety, Human Resources, Legal, Information Technology, Marketing/Communications, Operations, and Executive Leadership teams to address health and safety concerns related to COVID-19. Although the future is uncertain as to other viruses and crises, the internal capabilities Skelly and Loy utilized to confront the COVID-19 pandemic will allow our company to address future crises in a logical and technical fashion for meeting the needs of our clients. Additionally, with offices across the country, Terracon is impacted by severe thunderstorms, flooding, hurricanes and tornadoes. Our disaster response plans enable staff members to quickly and efficiently account for our employees' safety following disasters and quickly mobilize personnel and resources to meet our employees' needs and our clients' needs.

2. Describe your emergency response continuity of operations plan. Please attach a copy of your plan, or at a minimum, summarize how your plan addresses the following aspects of pandemic preparedness:

   a. Employee training (describe your organization's training plan, and how frequently your plan will be shared with employees);

Offeror Response

I-5.A.2 Emergency Response Continuity of Operations Plan

As mentioned above, **Skelly and Loy/Terracon has developed a Pandemic Response Plan**. This plan is the result of the experiences of the company through its operations during the COVID-19 pandemic, specifically to capture the approaches, processes, and steps taken during the management of that event. An electronic copy of our Pandemic Response Plan is provided at the end of this section.

For the current pandemic, businesses play a key role in protecting employees' health and safety as well as limiting the negative impact to the economy and society. Planning for a pandemic is critical. As every pandemic is different, Pre-Task Planning protocols are developed specific to the situation.

As part of our Pre-Task Planning process, Skelly and Loy maintains an in-house supply of expendable items such as sampling supplies (tubing, filters, sampling cassettes, sampling bottles) and PPE supplies (gloves, ear plugs, masks, air respirator filter cartridges, and Tyvek suits). Since our purchasing power allows us to purchase supplies from multiple vendors, we are able to furnish services to our clients and avoid supply chain issues.

Skelly and Loy employees have the responsibility to follow all aspects of our policy, including polices generated to address pandemic-specific risks. Our appointed Pandemic Safety Officer allows for timely responses to employees' questions, concerns, or situations to ensure safe worker safety and maintain clients' needs. Employees will also utilize all PPE provided by our company. Failure to adhere to these guidelines may result in disciplinary action enforced upon the employee.

Management leads the pandemic-related response efforts for their respective areas of responsibility, including reviewing all incident reports. It is the responsibility of management to administer documented coaching and, if necessary, disciplinary action to an employee not adhering to the requirements of this program.

Supervisors have the responsibility to implement specific actions of this policy. Supervisors will also have the responsibility for knowing and following all client-required procedures.

Our ***Safety Department*** will ensure that all incident reports are received and logged, as required by policy. The company Safety Team will also schedule auditing of the program to ensure compliance by local offices and identify needs for revision. It will be the responsibility of the company Safety Team to file all required legislative paperwork and worker's compensation documentation.

I-5.A.2.a Training

We **implement an annual exercise to test the components of this plan** and revise it as necessary. Additional training criteria will be determined based on the details of the specific pandemic and may include but are not limited to:

- Disease spread prevention and containment
- Disease symptoms
- Personal hygiene
- Internal protocols
- Workplace monitoring
- Vaccination/immunization recommendations/protocols
- Return to work

After a pandemic situation, a post-incident debrief will be conducted to identify learning opportunities and take action to revise the Pandemic Response Plan as necessary to address current and future events.

b. Identified essential business functions and key employees (within your organization) necessary to carry them out;

Offeror Response

I-5.A.2.b Essential Business Functions and Key Employees

When a pandemic or potential pandemic is classified by the World Health Organization (WHO) or Centers for Disease Control (CDC), Skelly and Loy will take the following steps. These steps were and are a key part of our response to the ongoing COVID-19 pandemic.

- Identify a pandemic task force with defined roles and responsibilities for preparedness and response planning and include the establishment of a Pandemic Safety Officer. At a minimum, the team will include representatives from Safety, Human Resources, Legal, Information Technology, Marketing/Communications, Operations, and Executive Leadership.

- Identify a pandemic task force coordinator (Pandemic Safety Officer). This will most likely be the Director of Safety; however, based on pandemic-specific scenarios, a different executive owner may be selected.

- The Director of External Communications will establish a communications plan with key contacts, including both customers and suppliers. This procedure will include notifications to customers and suppliers with operations impacts and communicating employee exposures that may affect client project sites.

- Provide a subject matter expert to address operations in appropriate venues and forums to discuss response philosophies, roll out protocols, and provide updates/revisions to approaches/protocols, etc.

- The task force coordinator and Director of Strategic Communications will establish a communications plan with key contacts, a chain of communications with contact numbers for task force members, and processes for tracking business and employee status.

c. Contingency plans for:

i. How your organization will handle staffing issues when a portion of key employees are incapacitated due to illness; and.

ii. How employees in your organization will carry out the essential functions if contagion control measures prevent them from coming to the primary workplace.

Offeror Response

I-5.A.2.c Contingency Plans

Skelly and Loy will take the following steps to handle staffing issues and essential functions if contagion-control measures or and crisis situations prevent employees from coming to the primary workplace (i.e., office or field site).

- Assess the risk and impact of the pandemic or other illness on its workforce and operations. Essential employees will be identified, including a Pandemic Safety Officer and other critical members (e.g., raw materials, suppliers, subcontractor services/products, and logistics) required to maintain business operations by location and function during a pandemic.

- Train and prepare ancillary workforce (e.g., contractors, employees in other job titles, descriptions, or retirees).

- Forecast employee absences and adjust resources accordingly. As a long-standing business with excellent technology resources, Skelly and Loy can adjust resources to continue to support work if geographical regions within the Commonwealth are affected by employee absences.

- Enhance communications and information technology infrastructures as needed to support employee telecommuting and remote customer access.

- Quickly implement guidelines to allow telecommuting and work from home. Include staggered shift and flexible work hours considerations. Encourage employees to stay home if they or a family member are ill (there will be no reprisals against absence).

- Evaluate changes in project delivery or client communication that may be necessary to meet project/client needs while also providing safe environments for employees.

- Set up authorities, triggers, and procedures for activating and terminating the company's response plan, altering business operations (e.g., shutting down operations in affected areas), and transferring business knowledge to key employees.

As documented in Section I-2.C (Personnel), Skelly and Loy maintains a large staff; if necessary, due to an employee illness, work duties can be transferred to another staff member as needed in

response to illness related absences. Skelly and Loy has applied this strategy throughout the COVID-19 pandemic to furnish services to our clients.

Moreover, since the start of the COVID-19 pandemic, Skelly and Loy made the decision to close our business office for normal daily activities and have employees work remotely from their homes, as appropriate. We have employed this strategy for the past two years and have continued to provide full services to our clients throughout this time period.

3. How your organization will communicate with staff and suppliers when primary communications systems are overloaded or otherwise fail, including key contacts, chain of communications (including suppliers), etc. and;

Offeror Response

I-5.A.3 Communication

Communication will be performed on a regular basis with staff to update employees on pandemic and crisis situation plans and changing conditions.

- Develop and plan for employee and operational scenarios that may occur as a result of the pandemic, including the planning of likely employee, operational, and policy-related decisions that may be necessary as a result of the scenario occurring and how such decisions will be communicated. The goal is to have plans in place prior to a scenario occurring. When that is not achieved, develop plan as quickly as possible based on scenario experience. Revise plans in real time, as necessary, based on learnings from experience.

- Assess the potential impact of a pandemic on company business financials using multiple possible scenarios that affect different service lines and/or geographical regions.

- Assess the potential impact of a pandemic on business-related domestic and international travel (e.g., quarantines, border closures).

- Establish an emergency communications plan and revise it periodically. This plan includes identification of key contacts (with backups), a chain of communications (including suppliers and customers), and processes for tracking and communicating business and employee status.

If the phone system (land lines and cell phones) in a local area crashes, Skelly and Loy would rely on our internal network of staff members situated outside the affected area to take phone calls from our clients and interact with our suppliers and subcontractors. We have used this strategy in the past for responding to requests from PennDOT under the current and previous Remediation Contracts to deal with localized phone outages. For such a contingency, Skelly and Loy developed and furnished a contact list to PennDOT Central Office and the PennDOT Engineering District Offices. This contact list is typically referred to as the "**Rapid Response Notification List**." Basically, if Rapid Response services are needed, PennDOT calls the lead person on the list (Person #1). If Person #1 is unavailable, then Person #2 is called; if Person #2 is unavailable, then Person #3 is contacted, etc. This procedure has worked flawlessly for 24 years.

4. How and when your emergency plan will be tested, and if the plan will be tested by a third-party.

Offeror Response

I-5.A.4 Emergency Plan Testing

Our **Pandemic Plan has been tested and utilized for the past two years** (i.e., since the start of the COVID-19 pandemic). The Pandemic Plan is revised on a regular basis. Our current plan was last revised in February 2022. Additionally, Terracon tested and utilized our disaster response plan following Hurricane Ida, which severely impacted southern Louisiana, where Terracon has offices in Baton Rouge and New Orleans. We had a wide range of employees who evacuated the impact areas and some who did not. We first accounted for all of our employees and helped with their needs for damage sustained to their properties. We then began accounting for our clients' needs. (All of this with no local power for seven to ten days following the storm and spotty cellular phone coverage.)

In terms of testing our communication plan, as referenced above, Skelly and Loy developed and furnished a "Rapid Response Notification List" list to PennDOT Central Office and the PennDOT Engineering District Offices. The communication plan is tested and used on a regular basis (including with every Rapid Response project) and involves PennDOT calling the lead person on the Rapid Response Notification List (Person #1). If Person #1 is unavailable, then Person #2 is called; if Person #2 is unavailable, then Person #3 is contacted, etc. This procedure has been tested and has worked flawlessly for 24 years.

PANDEMIC RESPONSE POLICY

Quality Control

Document Owner		Position		Signature	
Change	**Page**	**Mod.**	**Authorization**		
			Name	**Signature**	**Date**
original	*all*	*0120*	*J. Wright*		*01-20*
COVID update	*all*	*0621*	*J. Wright*		*06-21*
rebranding, review	*all*	*0122*	*J. Wright*		*06-21*

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Attachments

Terracon COVID-19 Specific Pre-Task Planning Protocols

PREAMBLE & GUIDING PRINCIPLES

This plan document is the result of the experiences of the company through its operations during the COVID-19 pandemic, specifically to capture the approaches, processes, and steps taken during the management of that event. It is important to take this information in the context of overarching guiding principles that formed the mindset of decision-making during this period.

First and foremost, Terracon's Purpose, Vision, and Values as set out in our Strategic Plan formed the basis of how we approached this challenge, particularly around the Values of Caring and Integrity and our Vision of being Best at People. Using those concepts as our north star, we developed the following guiding principles that formed the basis of our decision-making:

1. We will rely upon pandemic health policy subject-matter experts for direction, including the United States Centers for Disease Control (CDC) as well as state and local health agencies/departments, and not be distracted by other non-expert voices in the process. Relying upon expert guidance, even at times in the face of objections to that guidance, created a dedicated commitment to the safety of our employees during the COVID pandemic.

2. Our default will be to rely upon the Integrity of Terracon employees and trust them to execute Terracon safety protocols. This does not mean there is no accountability for failing to comply but means that we will not set policy based on a lack of trust or unreasonable fear of noncompliance. Throughout the COVID pandemic, our employees consistently operated within our guidelines and protocols and maintained an excellent record of COVID-jobsite and office safety. This reinforced our belief that we could rely upon and trust our employees to properly execute pandemic protocols.

We are confident that if we execute the below plan based on the guiding principles discussed above, we will be doing our utmost to weather the storm of a pandemic in the best way possible.

1.0 Plan and Policy

This is a basic plan that sets out the procedures Terracon will take upon the onset of a pandemic and outlines the general immediate steps to be taken. This should serve as a policy document during the actual event. These procedures will be used in all Terracon workplaces and are to be enforced among contractors.

All contractors and subcontractors engaged by Terracon will be required (at a minimum) to comply with the requirements of this plan.

Clients may have their own policies, procedures, and forms. Where it is a requirement that client procedures and forms are used, it will be in addition to those required by this policy.

2.0 Definitions

Centers for Disease Control (CDC) – is a United States national public health institute. It is a United States federal agency under the Department of Health and Human Services.

Epidemic – an outbreak of a disease that has a sudden increase in cases.

Pandemic – a disease that is prevalent over a whole country or the world.

World Health Organization (WHO) – The World Health Organization is a specialized agency of the United Nations responsible for international public health. The WHO Constitution, which establishes the agency's governing structure and principles, states its main objective as "the attainment by all peoples of the highest possible level of health."

3.0 Regulatory Requirement

There is no specific safety legislation that requires a pandemic preparedness policy. A pandemic preparedness policy is required by many Terracon clients and is considered a best management practice. As an industry leader, Terracon has prepared this policy.

4.0 Responsibility

All employees have the responsibility to follow all aspects of Terracon policy, including polices generated to address pandemic-specific risks. They will also utilize all Personal Protective Equipment (PPE) provided by Terracon. Failure to adhere to these guidelines may result in disciplinary action.

Supervisors have the responsibility to implement specific actions of this policy. Supervisors will also have the responsibility for knowing and following all client-required procedures.

Terracon Safety will ensure that all incident reports are received and logged, as required by policy. The Terracon Safety team will also schedule auditing of the program to ensure compliance by local offices and identify needs for revision. It will be the responsibility of the Terracon Safety team to file all required legislative paperwork and worker's compensation documentation.

Management will lead the pandemic-related response efforts for their respective areas of responsibility, including reviewing all incident reports. It is the responsibility of management to administer documented coaching and, if necessary, disciplinary action to any employee not adhering to the requirements of this program.

5.0 Procedures

5.1 General

In the event of a pandemic, businesses will play a key role in protecting employees' health and safety as well as limiting the negative impact to the economy and society. Planning for a pandemic is critical. As every pandemic is different, pre-task planning protocols will be developed specific to the situation.

5.2 Initial Steps

When a pandemic or potential pandemic is classified by the World Health Organization (WHO) or Centers for Disease Control (CDC), Terracon will take the following steps:

- Identify a pandemic task force with defined roles and responsibilities for preparedness and response planning. At a minimum, the team will include representatives from Safety,

Human Resources, Legal, Information Technology, Marketing/Communications, Operations, and Executive Leadership.

- Identify a pandemic task force coordinator. This will most likely be the Director of Safety, however, based on pandemic-specific scenarios, a different executive owner may be selected.
- Find up-to-date, reliable pandemic information from scientific community, community public health, emergency management, and other sources and provide sustainable links to these resources for Terracon operations.
- Assess the risk and impact of the pandemic on Terracon's workforce and operations. Identify essential employees and other critical members (e.g., raw materials, suppliers, sub-contractor services/products, and logistics) required to maintain business operations by location and function during a pandemic.
- Train and prepare ancillary workforce (e.g., contractors, employees in other job titles/descriptions, retirees).
- Develop and plan for employee and operational scenarios that may occur as a result of the pandemic, including the planning of likely employee, operational, and policy-related decisions that may be necessary as a result of the scenario occurring and how such decisions will be communicated. The goal is to have plans in place prior to a scenario occurring. When that is not achieved, develop plan as quickly as possible based on scenario experience. Revise plans in real time as necessary based on learnings from experience.
- Assess potential impact of a pandemic on company business financials using multiple possible scenarios that affect different service lines and/or geographical regions.
- Assess potential impact of a pandemic on business-related domestic and international travel (e.g., quarantines, border closures).
- Establish an emergency communications plan and revise periodically. This plan includes identification of key contacts (with backups), chain of communications (including suppliers and customers), and processes for tracking and communicating business and employee status.

5.3 Protecting Employee-Owners

- Identify employees with elevated risk concerns and/or special needs and incorporate their requirements into the pandemic-specific pre-task planning protocols.
- Assess risk associated with current operations and determine any necessary operational changes in office or jobsite logistics to maximize safety of employees.
- Forecast and allow for employee absences due to factors such as personal illness, family member illness, community containment measures and quarantines, school and/or business closures, and public transportation closures.
- Quickly implement guidelines for social distancing (if applicable to the pandemic), to modify the frequency and type of face-to-face contact (e.g., hand-shaking, seating in meetings, office layout, shared workstations) among employees and between employees and customers (refer to CDC recommendations).
- Establish guidelines for testing of employees for pandemic-related exposures.

- Quickly implement guidelines to allow telecommuting and work from home. Include staggered shift and flexible work hours considerations. Encourage employees to stay home if they or a family member are ill and that there will be no reprisals against absence.
- Evaluate employee access to and availability of healthcare services during a pandemic and improve services as needed.
- Immediately implement enhanced cleaning and disinfecting protocols based on pandemic-specific situations. Protocols will be established to identify products to be used, cleaning requirements, and frequency.
- Evaluate any compensation or leave policy changes that may be implemented to reduce the financial hardship of pandemic on employees.
- Evaluate employee access to and availability of mental health and social services during a pandemic, including corporate, community, and faith-based resources, and improve services as needed.
- Identify and lock in suppliers for critical supplies. These supplies should include operational (business-critical) and pandemic protection items.
- Evaluate and if necessary, restrict access to Terracon facilities as necessary, discontinuing internal meetings, visitors, and client onsite visits. Executive-level approval is required for these internal meetings.
- Immediately implement travel restrictions (based on pandemic-specific impact) to business-critical needs only. Executive-level approval is required for travel.
- Establish protocols and communications supporting national, state, and local vaccination programs, including aspects associated with reducing financial burden of vaccination process on workforce. Key decisions involve whether vaccinations should be mandated or merely recommended, how such mandates would be executed, or how recommendations will be communicated.
- Revise, enhance, or remove protocols as needed based on the current status of pandemic safety guidance from health authorities and scientific expertise.
- Assist operations in the development of plans to emerge from the pandemic back to normal operations.

5.4 Planning for Client Impact

- Forecast employee absences and adjust resources accordingly. As a nationwide business with excellent IT resources, Terracon can adjust resources to continue to support work if geographical regions of the country are affected by employee absences.
- Evaluate any changes in project delivery or client communication that may be necessary to meet project/client needs while also providing safe environments for employees.
- Identify customers with special needs and incorporate their requirements into the pandemic-specific pre-task planning protocols.
- The Director of External Communications will establish a communications plan with key contacts including both customers and suppliers. This procedure will include notifications to customers and suppliers with operations impacts and communicating employee exposures that may affect client project sites.

5.5 Resource Allocation

- Provide subject-matter expertise to operations in appropriate venues and forums to discuss response philosophies, roll out protocols, and provide updates, revisions to approaches, protocols, etc.
- Provide sufficient and accessible infection control supplies in all business locations. This may include but is not limited to hand-washing facilities, hand sanitizers, tissues, no-touch trash cans, hand soap, and disposable towels.
- Enhance communications and information technology infrastructures as needed to support employee telecommuting and remote customer access.
- Ensure availability of medical consultation and advice for emergency response.
- Evaluate the need for purchase and stockpiling of business-critical supplies.

5.6 Pre-Task Planning Protocols

- Establish policies for employee compensation and sick-leave absences unique to a pandemic (e.g. non-punitive, liberal leave), including policies on when a previously ill person is no longer infectious and can return to work after illness.
- Establish policies for preventing disease spread at the worksites (e.g., promoting respiratory hygiene/cough etiquette, and prompt exclusion of people with relevant symptoms).
- Establish policies for employees who have been exposed to the pandemic, are suspected to be ill, or become ill at the worksite (e.g., testing, infection control response, immediate mandatory sick leave).
- Establish policies for restricting travel to affected geographic areas (consider both domestic and international sites), evacuating employees working in or near an affected area when an outbreak begins, and guidance for employees returning from affected areas (refer to CDC or WHO travel recommendations).
- Set up authorities, triggers, and procedures for activating and terminating the company's response plan, altering business operations (e.g., shutting down operations in affected areas), and transferring business knowledge to key employees.
- Encourage vaccinations, immunizations, or medical programs for pandemic-specific care and prevention. Terracon will support this by allowing paid time off for medical care and offering in-house services if available.
- Establish protocols for the resumption of normal activities at the close of the pandemic.

5.7 Communications Plan

- Communicate regularly and transparently on pandemic plans, even if we do not have all the answers, especially at the early stages. Leaders find comfort knowing that someone is developing the planning efforts and they do not have to try to figure it out on their own. Try to communicate ahead of scenarios as best you can, learn quickly from the scenarios when you cannot, and adjust plans accordingly.

- The task force coordinator and Director of Strategic Communications will establish a communications plan with key contacts, a chain of communications and contact numbers for task force members, and processes for tracking business and employee status.
- Develop and disseminate programs and materials covering pandemic fundamentals (e.g., signs and symptoms, modes of transmission), and personal and family protection and response strategies (e.g., hand hygiene, coughing/sneezing etiquette, contingency plans).
- Anticipate employee fear and anxiety, rumors, and misinformation, and plan communications accordingly.
- Ensure that communications are culturally and linguistically appropriate and provided in a language understandable to all employees.
- Disseminate information to employees about your pandemic preparedness and response plan.
- Provide information for the at-home care of ill employees and family members.
- Develop platforms (e.g., hotlines, dedicated websites) for communicating pandemic status, protocols, and actions to employees, vendors, suppliers, and customers, inside and outside the worksite, in a consistent and timely way, including redundancies in the emergency contact system.
- Identify community sources for timely and accurate pandemic information (domestic and international) and resources for obtaining countermeasures (e.g., vaccines and antivirals).
- Communicate vaccination/immunization recommendations and protocols as required. Provide encouragement for vaccination as appropriate for all staff levels.
- Communicate philosophies, plans, and protocols associated with the return to normal operations at the conclusion of the pandemic. This communication shall occur as soon as is reasonably possible to give operations as much time as possible to plan for and execute return-to-normal plans.

5.8 Community Involvement and Support

Terracon is committed to the communities in which we work. The Pandemic Task Force will evaluate how Terracon can assist local communities. At a minimum:

- Collaborate with insurers, health plans, and major local healthcare facilities to share your pandemic plan and understand their capabilities and plans.
- Collaborate with federal, state, and local public health agencies and/or emergency responders to participate in their planning processes, share your pandemic plans, and understand their capabilities and plans.
- Communicate with local and/or state public health agencies and/or emergency responders about the assets and/or services your business could contribute to the community.
- Share best practices with other businesses in your communities, chambers of commerce, and associations to improve community response efforts.

5.9 Training

Terracon will implement an annual exercise to test the components of this plan and revise as necessary. Additional training criteria will be determined based on the details of the specific pandemic and may include but are not limited to:

- Disease spread prevention and containment
- Disease symptoms
- Personal hygiene
- Terracon protocols
- Workplace monitoring
- Vaccination/immunization recommendations/protocols
- Return to work

After any pandemic situation, a post-incident debrief will be conducted to identify learning opportunities and take action to revise this policy as necessary.

5.10 Record-keeping

When a pandemic response task force is implemented, meeting minutes may be kept and filed as necessary. Additional record-keeping criteria will be determined based on the details of the specific pandemic.

I-6. Tasks. Describe in narrative form your technical plan for accomplishing the work using the task descriptions set forth below as your reference point. Modifications of the task descriptions are permitted; however, reasons for changes should be fully explained. Indicate the number of person or man hours allocated to each task. Include a Program Evaluation and Review Technique (PERT) or similar type display, time related, showing each event. If more than one approach is apparent, comment on why you chose this approach.

The offeror will provide Environmental Remediation Services at those locations as determined by PennDOT for Normal and Rapid Responses based on the following:

A. Service Specifications: The awarded Supplier will be expected to provide all labor, materials, tools, equipment, and incidentals necessary to perform environmental remediation on an as-needed basis for which the Supplier has been awarded. The Supplier must comply with all applicable Federal, State, and local government laws, regulations, ordinances and agreements (e.g. Memorandums of Understanding) by the jurisdiction where the services are to be performed. The Supplier is responsible for any fines or citations levied, as a result of their non-compliance with any applicable Federal, State, and/or local government laws, regulations, ordinances, and/or agreements.

Supplier shall staff a sufficient amount of personnel to perform services under this Contract, such as senior staff professionals, project staff professionals and Assistant Staff Professionals (titles can be found on **Appendix A – Cost Submittal**. In addition, all Key Professional Personnel must possess and maintain all applicable professional licenses throughout the term of this Contract.

Offeror Response

I-6 Tasks

I-6.A Service Specifications

Skelly and Loy understands that we will be expected to provide all labor, materials, tools, equipment, and incidentals necessary to perform environmental remediation on an on-call basis under the contract. The services will be performed in accordance with all applicable federal, state, and local government laws, regulations, ordinances, guidelines, and agreements (e.g., Memorandums of Understanding) by the jurisdiction where the services are provided. We also understand that it will be our responsibility to address fines or citations levied as a result of non-compliance with applicable federal, state, and/or local government laws, regulations, ordinances, and/or agreements.

As presented in Section I-2.C (Personnel) and Section I-2.D (Subcontractors), the Skelly and Loy team has the staff and resources to furnish comprehensive environmental investigation and remediation services under this contract. It should be noted that Skelly and Loy has established working relationships with the subcontractors on our team, and many of these “long-term” subcontractors have provided services to support work order assignments under the current and

past Remediation Contracts. The qualifications of our staff are presented in Section I-2.C (Personnel). Skelly and Loy understands that all key staff and support staff will possess and maintain all applicable professional licenses and/or certification throughout the term of this Contract.

Services under this Contract may include, but are not limited to the following:

1. **Aboveground Storage Tank (AST) System Removal.** Removal of tank and appurtenances (i.e. pedestal, containment structure, and footer, etc.), disposal of the tank and appurtenances, and completion of closure sampling, analysis, and documentation (including PA DEP notifications and reporting, if required). Closure, closure reporting, and corrective actions shall follow the PA DEP Storage Tank and Spill Prevention Act, Corrective Action Regulations format. For the purposes of solicitation this service does NOT include remediation or follow-up investigation.

   Suppliers and Subcontractor(s), if any, must possess and maintain, as per services needed, AMR, AMMX, and AMNX certification issued by the PA DEP for any services performed pertaining to AST systems removal and/or installation and modification.

   If it is determined that aboveground storage tank replacement services are necessary, and services are approved by PennDOT, the awarded Supplier rates/prices must be submitted as "Cost No Mark-Up" Items. Any necessary costs for equipment, tools, materials, labor and permits for the installation of tank and appurtenances (i.e. pedestal, containment structure, and footer, etc.), can only be charged for the time used during the installation portion of the process, as these items are already included in the cost of AST system removal services (Line Items 263 through 265). ASTs, particularly ASTs that contain heated product, may be wrapped with an insulating material. During the work order scoping for an AST system removal, the vendor is responsible for determining whether any AST system components are wrapped with an insulating material. If so, the work order scope should include an asbestos inspection of the insulating material, followed by the abatement of any asbestos containing material that will be disturbed during AST system removal. Asbestos inspection and abatement work are not included in AST removal line items and should be contracted using the appropriate asbestos inspection, abatement and waste disposal line items as appropriate.

Offeror Response

I-6.A.1 AST System Removal

Qualifications and Experience

Impacts from leaking storage tanks are a major source of soil and groundwater contamination. Industries, public utilities, public agencies, and private individuals are among the clients who call on Skelly and Loy to provide storage tank management services. Skelly and Loy has extensive

Skelly and Loy and our teaming partners have over 30 years' experience providing storage tank services. During this time, Skelly and Loy and our team have collectively performed over 2,500 storage tank closures (removal and closure in place, including product distribution systems) in the region.

experience with petroleum and hazardous USTs/ASTs. We employ PA DEP-certified and 40-hour OSHA-trained personnel and provide the following services:

- Removal and closure in place of USTs and ASTs
- Preparation of UST/AST closure reports
- Confined space entry and tank cleaning
- Leak detection monitoring for storage tanks and ancillary piping
- O&M services, including automatic tank gauging systems
- Site assessments for USTs/ASTs
- Site characterizations
- Storage tank management plans

Skelly and Loy and our teaming partners have collectively performed over 2,500 storage tank closures (removal and closure in place, including product distribution systems) in the Mid-Atlantic region. These projects have included cleaning, removing, installing, upgrading, repairing, inspecting, and testing of ASTs and USTs. Storage tank projects for routine maintenance and/or closure have included various types of stored products ranging from petroleum to processing chemicals. Skelly and Loy and our teaming partners (ACV Enviro, Coventry Environmental, Elk Environmental, Hafer Petroleum, McCutcheon Enterprises, Total Tank Works, and R.T. Wimer) hold certifications as tank removal companies. Moreover, our team employs personnel who are certified to perform regulated tank closure activities in the Commonwealth. Our storage tank specialists are experienced and accustomed to performing closure activities according to both federal and state (i.e., Act 32) regulations. Site activities are also performed in accordance with industry standards developed by the American Petroleum Institute (API), National Institute for Occupational Safety and Health (NIOSH), National Fire Protection Association (NFPA), Petroleum Equipment Institute (PEI), and United States Environmental Protection Agency (U.S. EPA).

Planned Approach and Procedures for Removing ASTs

AST System Removal, for the purposes of this bid, has been expanded in definition to include PA DEP-certified individuals holding AMR, AMMX, and AMNX certifications for services performed pertaining to AST systems. Pre-task planning, whether for Normal Response or Rapid Response projects, will initially involve identifying potential project hazards, existing or future safety concerns, PPE required of the job, scheduling project tasks, and developing the project work scope. Refinement of this work scope and prevailing wage determination are the next task steps and are key to work order development and accurate project forecasting and budgeting.

Skelly and Loy has completed numerous projects of this type for PennDOT under the current and previous Remediation Contracts, expediting AST removals to not interfere with other facility or project plans. A typical project sequence would be as follows.

After receipt of the notice to proceed, Skelly and Loy will obtain additional information on the AST planned for removal and verify the current registration with PA DEP (if applicable). Following receipt of this additional information, the AST removal operations will begin with preparation of an installation/closure notification form (PA DEP Form 2630-FM-BECB0513, rev. 12/2018) that is to be submitted 30 calendar days prior to proposed closure activities. The form is to be submitted electronically (i.e., via e-mail or on the GreenPort website) to the appropriate PA DEP regional office storage tank section. The form communicates pertinent information relative to the AST system undergoing closure and includes the AST location, owner information, proposed date of AST system closure, PA DEP-certified remover (AMR) and/or metallic tank installer (AMMX) or

non-metallic tank installer (AMNX) certified contractor completing tank handling activities, contractor/individual completing the closure site assessment, AST owner signature, and a description of planned closure activities. In certain instances where it is not feasible to wait 30 calendar days, PA DEP may grant a waiver of the 30-day notification and further grant acceptance of a proposed alternate work start date. This waiver must be received in writing before site work is initiated.

AST removal at the PennDOT Quarryville site

For sites where installations and/or modifications are being proposed, L&I will be contacted in advance. L&I approves the installation or relocation of tanks, pumps, and dispensing devices associated with flammable and combustible liquids that are regulated under the Combustible and Flammable Liquids Act. A Flammable & Combustible (F&C) Liquids Intent to Install form (LIBI-703, rev. 10/21) will be submitted to L&I along with a check or money order to cover the services and fees associated with proposed installation and/or major modification. Upon review and acceptance of the application, the forms and permit number will be mailed to the applicant and work can proceed. The work must be completed within one year of the application approval date. In addition to L&I, the local municipality in which the work will take place will be contacted to determine if site-specific requirements are needed for the proposed system installation and/or modification. An AST Modification Report (PA DEP Form 2630-FM-BECB0151, rev. 03/2013) requires a signature only by the certified tank installer (AMMX or AMNX) completing the modifications; however, the form will be reviewed by the supplier for content prior to submission.

Prior to initiating site operations, Skelly and Loy will dispatch a L&I certified Asbestos Inspector to the site to inspect the thermal insulation surrounding the AST. The inspector will collect samples of the insulation, caulking, and other suspect materials on the AST. The samples will be submitted to a NVLAP testing laboratory for determining if the sampled materials contain asbestos. If the sampled materials are determined to contain asbestos, Skelly and Loy will discuss the results with PennDOT and the requirements for performing asbestos abatement activities prior to removing the AST. If necessary, Skelly and Loy will develop a change order outlining the costs associated with the asbestos abatement work. Upon approval of the change order, Skelly and Loy will submit the necessary asbestos abatement notification to the PA DEP and schedule the abatement work. Following the asbestos abatement activities, the waste materials will be removed from the site, allowing the AST removal procedures to start.

At least three business days prior to conducting excavation work, a Pennsylvania One Call (PA-1-Call) system notification must be placed, either by phone (at 1-800-242-1776) or electronically (through PA-1-Call's Online Web Ticket Entry application), to notify utility companies to mark out nearby utility lines where they have responsibility in the proximity of the work site. Local municipalities will also be contacted to determine if local permits or approvals are required in advance of the planned AST removals. Our *IIF*™ safety culture also requires that a utility location be performed by a private utility locator in addition to what is provided via PA-1-Call.

AST Decommissioning and Removal Services
Dauphin County Maintenance Facility, PennDOT Engineering District 8-0
City of Harrisburg, Dauphin County, Pennsylvania

PennDOT District 8-0 Maintenance retained Skelly and Loy to remove an 8,000-gallon capacity AST, its appurtenances, and the ancillary equipment associated with the tank system.

The decommissioning work included disconnecting electric service to the tank; disconnecting, cleaning, and disposal of a 275-gallon ancillary AST; and removal of the residual asphalt road emulsion liquids/ sludge contained inside the tar tank and the associated containment areas.

Upon completion of the removals and related services, Skelly and Loy completed the amended AST registration form and submitted it to PA DEP on behalf of PennDOT. Along with the amended registration form, Skelly and Loy provided PennDOT with the associated manifests, disposal certificates, and photographs to document the AST closure activities.

These activities were completed in a cost-effective and timely manner protective of both the environment and the public. The AST structures and wastes generated were handled and properly disposed successfully as non-hazardous waste.

Safety Data Sheets of the substances stored in the tank(s) will be reviewed to determine which petroleum short list compounds will be tested for in the soil and/or groundwater samples to be collected. The selected analytical testing laboratory, accredited by the PA DEP's National Environmental Laboratory Accreditation Program (NELAP), will be contacted in advance to order appropriate sample containers with or without preservatives (if required by the standardized U.S. EPA laboratory testing methods); laboratory quality assurance/quality control (QA/QC) samples; and a trip blank, if required, to properly preserve the soil and/or groundwater samples between collection time and laboratory preparation/analysis. Requested laboratory turnaround time will also be confirmed with PennDOT; if no preference is determined, then standard two-week turnaround time will be specified.

In instances where the AST(s) proposed for removal contains tar or emulsion oils, special handling practices concerning the paint and insulation materials must be evaluated prior to removal. Older ASTs (manufactured prior to 1978) have the potential to contain LBP or paint that contains greater than 0.5% lead by weight. To determine if the outer shell paint contains LBP, an experienced L&I-certified Lead Inspector would complete a visual inspection of the tank's exterior and collect representative samples of each paint coating present on the exterior of the tank. These LBP samples would be submitted to a PA DEP NELAP-accredited analytical testing laboratory for subsequent testing and analyses. Insulation materials surrounding the tank's exterior as well as the pipe wrap insulation manufactured before 1975 have the potential to contain asbestos-containing material (ACM). An experienced U.S. EPA-trained and L&I certified asbestos inspector will identify suspect materials, document their condition, determine an estimated quantity of the materials present, and then sample the materials in accordance with U.S. EPA protocols. Asbestos samples would be submitted to an American Industrial Hygiene Association (AIHA)-accredited laboratory for subsequent testing and analyses. Requested laboratory turn-around time for both sample sets will be confirmed with PennDOT at the time of sampling; if no preference is determined, then standard two-week turnaround time will be specified. If the suspect material is found to be asbestos containing, we would hire one of our L&I certified asbestos abatement contractors to remove the ACMs prior to actual AST and piping removal.

All AST closure activities will, at a minimum, follow PA DEP's technical standards cited in *Closure Requirements for Aboveground Storage Tanks* (Technical Guidance Number 263-4200-001, dated April 10, 2021), in order to comply with state closure requirements for AST systems. Industry standard safety practices that will be followed during removal activities include API's Recommended Practice (RP) 2003 – *Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents* and API RP 2009 – *Safe Welding, Cutting, and Hot Work Practices in the Petroleum and Petrochemical Industries*. In addition to these technical guidance documents, site assessment obligations require soil and/or groundwater sampling to be completed to determine if a release had occurred from the AST system during its operation. Analytical test parameters for soil and/or groundwater samples are dictated by the product that was formerly stored within the tank. Testing parameters are further discussed in *Site Assessment Sampling Requirements at Regulated Storage Tank System Closures* (Technical Guidance Number 2630-BK-DEP4699 rev., 02/2022), as this guidance dictates which PA DEP petroleum short list analyte list will be run on the soil and/or groundwater samples that are collected. Additionally, this document lists action levels, developed in accordance with 25 Pa. Code Chapter 250, Administration of the Land Recycling Program, that soil and/or groundwater sample analytical results must meet in order to eliminate further site characterization.

AST removal at the PennDOT Huntingdon Maintenance Facility

Equipment staging and deployment that was discussed as part of the Pre-Task Planning will allow for site mobilization to occur quickly and safely. Equipment will be sized appropriately for the project assignment and confirmed to be in a state of good repair. Site utility disconnection will be confirmed prior to proceeding with site activities. Once the site safety meeting has been completed, utility mark-outs discussed, and the work area properly barricaded with safety cones and/or signage, the tank product lines will be drained back into the AST. Then all remaining liquids and sludges removed to the extent possible with a grounded vacuum truck. The AST will then be monitored with a combustible gas indicator (CGI) for explosive vapors and inerted with dry ice or nitrogen to displace the oxygen until the tank is confirmed to be free of potentially explosive vapors. Once this has been confirmed and documented, the tank will be removed from the pedestal or containment structure once properly cleaned. Depending on the size of the tank, the tank may need to be entered and cleaned by an individual who holds pertinent training to do so (i.e., OSHA Permit-Required Confined Space training and current OSHA 40-hour HAZWOPER training) as well as API RP 2015 – *Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks* and API RP 2015A – *Lead Hazards Associated with the Cleaning of Petroleum Storage Tanks*. The entrant will be fully equipped to enter the tank with a full body harness attached to a tripod and wench and with complete PPE. An attendant will stand by to provide emergency support, if needed. After the remaining liquids and sludges are removed, the inside of the tank will be jet rinsed with water. The rinse water will be disposed of along with residual product and sludge in accordance with local, state, and federal requirements.

AST Removal Services
PennDOT Engineering District 9-0
Blair County Maintenance Facility, Blair County, Pennsylvania

PennDOT Engineering District 9-0 retained Skelly and Loy to remove a 10,000-gallon capacity AST, its appurtenances, and the ancillary equipment associated with the tank system. The AST was historically utilized to store asphalt road emulsion that was used for local roadway improvements and paving activities.

The decommissioning work included **disconnecting electric service** to the tank, removal and re-routing of electric service to the nearby storage building, and removal of the residual asphalt road emulsion liquids/sludge wastes contained inside the AST. These **waste materials were sampled, characterized, and transported off the site to a permitted disposal facility**. Following removal of the AST, the conduit and wiring for the electric service were removed and the **concrete piers used to support the tank were demolished**.

Upon completion of the construction work, Skelly and Loy **completed the amended AST registration form** for submission to the PA DEP. Along with the amended registration form, Skelly and Loy provided PennDOT with the associated manifests, disposal certificates, field notes, and photographs to document the AST closure activities.

These activities were completed in a cost-effective and timely manner protective of both the environment and the public. The AST structures and wastes generated were handled and properly disposed successfully as non-hazardous waste.

Immediately following tank cleaning activities, the atmosphere inside the AST will be re-checked with the CGI for explosive vapors to confirm that the tank's CGI readings show a concentration of flammable vapors of zero or close to zero.

Soil excavation that is necessary due to removal of other site appurtenances (such as product piping) will be screened with a photoionization detector (PID) for VOCs. Potentially impacted material will be staged on and covered with plastic sheeting until analytical testing can be completed to determine the fate of the material removed Impacted soil removal for the purposes of this task would be limited to the area immediately surrounding subsurface piping requiring removal for sampling purposes. Throughout the removal process, the breathing zone air will be continuously monitored with the use of a PID capable of scanning for the emission of VOCs. If on-site ambient air conditions become unsafe, it may become necessary to upgrade the PPE if elevated concentrations of VOCs are detected in the breathing zone and if engineering controls cannot be implemented to remedy the situation. Such an upgrade would require PennDOT's approval before work would proceed.

In the event that subsurface product piping related to the AST is discovered, soil samples will be collected at the pipe unions and/or the required 20-foot intervals directly below piping runs, removing only what backfill material is necessary to allow for collection of representative soil samples. All soil sampling associated with the product piping removal will be done in accordance with the technical standards found in *Closure Requirements for Aboveground Storage Tank Systems* (Technical Guidance Number 263-2400-001, dated April 10, 2021). If necessary, SRS [as specified in 25 Pa. Code 250.703(d) as well as within the Technical Guidance Manual – Section III – Technical and Procedural Guidance (B,4,b)] will be employed for sampling excavations associated with the tank. This sampling method is accepted in PennDOT Publication 281 – Waste Site Evaluation Procedures.

Upon removal from the ground, the tank will be secured and supported on the ground surface while both the tank and piping are visually inspected and photographed to document their integrity, with perforations or corrosion documented. Once tank and piping inspection has been completed, both will be lifted onto a trailer and secured for transport. Tank interiors will either be cleaned on proper containment on the site to contain leakage or will be properly labeled and secured for transport to a facility for proper cleaning in accordance with regulatory requirements for tank cleaning and transport/disposal. Disposal of steel tanks and piping would occur through recycling. Documentation of recycling and/or disposal will be provided upon project completion. Site restoration efforts, if needed, consist of backfilling areas of excavation with clean fill to grade and topping the area with compacted crushed stone to the extent needed to level the surface prior to mobilizing from the site.

AST removal at the PennDOT Indiana Maintenance Facility

Pertinent project documentation, as outlined below, will be provided to PennDOT in draft version for review prior to final submission to PA DEP.

- An amended tank registration form is required to be submitted to PA DEP Central Office within 30 days of tank removal completion in order to have registration fees discontinued. This form requires signatures from the certified tank installer/remover as well as the tank owner, so the importance of timely submission of this information is a critical part of the process.

- The AST Closure Report (PA DEP Form 2630-FM-BECB0514, rev. 12/2018) will consist of the required AST closure report form, analytical testing reports, and site mapping. This strategy will be implemented for closure reporting consistency regardless whether the tank is regulated by PA DEP or unregulated (i.e., not registered by PA DEP), unless a detailed letter report is requested.

If a confirmed release of a regulated substance occurred from the AST system during removal activities, corrective actions will follow the 25 Pa. Code Chapter 245, Administration of the Storage Tank and Spill Prevention Program. If a confirmed release has occurred, interim remedial actions will be initiated and a site characterization completed. The site characterization report will follow the corrective action process, in its entirety, as outlined in 245.309 and 245.310 – pertaining to site characterization and reporting.

A typical project duration for a tank removal project is approximately 90 days from initial execution, although this can vary depending on the number of tanks, tank sizes, contents, presence of contamination, waste disposal, and/or project site constraints. Field work associated with a tank closure project has a duration of approximately one to two days. It should be noted that the Pre-Task Planning prior to the initiation of field work and post-project documentation preparation is where much of the project time is utilized.

AST Removal and New AST Installation
Huntingdon County Maintenance Facility, PennDOT Engineering District 9-0
Smithfield Township, Huntingdon County, Pennsylvania

Skelly and Loy provided removal and installation services for two ASTs at the Huntingdon County Maintenance District 9-5 facility. The services included **removal and disposal of a 10,000-gallon horizontal tar AST** located within a containment area in the maintenance yard and **installation and start-up of a new 8,000-gallon vertical tar AST** system on a newly constructed concrete foundation within the same containment area.

In preparation for removal of the 10,000-gallon tar AST, **asbestos management activities** (identification, sample collection, laboratory analysis, abatement, and off-site disposal) were completed by accredited asbestos personnel from Skelly and Loy in accordance with US EPA NESHAP regulations. The AST appurtenances and ancillary equipment associated with the tank system (safety platforms, railings, access ladder, tar heater, etc.) were detached for off-site transport purposes and recycled along with the tank structure.

A **new concrete foundation was constructed** to the tank manufacturer's specifications, and the **new 8,000-gallon vertical steel AST with agitator was installed** by a two-crane support system. Skelly and Loy and tank manufacturer representatives were on the site to install the tank components, oversee the tank install, and provide on-site training to PennDOT personnel at system start-up.

The AST services were completed without any disruption to daily operations at the PennDOT facility. These activities were completed in a cost-effective and timely manner protective of both the environment and the public.

Procedures for a Typical Planned (Normal Response) AST Removal Project

Upon receipt of a Purchase Order (Notice to Proceed) from PennDOT, Skelly and Loy will begin the planning stages for completing performing the AST removal work, including preparation and submission of a written work plan if required by the issuing PennDOT District Office or PennDOT Central Office. Even if not a requirement, Skelly and Loy will develop an internal work plan for employees to follow, including a HASP for completing the work in a safe and efficient manner. Following is an outline of the steps that will be completed for a typical excavation project.

- Prepare/submit (if required by PennDOT) a Work Plan and HASP
- Procure and schedule the storage tank removal contractor
- Submit the 30-day storage tank removal notice to the local PA DEP regional office
- Submit notification to L&I regarding the infrastructure project
- Submit notice of the planned removal of the AST to the local municipality
- Collect and analyze thermal insulation and other suspected materials for asbestos. Perform asbestos abatement as necessary.
- Mark out the proposed excavation area(s) at the site and place the PA 1-Call (three-day advance notification)

- Site mobilization and setup
  - Conduct tailgate safety meetings with contractor personnel (daily) and record it through our internal tailgate meeting app or completing a paper copy after every meeting (copies are stored in our electronic project file)
    - Review utility mark-outs with the tank removal contractor and address conflicts/concerns with appropriate utilities
    - Disconnect utilities (if present)
- Designate temporary staging areas for equipment, materials (backfill), and temporary storage of contaminated materials removed during demolition/excavation
- Set up erosion and sedimentation (E&S) controls around waste staging areas, as required
- Perform tank removal Work (including post-excavation sampling, if needed)
  - Remove residual liquids and clean tank
  - Clean tank of residual liquids and sludges
  - Check the atmosphere inside the tank to determine the lower explosive level (LEL); inert the tank, if required
  - Remove the tank from the containment area
  - Demolish the tank piers and clean the containment area of residual hydrocarbons
  - Collect soil samples from the containment area following removal of the AST; if contamination is suspected, the soil samples will be collected using SRS procedures
  - If contaminated soils and demolition materials are being temporarily staged on-site until off-site disposal is arranged, follow proper E&S controls for the soil stock-pile(s) to ensure compliance with local, state, and/or federal regulations
    - In addition, notification will be provided to the PennDOT Project Manager (PennDOT PM) providing information on the planned schedule for loading out contaminated media for off-site disposal
- Conduct periodic safety check-ins through our internal check-in app installed on every Skelly and Loy staff members' phones
- Backfill the excavation and restore the area in accordance with PennDOT specifications
- Demobilize the equipment
- Submit soil and groundwater samples to the PA DEP certified environmental testing laboratory for the appropriate PA DEP Short List of Petroleum Products

- Prepare/submit a draft closure report with all associated documentation to appropriate PennDOT contacts

- Revise the closure report in accordance with PennDOT comments and submit final closure report to PennDOT

Presented below is a Gantt chart presenting the steps, estimated schedule, and hours of the personnel who would be involved in the typical AST removal project discussed above.

Project Schedule and Manhour Estimate
for the Planned Removal (Normal Response) of an Aboveground Storage Tank

ID	Task Name	Duration	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Estimated Labor Hours Per Bid Item Numbers						
													2 PM	9 HazMat Tech	14 Env. Sci (Std)	15 Clerical	16 CADD	17 Survey	22 Env. Sci (std)
1	Notice to Proceed	1 Day											1	-	-	1	-	-	-
2	30-Day Removal Notice	30 Days											0.5	-	2	1	-	-	2
3	L&I Notification	1 Day											0.5	-	2	1	-	-	2
4	Local Municipality Notification	1 Day											0.5	-	-	-	-	-	1
5	Conduct Asbestos Inspection/abatement	13 Days											1	-	8	-	-	-	4
6	PA-1-Call	1 Day											-.5	-	2	-	-	-	1
7	Mobilization	1 Day											-	-	1	-	-	-	2
8	Disconnection of Utilities	1 Day											-	-	2	-	-	-	2
9	Liquid Waste Disposal	1 Day											-	-	1	-	-	-	2
10	Tank Cleaning	1 Day											-	-	1	-	-	-	2
11	Tank Removal	1 Day											-	-	1	-	-	-	2
12	Environmental Sample Collection	1 Day											-	-	-	-	-	-	8
13	Demolition of Piers	5 Days											-	8	2	-	-	-	8
14	Residual Waste Disposal	2 Days											-	-	-	-	-	-	8
15	Site Restoration	2 Days											-	-	-	-	-	-	8
16	Demobilization	1 Day											-	-	-	-	-	-	2
17	Laboratory Analysis of Environmental Samples	14 Days											-	-	-	-	-	-	2
18	Evaluation of Analytical Data	2 Days											1	-	2	-	-	-	4
19	Preparation of Amended Tank Registration	1 Day											2	-	2	1	-	-	2
20	Preparation of Closure Report	14 Days											4	2	8	4	4	4	12
21	Submittal of Closure Report to PennDOT	1 Day											2	-	-	2	-	-	-
Totals		**95 Days**											**13**	**10**	**34**	**10**	**4**	**4**	**74**

Labor Bid Item Numbers

2 Project Manager
3 Sr. Geologist/Hydrogeologist
5 Sr. Environmental/Sanitary Engineers
9 Technician, Hazardous Materials
11 Environmental/Sanitary Engineers
14 Environmental Scientist (Standard)
15 Clerical/Secretarial Personnel
16 Draftsperson/CADD Operator
17 Survey Crew: Includes PA Certified Surveyor
22 Environmental Scientist (Standard Rate)
34 Environmental Scientist (Emergency)
40 Environmental Scientist (Emergency)

2. **Underground Storage Tank (UST) System Removal.** Excavation and removal of the tank system, disposal of the tank and appurtenances, and performance of the PA DEP UST closure sampling, analysis, and documentation (i.e., PA DEP, PA L&I notifications and reporting). UST system removal line item costs are to include all required sampling and analysis costs. For the purpose of this service remediation or follow-up investigation is not included.

   Supplier and Subcontractor(s), if any, must possess and maintain, as per services needed, UMR and UMX certification issued by the PA DEP for any services performed pertaining to UST systems removal and/or installation and modification.

   If it is determined that underground storage tank replacement services are necessary, and services are approved by PennDOT, the awarded Supplier rates/prices must be submitted as "Cost No Mark-Up" Items. Any necessary costs for equipment, tools, materials, labor and permits for the installation of tank and appurtenances (i.e. pedestal, containment structure, and footer, etc.), can only be charged for the time used during the installation portion of the process, as these items are already included in the cost of UST system removal services (Line Items 266 through 270).

   Closure, closure reporting, and corrective actions shall follow the PA DEP Storage Tank and Spill Prevention Act, Corrective Action Regulations format for site characterization. Supplier shall follow the API Recommended Practice 1604: Removal and disposal of used underground storage tanks and PennDOT Publication 694/694A, the *Storage Tank Management Manual*. Confirmatory soil sampling shall be conducted in accordance with PennDOT Publication 281, the *Waste Site Evaluation Procedures Handbook*, which requires the use of systematic random sampling rather than biased sampling.

Offeror Response

I-6.A.2 UST System Removal

Planned Approach and Procedures for Removing USTs

UST System Removal, for the purposes of this bid, has been expanded in definition to include both PA DEP certified individuals holding UMR (removal) and/or UMX (installation and modification) for services performed pertaining to UST systems. Pre-Task Planning, whether for Normal Response or Rapid Response projects, will initially involve identifying potential project hazards, existing or future safety concerns, PPE required of the job, scheduling project tasks, and developing the project work scope. Refinement of this work scope and prevailing wage determination are the next steps and are key to work order development and accurate project forecasting and budgeting.

Skelly and Loy has completed numerous projects for PennDOT under current and previous contracts, expediting UST removals on sensitive highway projects to allow projects to proceed on schedule. A typical project sequence would be as follows.

Once notice to proceed has been received, additional information on the UST slated for removal activities has been obtained, and current registration with PA DEP verified (if applicable), UST removal operations will begin. An installation/closure notification form (PA DEP Form 2630-FM-BECB0127, rev. 12/2018) is submitted 30 calendar days prior to the proposed closure activities. This form will be submitted electronically (i.e., via e-mail or GreenPort) to the appropriate PA DEP regional office storage tank section. This form communicates pertinent information relative to the UST system undergoing closure and includes UST location, owner information, proposed date of UST system closure, PA DEP-certified installer (UMX) and/or certified remover (UMR) completing tank handling activities, contractor/individual completing the closure site assessment, UST owner signature, and a description of planned closure activities. In certain instances where it is unfeasible to wait 30 calendar days, PA DEP may grant a waiver of the 30-day notification and further grant acceptance of a proposed alternate work start date. This waiver must be received in writing before site work should be initiated.

UST removal for the PennDOT I-83 Mt. Rose Avenue Improvements Project

Rapid Response UST Removal Activities and Soil Sampling
S.R. 0202, Section S-01, PennDOT Engineering District 6-0
Buckingham Township, Bucks County, Pennsylvania

Skelly and Loy provided **Rapid Response tank removal**, soil sampling, and waste disposal services associated with the removal of two orphaned USTs discovered during roadway construction activities within the PennDOT right-of-way.

Skelly and Loy made the necessary notifications and coordinated the mobilization of equipment to the site for cleaning and removal of the unknown USTs. Prior to removing the USTs, the residual hydrocarbon liquids and sludge materials present in the tanks were evacuated via a vacuum truck. The liquids and sludge were transported to a permitted facility for treatment and disposal.

Skelly and Loy **collected soil samples** from the interval beneath each tank. All samples were screened prior to collection using a PID for assessing the presence/absence of VOCs. The soil samples were submitted to a PA DEP-accredited environmental laboratory for analysis of **petroleum short list compounds**.

All work activities were completed in a timely manner and within the project budget, allowing the highway construction work to proceed on schedule. The investigative activities were documented in a letter report and submitted to PennDOT for its records.

L&I will be contacted for sites where installations and/or major modifications are proposed. L&I approves the installation or relocation of tanks, pumps, and dispensing devices associated with flammable and combustible liquids that are regulated under the Combustible and Flammable Liquids Act. An F&C Liquids Intent to Install form (LIBI-703, rev. 10/2021) will be submitted to L&I along with a check or money order to cover the services and fees associated with proposed installation and/or major modification. (It should be noted that proposed work in Philadelphia County or Allegheny County have specific requirements.) Upon review and acceptance of the

application, the forms and permit number will be mailed to the applicant and work can proceed. The work must be completed within one year of the application approval date. In addition to the L&I, the local municipality in which the work will take place will be contacted to determine if site-specific requirements are needed for the proposed system installation and/or modification. A UST Modification Report (PA DEP Form 2630-FM-BECB0575, rev. 12/2018) requires a signature only from the certified tank installer (UMX) completing the modifications; however, the form will be reviewed by the supplier for content prior to submission.

At least three business days prior to excavation, a PA-1-Call system notification must be placed, either by phone (at 1-800-242-1776 and/or 8-1-1) or electronically (through PA-1-Call's Online Web Ticket Entry application), to notify underground facility owners to identify and mark out nearby utility lines in the proximity of the work site. Local municipalities will also be contacted to determine if permits or approvals are required in advance of the planned UST removals. Our *IIF*™ safety culture also requires that a utility location be performed by a private utility locator in addition to what is provided via PA-1-Call.

UST removal for the PennDOT S.R. 0412 Improvements Project, Bethlehem, Pennsylvania

Safety Data Sheets of the substances stored in the tank(s) will be reviewed to determine which petroleum short list compounds will be tested for in the soil and/or groundwater samples to be collected. The selected analytical testing laboratory, accredited by PA DEP's NELAP, will be contacted in advance to order appropriate sample containers with or without preservatives (if required by the standardized U.S. EPA testing methods); laboratory QA/QC samples; and a trip blank, if required, to properly preserve the soil and/or groundwater samples between the time of collection and laboratory preparation/analysis. Requested laboratory turnaround time will also be confirmed with PennDOT; if no preference is determined, standard two-week turnaround time will be used.

UST Removals
S.R. 0412 Improvements Project, PennDOT Engineering District 5-0
Bethlehem, Northampton County, Pennsylvania

Skelly and Loy provided environmental and waste management support services associated with the removal of four USTs on behalf of PennDOT for the S.R. 0412 roadway improvements project in Bethlehem, Northampton County, Pennsylvania.

Three 1,000-gallon USTs and one 1,500-gallon UST were present at the site. Prior to removing the USTs, a vacuum truck removed the residual hydrocarbon liquids/wastewater present in the tanks. The liquids were transported to a permitted processing facility for treatment and disposal. **All four USTs were removed by a licensed contractor** and transported to an off-site recycling facility. To characterize the subsurface materials, Skelly and Loy collected samples of both soil and groundwater from the tank excavations.

All work activities were completed in a timely manner and within the project budget, allowing construction activities for the intersection improvement project to proceed on schedule.

All closure activities will, at a minimum, follow PA DEP's technical standards cited in *Closure Requirements for Underground Storage Tank Systems* (Technical Guidance Number 263-4500-601, dated 07/2017) and API's RP 1604 – *Closure of Underground Petroleum Storage Tanks* in order to comply with state closure requirements for UST systems and industry standard practices. In addition to this technical guidance, site assessment obligations require soil and/or groundwater sampling to be completed to determine if a release had occurred from the UST system during its operation. Analytical test parameters for soil and/or groundwater samples are dictated by the product that was formerly stored within the tank. Testing parameters are further discussed in *Site Assessment Sampling Requirements at Regulated Storage Tank System Closures* (Technical Guidance Number 2630-BK-DEP4699, Rev. 2/2022); this guidance dictates which PA DEP petroleum short list analyte list will be run on the soil and/or groundwater samples that are collected. Additionally, this document lists action levels (developed in accordance with 25 Pa. Code Chapter 250, Administration of the Land Recycling Program) that soil and/or groundwater sample analytical results must meet in order to eliminate further site characterization.

Equipment staging and deployment that was discussed as part of the Pre-Task Planning will allow for mobilization to occur quickly and safely. Equipment will be sized appropriately for the project assignment and be in a state of good repair. Disconnection of pertinent site utilities would be confirmed prior to proceeding with further site activities. Once the on-site safety meeting has been completed, utility mark-outs have discussed, and the work area properly barricaded with safety cones and/or signage, the tank product lines will be drained back into the tank and all remaining liquids and sludges will be removed in the UST to the extent possible with a grounded vacuum truck. Depending on the size of the tank, the tank may need to be entered and cleaned by an individual who holds pertinent training to do so (i.e., OSHA Permit-Required Confined Space training and current OSHA 40hr HAZWOPER training) as well as API Standard 2015 – *Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks*. The entrant will be fully equipped to enter the tank with a full body harness attached to a tripod and retrieval wench and with complete PPE. An attendant will stand by to provide emergency support, if needed. After the remaining liquids and sludges are removed, the inside of the tank will be jet-rinsed with water. The rinse water will be disposed of along with residual product and sludge in accordance with local, state, and federal requirements.

Immediately following tank cleaning activities, the UST will be inerted with dry ice or nitrogen to displace the oxygen concentration in the tank's atmosphere or purged with an educator-type air mover that removes vapors out of the tank and allows fresh air to enter the tank. The purging or inerting processes will follow API's RP 1604 – *Closure of Underground Petroleum Storage Tanks.* During the removal of flammable vapors by either method, the atmosphere inside the UST will be monitored with a CGI for explosive vapors until the CGI's readings show the tank's concentration of flammable vapors to be zero or close to zero. Once this has been confirmed and documented, the tank's product lines will be disconnected from the system and removed from the ground.

UST removal for the PennDOT I-95, Section CP2 Improvements Project

In accordance with the technical standards found in *Closure Requirements for Underground Storage Tank Systems* (Technical Guidance Number 263-4500-601, dated July 8, 2017), soil samples will be collected from beneath the piping unions and/or the required twenty-foot intervals and one-foot below piping runs, removing only what backfill material is necessary to allow for collection of representative soil samples. The tank's appurtenances will then be removed, as necessary, then the tank will be removed from the ground. Soil sampling within the tank excavation will follow PA DEP's SRS [as specified in 25 Pa. Code 250.703(d)] as well as within the Technical Guidance Manual – Section III – Technical and Procedural Guidance (B, 4, b). SRS sampling consists of measuring the dimensions of the excavation, determining the total surface area of the excavation, calculating the volume of the excavation, and determining the number of soil samples to be collected. Once determined, the spacing between sampling points can be calculated with the following equation:

$$\mathrm{L} = \sqrt{\mathrm{A/n}}$$ (where A = area and n = number of sample points)

The calculation of a random starting point on both the X and Y axes will be calculated using a spreadsheet to generate two random numbers (RND) between 0 and 1.0 with the following equations:

$$X = X_{min} + (\Delta X \; x \; RND) \text{ and } Y = Y_{min} + (\Delta Y \; x \; RND)$$

After the randomly generated coordinate (X,Y) is calculated, sampling can begin at that generated coordinate. Then the spacing, calculated earlier, will be followed throughout the SRS grid. The SRS technique implies a statistical evaluation whereby 75% of the sample analytical results must meet the PA DEP Act 2 statewide health standards (SHS), and none of the sample analytical results can exceed the SHS by a factor of 10 times the SHS for the particular targeted testing parameters. This sampling method is accepted in PennDOT Publication 281 – Waste Site Evaluation Procedures and is mandated for UST closures in instances following the excavation of contaminated soil.

UST Removal and Soils Evaluation
Lititz Pike Bridge, S.R. 222, Section 027, PennDOT Engineering District 8-0
Manheim Township, Lancaster County, Pennsylvania

Skelly and Loy **provided rapid respond services** to PennDOT to address an UST encountered during construction activities at the subject site. The UST was delaying the installation of a utility line by the construction contractor.

The UST was unearthed and removed using a backhoe. A tanker truck was utilized to pump the liquids contained in the steel UST. Approximately **1,000 gallons of liquid** was removed from the UST and transported to an **off-site permitted disposal facility**.

Soil samples were collected from the tank excavation and field-screened with a PID. The **soil samples were then submitted to a PA DEP-licensed environmental testing laboratory** for analysis of the compounds contained on PA DEP's **Short List of Petroleum Products for Fuel Oil Number 2 compounds**.

All work activities were completed in a timely manner and within the project budget, allowing the construction activities for the roadway improvement project to proceed on schedule.

All soils removed from the excavation will be screened for VOCs with a PID. Potentially impacted material will be staged on and covered with plastic sheeting until analytical testing can be completed to determine the fate of the material removed. Once the tank has been completely uncovered, the tank's atmosphere will be monitored again for explosive vapors with the CGI to confirm a safe tank atmosphere throughout the removal process. Throughout the removal process, the breathing zone air will be continuously monitored with the use of a PID capable of scanning for the emission of VOCs. If on-site ambient air conditions become unsafe (if elevated concentrations of VOCs are detected in the breathing zone and if engineering controls cannot be implemented to remedy the situation), it may become necessary to upgrade the PPE. Such an upgrade would require PennDOT's approval before work would proceed.

Upon removal from the ground, the tank will be secured and supported on the ground surface while both the tank and piping are visually inspected and photographed to document their integrity, with perforations or corrosion documented. Once tank and piping inspection has been completed, both will be lifted onto a trailer and secured for transport. Disposal of steel tanks and piping would be via recycling while fiberglass tanks and piping would be disposed as residual waste, once cleaned. Tank interiors will either be cleaned on proper containment on the site to contain leakage or will be properly labeled and secured for transport to a facility for proper cleaning in accordance with regulatory requirements for tank cleaning and transport/disposal. Documentation of recycling and/or disposal will be provided upon project completion. Site restoration efforts typically consist of backfilling with clean fill to grade and topping the area with compacted crushed stone to the extent needed to level the surface prior to mobilizing from the site.

Pertinent formwork, as outlined below, will be submitted to PennDOT as drafts prior to final submission to PA DEP.

- A Storage Tanks Registration/Permitting Application form (PA DEP Form 2630-PM-BECB0514, rev. 6/2019), also referred to as an amended tank registration form, is a required submittal directed to PA DEP Central Office within 30 days of tank removal completion in order to have the registration fee and UST Indemnification Fund (USTIF) billing discontinued. This form requires certified tank installer and/or tank remover signature as well as the tank owner signature, so the importance of timely submission of this information is a critical part of the process. While state agencies are not eligible for USTIF coverage directly, this coverage can be transferred from active USTIF claims in certain circumstances.

- The UST Closure Report (PA DEP Form 2630-FM-BECB0159, rev. 12/2018) will consist of the required UST closure report form from the aforementioned PA DEP guidance document on UST closure, analytical testing reports, and site mapping. This strategy will be implemented regardless whether the tank is regulated by PA DEP or unregulated (i.e., not registered by PA DEP) for closure reporting consistency, unless a detailed letter report is requested.

If a confirmed release of a regulated substance occurred from the UST system during removal activities, corrective actions will follow the 25 Pa. Code Chapter 245, Administration of the Storage Tank and Spill Prevention Program. If a confirmed release has occurred, interim remedial actions will be initiated and a site characterization completed. The site characterization report will follow the corrective action process, in its entirety, as outlined in 245.309 and 245.310 – pertaining to site characterization and reporting.

UST removal at the PennDOT Preston Center Stockpile, Wayne County, Pennsylvania

The typical duration of a tank removal project is approximately 90 days from initial execution, although this can vary depending on the number of tanks, tank sizes, contents, presence of subsurface contamination, waste disposal, and/or project site constraints. Field work associated with a tank removal project has a duration of approximately one to two days. It should be noted that the Pre-Task Planning prior to the initiation of field work and post-project documentation preparation is where much of the project time is utilized.

Procedures for a Typical Planned (Normal Response) UST Removal Project

Upon receipt of a Purchase Order (Notice to Proceed) from PennDOT, Skelly and Loy will begin the planning stages for completing performing the UST removal work, including preparation and submission of a written work plan, if required by the issuing PennDOT District Office or PennDOT Central Office. Even if not a requirement, Skelly and Loy will develop an internal work plan for its employees to follow, including a HASP for completing the work in a safe and efficient manner. Following is an outline of the steps that will be completed for a typical excavation project.

- Prepare/submit (if required by PennDOT) a Work Plan and HASP
- Procure and schedule the storage tank removal contractor
- Submit of the 30-day storage tank removal notice to the local PA DEP regional office
- Submit notification to L&I regarding the infrastructure project
- Submit notice of the planned removal of the UST to the local municipality
- Mark out the proposed excavation area(s) at the site and place the PA 1-Call (three-day advance notification)
- Site mobilization and setup
  - Conduct tailgate safety meetings with contractor personnel (daily) and record it through our internal tailgate meeting app or completing a paper copy after every meeting (copies are stored in our electronic project file)

    - Review utility mark-outs with the tank removal contractor and address conflicts/concerns with appropriate utilities
    - Disconnect utilities (if present)
  - Implement controls to prohibit public access for Class C1 Non-Roadway Work (including temporary fencing, cones, or barricades) as deemed necessary based on the site conditions and in accordance with the Site Work Plan and HASP

- Designate temporary staging areas for equipment, materials (backfill), or temporary storage of contaminated materials removed during excavation
- Set up E&S controls around soil staging areas as required
- Perform tank removal work (including post-excavation sampling)
  - Excavate soils overlying and surrounding the UST(s)
  - Screen soils using a PID to segregate petroleum-impacted soils from clean soils.
  - Open tank and remove residual liquids
  - Clean tank of residual liquids and sludges
  - Check the atmosphere inside the tank to determine the LEL; inert the tank, if required
  - Remove the tank from the excavation
  - Clean the outside of the tank and load the tank on a trailer/truck to transport it to a recycling facility
  - Collect soil and groundwater samples from the excavation following removal of the UST; if contamination is suspected, the soil samples will be collected using SRS procedures
  - If contaminated soils are being temporarily staged on-site until off-site disposal is arranged, follow proper E&S controls for the soil stockpile(s) to ensure compliance with local, state, and/or federal regulations
    - In addition, notification will be provided to the PennDOT PM providing information on the planned schedule for loading out contaminated media for off-site disposal
- If necessary, berm the outside of the excavation with temporary caution fencing
- Backfill the excavation and restore the area in accordance with PennDOT specifications for Class C1 excavation
- Conduct periodic safety check-ins through our internal check-in app installed on every Skelly and Loy staff members' phones

- Demobilize equipment
- Submit soil and groundwater samples to the PA DEP certified environmental testing laboratory for the appropriate PA DEP Short List of Petroleum Products
- Prepare/submit a draft closure report with all associated documentation to appropriate PennDOT contacts
- Revise the closure report in accordance with PennDOT comments and submit the final closure report to PennDOT

Presented below is a Gantt chart showing the steps, estimated schedule, and hours of the personnel who would be involved in the typical UST removal project discussed above.

Project Schedule and Manhour Estimate
for the Planned Removal (Normal Response) of an Underground Storage Tank

ID	Task Name	Duration	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Estimated Labor Hours Per Bid Item Numbers					
													2 PM	14 Env. Sci (Std)	15 Clerical	16 CADD	17 Survey	22 Env. Sci (std)
1	Notice to Proceed	1 Day											1	-	1	-	-	-
2	30-Day Removal Notice	30 Days											0.5	2	1	-	-	2
3	L&I Notification	1 Day											0.5	2	1	-	-	2
4	Local Municipality Notification	1 Day											0.5	-	-	-	-	1
5	PA-1-Call	1 Day											0.5	2	-	-	-	1
6	Mobilization	1 Day											-	1	-	-	-	2
7	Disconnection of Utilities	1 Day											-	2	-	-	-	2
8	Liquid Waste Disposal	1 Day											-	1	-	-	-	2
9	Tank Cleaning	1 Day											-	1	-	-	-	2
10	Tank Removal	1 Day											-	1	-	-	-	2
11	Environmental Sample Collection	2 Days											-	2	-	-	-	16
12	Residual Waste Disposal	2 Days											-	-	-	-	-	8
13	Backfilling and Site Restoration	2 Days											-	-	-	-	-	8
14	Demobilization	1 Day											-	-	-	-	-	2
15	Laboratory Analysis of Environmental Samples	14 Days											-	-	-	-	-	2
16	Evaluation of Analytical Data	2 Days											1	2	-	-	-	4
17	Preparation of Amended Tank Registration	1 Day											2	2	1	-	-	2
18	Preparation of Closure Report	14 Days											4	8	4	4	4	12
19	Submittal of Closure Report to PennDOT	1 Day											2	-	2	-	-	-
Totals		**78 Days**											**12**	**26**	**10**	**4**	**4**	**70**

Labor Bid Item Numbers

2 Project manager
3 Sr. Geologist/Hydrogeologist
5 Sr. Environmental/Sanitary Engineers
9 Technician, Hazardous Materials
11 Environmental/Sanitary Engineers
14 Environmental Scientist (Standard)
15 Clerical/Secretarial Personnel
16 Draftsperson/CADD Operator
17 Survey Crew: Includes PA Certified Surveyor
22 Environmental Scientist (Standard Rate)
34 Environmental Scientist (Emergency)
40 Environmental Scientist (Emergency)

3. **Excavation.** Excavation Services may include but not limited to the following:

   a. Excavation of contaminated media and waste.

   b. Excavation and temporary on/off-site staging of contaminated media and waste.

   c. Excavation and selective placement (in accordance with PennDOT Publication 408, current edition) of contaminated media on-site, such that the effected work area is returned to a Level D health and safety condition.

   d. The limits of excavation for UST system removal(s) shall include only the necessary excavation required to remove the tank system(s) (tank and appurtenances) and the reinforced concrete hold-down pad. AST demolition/removals shall include the tank system (tank and appurtenances), secondary containment structure, and tank support structure (i.e. concrete pad, pedestal, footer, etc.).

   e. Supplier shall provide barricades around any open excavations that will be unoccupied for any length of time. Supplier shall also take necessary steps to prevent precipitation run-off from entering the excavation. All water entering excavation(s), due to the Supplier's inadequate securing of the excavation from run-off shall be pumped and treated at the Supplier's expense.

   f. All excavated materials deemed to be contaminated shall be segregated from uncontaminated or less contaminated debris to minimize all required off-site disposal.

      Awarded Supplier and Subcontractor(s) who will be performing excavation and grading work must be prequalified through PennDOT's Bureau of Construction in accordance with Pennsylvania Code, Title 67, Chapter 457, Prequalification of Bidders regulations for the following:

Work	**Code**	**Classification**
Earthwork	C	Roadway Excavating and Grading, or
	C1	Non-Roadway Excavating

      In order to become pre-qualified in one or both of the above areas, Supplier must first be registered as a "Business Partner" through PennDOT's ECMS system at: https://www.ecms.penndot.gov/ECMS/ . Generally the process requires two (2) weeks to register in ECMS as a business partner and thirty (30) to forty-five (45) calendar days concurrently to apply for prequalification. Any questions concerning the PennDOT ECMS system should be directed to the ECMS help desk at (717) 783-7711. Any questions on the Business Partner Registration may be directed to (717) 783-8330.

Offeror Response

I-6.A.3 Excavation

Based on the types of work expected to be performed under the Remediation Contract, remedial activities may include the excavation of soils. Skelly and Loy has provided soil excavation services at numerous sites across Pennsylvania on behalf of both public and private clients. Over the past 24 years, Skelly and Loy has excavated, characterized, managed, and disposed of over 100,000 tons of contaminated soil for PennDOT. An example of our experience in excavating, characterizing, and disposing of soil and waste materials is presented below.

Site Investigation, Remediation, and Engineering Support
Bear Creek Maintenance Facility, PennDOT Engineering District 4-0
Bear Creek Township, Luzerne County, Pennsylvania

Skelly and Loy assisted with providing environmental and engineering support services for several phases of work at the Bear Creek Maintenance site. Initial activities **addressed buried waste materials** (scrap steel, tree stumps, cans, bottles, engine parts, guide rails, tires, vinyl siding) discovered during construction work at the site. Within the footprint of the construction area, Skelly and Loy excavated and disposed of contaminated soils and waste materials. Approximately 2,000 gallons of water and **1,500 tons of residual solid waste materials were excavated and disposed** during this phase.

During the excavation of a new utility trench, tar-impacted soils and waste materials were discovered at the site. Skelly and Loy also responded to a release from an oil/water separator. Approximately **1,200 tons of tar-impacted soils and waste materials were excavated and disposed** at off-site permitted facilities.

To support these remediation projects, Skelly and Loy and our teaming partners have excavated contaminated media and waste and worked with PennDOT personnel to stage the excavated materials in on-site/off-site areas to meet the needs of the construction project or facility. Our work has included the use of straw bales and silt fencing to berm the edges of the stockpiled soils as an E&S control and the use of plastic sheeting to cover the soil/waste materials.

In addition, our geologists and environmental scientists are experienced in developing sampling plans to characterize the materials for disposal. Skelly and Loy routinely furnishes PennDOT with services related to the sampling the characterization of excess soils generated during construction projects to meet the PA DEP Management of Fill Policy guidelines. These services have included providing PennDOT with cost-saving recommendations for the on-site and off-site management of the excavated soils such as the following project.

Management of Fill, Soil Characterization and Soil Disposal
S.R. 6202, Pickertown Road, PennDOT Engineering District 6-0
Warrington Township, Bucks County, Pennsylvania

A 4,000-cubic-yard soil pile was generated as part of a PennDOT bridge construction project. The soil materials were evaluated to determine available options for reusing or disposing the soils based on the PA DEP Management of Fill Policy. Previous investigations determined that arsenic was the constituent of concern in the soils.

Skelly and Loy prepared a sampling plan to characterize the soil pile. The soil pile was gridded into approximate 20-foot intervals laterally and 5-foot intervals vertically. Using a track-mounted Geoprobe® unit, Skelly and Loy collected 81 soil samples for the analysis of arsenic by a certified laboratory. The analytical results showed that the concentrations of arsenic contained in the majority of the soil pile were within the *clean fill criteria* and the *regulated fill criteria*.

The soils classified as a regulated substance were selectively excavated from the soil pile and disposed of as a residual waste at an off-site permitted facility. Approximately 61.5 tons of soil were disposed. **The remaining soil materials were reused on the site, at an estimated cost savings of over $180,000**.

As discussed previously under Section I-6.A.1 (AST System Removal), Skelly and Loy is cognizant and understands PennDOT's procedures that, during demolition/removal of AST systems, excavation work will only include the tank system (tank and appurtenances), secondary containment structure, and tank support structure (i.e., concrete pad, pedestal, footer, etc.). In addition, our procedures for the removal of UST systems limit excavation work to only those materials required to remove the tank system(s) (tank and appurtenances) and the reinforced concrete hold-down pad. In addition, on-site personnel routinely use PIDs to screen excavated soils, segregating the contaminated materials from uncontaminated debris to minimize the volume of waste requiring off-site disposal (i.e., reduce project costs). Prior to initiating excavation activity, Skelly and Loy places a request with the PA-1-Call system to obtain a mark-out of underground utilities within the proposed construction area. If excavation services are needed for an emergency response (i.e., removal of an orphan UST), Skelly and Loy works with the general highway contractor and PennDOT officials to obtain information regarding the location of potential underground utilities within the work area. When performing remedial work, Skelly and Loy routinely provides barricades around open excavations that will be unoccupied for a length of time. In high-traffic areas Jersey barriers can be used to prevent vehicular traffic from driving into excavations. To minimize liquid disposal costs and expedite on-site remedial work, Skelly and Loy takes steps to prevent precipitation runoff from entering excavations by using excess soils to berm the edges of the tank pit.

Photograph showing the placement of orange safety fencing (i.e., barricade) around an open excavation for the removal of two USTs for the PennDOT S.R. 0322 Improvements Project in Delaware County, Pennsylvania

Remedial Soil Excavation and Disposal
Former Skippack Dry Cleaner Site, PennDOT Engineering District 6-0
Whitpain Township, Montgomery County, Pennsylvania

Skelly and Loy performed the excavation, loading, and disposal of **712 tons of solvent-impacted soils at a former dry cleaner site** that was acquired by PennDOT for an intersection improvement project. Skelly and Loy previously delineated solvent-impacted soils using conventional soil boring techniques coupled with **Membrane Interface Probe (MIP) technology** to expedite the soil characterization investigation (day-day process). Impacted soils were excavated over an area of 1,862 square feet to the bedrock surface (±10-feet below grade) and were **direct-loaded onto trucks for off-site disposal** at a permitted disposal facility. An estimated **2,750-gallons of solvent-impacted groundwater encountered above bedrock were recovered during dewatering activities**, containerized in totes, and temporarily stored on the site until testing results were received and off-site disposal was arranged (approximately one week).

The use of real-time delineation (MIP technology) of the solvent-impacted soils allowed for an expedited site characterization effort and sampling/testing of the impacted soils to facilitate approval for direct loading and transport of impacted soils to a pre-approved disposal facility. This also allowed for **compliance with a local township ordinance that prohibited temporary stockpiling of soils within a designated beautification zone which included the site area**. This remedial alternative enabled a relatively quick solution to eliminate source-impacted soils from further impacting the groundwater beneath the site and from potentially impacting off-site water supply wells downdip of the former dry cleaner site. Post-excavation soil sampling results proved successful at remediating the source-impacted soils area to a SHS.

To perform excavation work under the Remediation Contract, Skelly and Loy has included firms on our team which are prequalified through PennDOT's Bureau of Construction to perform "C" (Roadway Excavating and Grading) and "C1" (Non-Roadway Excavating) earthwork.

Procedures for a Typical Excavation Project

Upon receipt of a Purchase Order (Notice to Proceed) from PennDOT, Skelly and Loy will begin the planning stages for completing excavation work, including preparation and submission of a written work plan, if required by the issuing PennDOT District Office or PennDOT Central Office. Even if not a requirement, Skelly and Loy will develop an internal work plan for its employees to follow, including a HASP for completing the work in a safe and efficient manner. If the excavation work is to be performed adjacent to an active roadway, we will work with the local PennDOT District office for furnishing Maintenance of Traffic (i.e., Rapid Response events) or Skelly and Loy will arrange for traffic protection through a subcontractor (i.e., Normal Response events). Following is an outline of the steps that will be completed for a typical excavation project.

- Prepare/submit (if required by PennDOT) a Work Plan
- Procure and schedule the excavating contractor
- Place PA 1-Call (three-day notification or emergency notification if it is a Rapid Response)
  - Mark out the proposed excavation area(s)
- Submit a Traffic Control Plan to PennDOT (if required for Class C Roadway Work)
- If requested by PennDOT, complete a site reconnaissance visit with PennDOT and the excavating contractor to discuss the project specifics
- Site Mobilization and Setup
  - Conduct tailgate safety meetings with contractor personnel (daily) and record it through our internal tailgate meeting app or completing a paper copy after every meeting (copies are stored in our electronic project file)
    - Review utility mark-outs with the excavating contractor and address conflicts/concerns with appropriate utilities
  - Implement the Traffic Control Plan for Class C Roadway Work in accordance with PennDOT requirements
  - Implement controls to prohibit public access for Class C1 Non-Roadway Work (including temporary fencing, cones, or barricades) as deemed necessary based on the site conditions and in accordance with the Site Work Plan and HASP
- Designate temporary staging areas for equipment, materials or temporary storage of contaminated materials removed during excavation
- Set up E&S controls as required
- Complete excavation work (including post-excavation sampling)

  - If contaminated soils are being temporarily staged on the site until off-site disposal is arranged, follow proper E&S controls for the soil stockpile(s) to ensure compliance with local, state, and/or federal regulations

  - If contaminated groundwater from excavation dewatering is being temporarily staged on the site until off-site disposal is arranged or is being treated on-site through a mobile treatment system, follow all E&S controls to ensure compliance with local, state, and/or federal regulations

- Backfill the excavation and restore the area in accordance with PennDOT specifications for Class C or C1 excavation

- Conduct periodic safety check-ins through our internal check-in app installed on every Skelly and Loy staff members' phones

- Demobilize equipment

- If contaminated media is being temporarily staged on the site, make the PennDOT PM aware of the schedule for loading out contaminated media for off-site disposal

- Prepare/submit a draft report with all associated documentation to appropriate PennDOT contacts

- Revise the report in accordance with PennDOT comments and submit the final report to PennDOT

Presented below is a Gantt chart presenting the steps, estimated schedule, and hours of the personnel who would be involved in the typical excavation project discussed above.

Project Schedule and Manhour Estimate
Remedial Excavation and Disposal of
Solvent-Impacted Soils and Solvent-Impacted Groundwater from Excavation Dewatering

ID	Task Name	Duration	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Estimated Labor Hours Per Bid Item Numbers					
									2 PM	3 Sr. Geol	14 Env. Sci (Std)	15 Clerical	16 CADD	Sub-contractor
1	Notice to Proceed (PO)	1 Day							1	-	-	-	-	-
2	Excavation and Sampling Plan	5 Days							-	24	-	4	2	-
3	PennDOT Review and Approval	5 Days							-	-	-	-	-	-
4	PA-1-CALL/Private Utility locator (if deemed necessary)	3 Days							1	-	-	-	-	X
5	Procurement and Scheduling of Excavating Subcontractor	1 Day							1	-	-	-	-	-
6	Mobilization	1 Day							-	-	-	-	-	X
7	Excavation, Disposal (Direct Loading), and Backfill	5 Days							1	8	60	-	-	X
8	Excavation Dewatering (Containerize for Off-Site Disposal)	4 Days							-	-	-	-	-	X
9	Post-Excavation Soil Sampling	1 Day							-	-	4	-	-	X
10	Dewatering Sampling and Testing	11 Days							-	-	2	-	-	X
11	Laboratory Testing (Post-Excavation Soil Samples)	10 Days							-	-	-	-	-	-
12	Site Restoration (Grading and Seeding)	1 Day							-	-	8	-	-	X
13	Demobilization	1 Day							-	-	-	-	-	X
14	Scheduling and Coordination of Water Disposal	5 Days							1	1	-	-	-	-
15	Loading and Off-Site Disposal of Water	1 Day							-	-	8	-	-	X
16	Preparation of Letter Report	5 Days							-	8	8	-	-	-
17	Submittal of Letter Report to PennDOT	1 Day							1	1	-	-	-	-
Totals		**61 Days**							**7**	**42**	**90**	**4**	**2**	**NA**

Labor Bid Item Numbers

2 Project Manager
3 Sr. Geologist/Hydrogeologist
5 Sr. Environmental/Sanitary Engineers
9 Technician, Hazardous Materials
11 Environmental/Sanitary Engineers
14 Environmental Scientist (Standard)
15 Clerical/Secretarial Personnel
16 Draftsperson/CADD Operator
17 Survey Crew: Includes PA Certified Surveyor
22 Environmental Scientist (Standard Rate)
34 Environmental Scientist (Emergency)
40 Environmental Scientist (Emergency)

1 For this example project, the impacted soil was delineated in advance of the excavation and clearance for disposal at a permitted off-site facility was received in advance of the direct loading of the solvent-impacted soils.
2 Water extracted during excavation dewatering was temporarily stored in totes and staged on-site until sampling/testing was completed and arrangements were made to dispose of the water off-site at a permitted disposal facility. Laboratory testing was expedited on a three-day turnaround basis.

3 Laboratory testing of post-excavation soil samples was completed on a standard turnaround basis (ten business days) since the limits of excavation were determined in advance based on the delineation of impacted soils in advance of the excavation activities. The excavation was backfilled upon completion of the sampling to avoid any open excavation safety concerns due to proximity of excavation to nearby busy roadway.

4. Soil and Groundwater Remediation.

a. Site characterization, treatability studies, and Act 2 attainment sampling in support of soil and groundwater remediation. Remediation for a regulated storage tank corrective action shall follow the PA DEP Storage Tank and Spill Prevention Act, Corrective Action Regulations format.

b. Extraction and treatment of contaminated groundwater, including construction of treatment systems.

c. Treatment of contaminated soil, including construction of soil treatment systems and earthmoving activities.

d. Supplier and Subcontractor(s), if any, must possess and maintain, as per services needed, current PA Licensed Geologist for any services performed pertaining to soil and groundwater remediation.

Offeror Response

I-6.A.4 Soil and Groundwater Remediation

Soil and Groundwater Remediation Experience:

Site Characterization Approach

Our approach to site characterization focuses on the identification of the specific contaminants present at the site, risks associated with the contaminants, and ultimate objectives of the project. We employ innovative site characterization techniques that provide real-time results and streamline the site characterization process. Early formulation of a Conceptual Site Model (CSM) supported by site-specific data is a key component to the overall site characterization process. This model is used to help plan and guide the field efforts while considering the future use of the property and maintaining focus on the remedial cleanup goal. We have found that such approaches not only streamline the schedule for completing closure, they are often cost-effective.

Where warranted, Skelly and Loy utilizes the Triad approach to complete site characterization activities. The Triad approach was developed by the U.S. EPA to accelerate site cleanups and reduce overall costs associated with the 1980s era multi-stage investigative process (developed primarily for the Superfund program). The Triad approach is built on an accurate CSM that supports project decisions regarding exposure to contaminants, site cleanup and reuse, and long-term monitoring.

Skelly and Loy has conducted hundreds of site investigations for both public and private sector clients using innovative technologies and approaches such as Triad. These investigations have

focused on determining the type and extent of hazardous substances present in various media (soil, soil gas, groundwater, surface water, and sediments), the risk these substances posed to human and ecological receptors, and ultimately the appropriate mitigation and remediation methods for cleaning up a site.

Besides employing common sampling techniques that are used in the environmental industry, Skelly and Loy routinely directs a number of new and innovative sampling and analysis methods, including the use of MIP technology coupled with Geoprobe® drilling techniques and the use soil vapor sampling as a screening tool to locate subsurface impacts. Skelly and Loy has used these methods to streamline the site characterization process and identify off-site contaminant sources. Several examples of our use of innovative investigation techniques and the benefits provided to the client are summarized in Table I-6.A.4-1.

Table I-6.A.4-1
Innovative Approaches for Site Characterization

Problem	Approach	Benefits
An expedited site characterization study of a former gasoline station was needed to meet the let date for a construction contract.	Triad methods were implemented to characterize the site, including the use of MIP technology.	The real-time data provided by the MIP not only provided significant cost savings but also permitted an expedited investigation schedule to be used to complete the project on time, thereby allowing construction activities to start on schedule.
The groundwater underlying a site contains chlorinated solvents. Information regarding the source of the chlorinated solvents is needed.	Triad methods were used to characterize the site. The study included drilling soil borings using a Geoprobe®; collecting soil vapor, soil, and groundwater samples; and analyzing the samples on the site using a mobile VOC testing laboratory.	Field efforts were completed in ten days. These rapid characterization techniques provided information to identify the source of chlorinated compounds impacting groundwater at the site.
A 20-acre property was formerly used as a small-arms shooting range and exhibited areas of stressed vegetation, suggesting impacts associated with lead and other heavy metals.	To reduce sampling costs, X-Ray Fluorescence (XRF) instrumentation was used to assess the distribution and concentrations of lead in surficial soils. Field-screening activities were performed over a two-day period, providing 662 data readings.	The XRF survey identified hot spots for the collection of soil samples. The screening data provided by the XRF survey saved the client thousands of dollars in analytical costs for characterizing the concentrations of lead in the soils at the site.

Remediation Approach

Skelly and Loy has been providing consulting services for the cleanup and remediation of contaminated soil, sediments, surface water, and groundwater for more than 30 years to both public and private sector clients. We have direct and relevant experience in performing remedial investigations and feasibility studies. A successful remedial design program depends on acquisition of defensible data during the site characterization phase and the proper evaluation of these data to support the decision-making process. Our approach to evaluating cleanup alternatives involves the following considerations.

- What are the client's needs and expectations?
- What are the clean-up goals and risks?
- What is the client's timeframe for achieving cleanup and closure?
- Is the remedial alternative a new technology (i.e., untried) or an established technology?

- What are the site conditions and how would they affect the implementation of the remedial alternative?

- How would the implementation of a remedial alternative affect nearby residents and sensitive receptors (noise, odors, unsightly conditions, etc.)?

- Could the remedial alternative enhance conditions for furthering the spread of contamination?

- What are the costs associated with the implementation of the remedial alternative?

- What are the long-term O&M requirements associated with the remedial alternative?

Where possible, Skelly and Loy attempts to utilize cost-effective remedial approaches that rely on sound engineering controls, in-situ treatment, and/or enhancement of the naturally occurring biodegradation processes at the site. Our professionally licensed environmental engineers and geologists stay up to date on new and innovative investigative and remedial technologies by staying up to date with current research and by attending training seminars as part of their continuing education requirements.

Allison Hill Brownfields Project
City of Harrisburg, Dauphin County, Pennsylvania

The former Allison Hill Automotive site was a 6.2-acre "brownfields" property containing multiple vacant buildings that represented an eyesore to the local community, an environmental hazard, and a tax liability to the City of Harrisburg. The site had been a manufacturing facility since the late 1800s and was purchased by the Harrisburg Redevelopment Authority (HRA) for redevelopment.

Our approach on this project was to conserve resources for reducing impacts to the local community while restoring the property to productive use. For instance, natural attenuation and pathway elimination were used to demonstrate attainment to Act 2 site-specific standards, where feasible, over-active remediation. This strategy minimized the generation, transport, and disposal of impacted soils.

A Remedial Investigation Report, Act 2 final reports, and Environmental Covenants were prepared to document the investigative and remedial work performed at the site to achieve closure under the PA DEP Land Recycling Program. This project received two prestigious awards: **The Governor's Award for Environmental Excellence** and **The Phoenix Award for Community Impact**. (The Phoenix Award is a nationally recognized award presented annually at the National Brownfields Conference.)

Since implementation of Pennsylvania's Land Recycling Program (Act 2), Skelly and Loy has managed numerous projects where contaminant fate and transport modeling and pathway elimination options were implemented to assess/eliminate risks in lieu of active remediation. If practicable, such approaches offer a cost-effective alternative. An example of such an approach involved elevated levels of organic and inorganic compounds in soils at the Allison Hill Site in the City of Harrisburg. For this project, engineering controls, modeling, and pathway elimination were used to cost-effectively reduce risks to the general public and sensitive receptors. This approach allowed the client (HRA) to obtain a release of liability under Act 2 and move forward with the redevelopment of this brownfields site.

Remedial Alternatives Evaluation

Skelly and Loy has provided feasibility study services to a variety of public clients including the United States Army Corps of Engineers, PennDOT, PTC, and PA DEP. The feasibility study process provides the client with an evaluation of the range of possible remedies specific to the nature and extent of the release, goals of the client for cleanup, intended land use, and cost/ benefit of each remedy evaluated. Typically, each remedy is compared against a no-action alternative. An example of our experience in performing a feasibility study is the I-99 Environmental Studies and Design of Active Treatment Facility for Heavy Metals. For this project, Skelly and Loy performed pilot testing studies and used the data to evaluate and develop site-specific remedial approaches for cleaning up the contaminants in the soils and groundwater at each site.

Environmental Studies and Design of Active Treatment Facility for Heavy Metals,
I-99 Improvements Project, PennDOT Engineering District 2-0
Blair and Centre Counties, Pennsylvania

A naturally occurring highly mineralized ore deposit comprised of pyritic sandstone was encountered during construction of the new roadway for the I-99 improvements project. Portions of this material were used as roadway subbase, embankment, and general fill. Weathering of this fill material produced **Acid Rock Drainage (ARD)** exhibiting a low pH and containing elevated concentrations of heavy metals that impacted the quality of the surface water and groundwater in the area.

Skelly and Loy conducted a **remedial feasibility study to evaluate various treatment approaches**. The remediation measures selected for implementation included encapsulation, removal and consolidation, and post-remediation treatment of discharge.

Skelly and Loy continues to provide **environmental compliance services** for NPDES (stormwater) sampling of discharge points and completing monthly Discharge Monitoring Reports (DMRs); O&M of the **I-99 ARD treatment facility**; quarterly groundwater sampling; and water quality sampling and reporting for groundwater wells, surface water streams, and residential water supplies.

Remedial Action Design

Our approach to remedial action design focuses on the end use of the property and the overall remedial clean-up goals, with an emphasis on the use of the best available technology (BAT) and the application of best management practices (BMPs). All remedial action design will be completed under the direct supervision of a Pennsylvania-licensed Professional Environmental Engineer. Design and implementation of a remedial system will be based on sound scientific principles, feasibility testing results, and cost feasibility analysis.

Skelly and Loy has provided our geologic and engineering services to public and private clients for the design and construction of the following types of remediation systems:

Water treatment system at the PennDOT Bear Creek Maintenance Facility, Engineering District 4-0

- In-situ and ex-situ soil remediation projects, including stabilization
- In-situ chemical oxidation methodologies for remediation of groundwater
- Evaluation, design, and implementation of bioremediation methodologies for remediating groundwater
- Design and construction of groundwater extraction systems
- Design and construction of air sparging systems
- Design and installation of SVE systems
- Design and construction of dual phase remediation systems (groundwater and SVE)
- Public water supply treatment plant systems
- Wastewater treatment plant components and systems
- AMD and ARD treatment systems
- Wetland mitigation and treatment systems
- Stream and waterways restoration projects
- Stormwater management and treatment systems

Our team is knowledgeable and capable of providing PennDOT with technical assistance regarding the design and construction of remediation systems, including preparing detailed Scopes of Work for remedial action projects; developing design plans sealed by a licensed Professional Geologist or Engineer; providing technical review of remedial design; and providing management, technical oversight, and technical assistance for remedial actions. During the planning process for a remedial system, we routinely conduct pilot testing to ensure that our designs are founded on real data, not guesses. In addition, we have the experience and capabilities to prepare maps and plans for developing remedial designs.

Example Site Characterization, Treatability/Feasibility Study, and Act 2 Attainment Project

Upon receipt of a Purchase Order (Notice to Proceed) from PennDOT, Skelly and Loy will begin the planning efforts for completing exploratory Geoprobe® sampling and/or monitoring well installations necessary to evaluate the degree and extent of impact to soil and groundwater media based on a release from a regulated UST. The investigation and cleanup of the release will be governed by the PA DEP Storage Tank and Spill Prevention Act, Corrective Action Regulations. The initial phase of this work involves preparation of a written work plan for the subsurface investigation (which may also be submitted to the issuing PennDOT office or PennDOT's Central Office, if required). The work plan will include a site-specific HASP to ensure employees and subcontractors complete the work safely. Activities involved with completing a typical site characterization including a treatability/feasibility study for Act 2 attainment include the following:

- Prepare/submit (if required by PennDOT) a Work Plan and site-specific HASP
- Procure and schedule the Geoprobe® and/or drilling subcontractor
- Initiate PA 1-Call (three-day notification or emergency notification in the event of a Rapid Response)
  - If requested by PennDOT, perform an on-site reconnaissance with PennDOT and the drilling subcontractor (and possibly the PA DEP case manager) to discuss access and key site-specific details to ensure the area of potential impact is adequately assessed
  - Mark out the proposed soil boring and/or monitoring well drilling locations
  - Perform an on-site geophysical survey to identify on-site proprietary/unmapped underground utility locations
- Site mobilization and setup
  - Conduct tailgate safety meetings with contractor personnel (daily) and record it through our internal tailgate meeting app or completing a paper copy after every meeting (copies are stored in our electronic project file)
  - Review utility mark-outs with the drilling contractor and address conflicts/concerns with appropriate utilities
- Implement site security controls to prohibit public access for Class C1 Non-Roadway work (including temporary fencing, cones, or barricades) as deemed necessary based on site conditions and in accordance with the Site Work Plan and site-specific HASP
- Designate temporary staging areas for equipment, materials, decontamination, or temporary storage of contaminated materials (e.g., drill cuttings, groundwater, decontamination fluids) generated during drilling
- Set up the equipment decontamination pad and construct appropriate E&S controls
- Complete installation of soil borings/monitoring wells to delineate areas of impacted soil and potential groundwater impact (the soil and groundwater samples will be analyzed for PA DEP short list compounds)
- Evaluate sample results to determine the need for soil excavation and/or additional well installations to fully evaluate the degree and extent of on-site groundwater plume
  - Complete excavation of petroleum-impacted soils as appropriate to address source removal
  - If contaminated soils are being temporarily staged on-site until off-site disposal is arranged, follow proper E&S controls for the soil stockpile(s) to ensure compliance with local, state, and/or federal regulations

- Complete excavation work (including post-excavation SRS for Act 2 attainment demonstration)

- Backfill the excavation and restore the area in accordance with PennDOT specifications for C1 excavation

- Conduct periodic safety check-ins through our internal check-in app installed on every Skelly and Loy staff members' phones

- Demobilize equipment

- If contaminated media is being temporarily staged on the site, make the PennDOT PM aware of the schedule for loading out contaminated media for off-site disposal

- Analyze soil/groundwater sample results to determine the feasibility of in-situ treatment options for soil/groundwater remediation of the remaining impacted soil

  - Submit soil samples for analysis using Synthetic Precipitation Leaching Procedure (SPLP)

  - Use the results to develop an alternate numeric standard for in-situ closure of soil under an Act 2 site-specific standard

  - If contaminated groundwater from excavation dewatering is temporarily staged on the site until off-site disposal is arranged or if it is being treated on the site through a mobile treatment system, follow all E&S controls to ensure compliance with local, state, and/or federal regulations

- Begin in-situ treatability testing to address residual contaminated soil/groundwater including collection and submission of water quality samples for microbial DNA analysis (bioremediation alternative) or deployment of mobile treatability testing equipment (in-situ chemical oxidation alternative)

- Implement the selected remedial alternative(s) based on most favorable treatability results

- Perform groundwater sampling and analysis for attainment demonstration according to Act 2 requirements

- Prepare an environmental covenant in compliance with Act 2 requirements for remaining residual areas of soil/groundwater impact

- Prepare/submit a draft report with all associated documentation to appropriate PennDOT staff

- Revise the report by incorporating PennDOT comments and submit the final report to PennDOT and/or PA DEP

Project Schedule and Manhour Estimate
Site Characterization, Treatability/Feasibility Study, and Act 2 Attainment Project
in Support of Soil and Groundwater Remediation Project

																	Estimated Labor Hours Per Bid Item Numbers						
ID	Task Name	Duration		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Month 3	Month 4	Year 3	Year 4	Month 49	2 PM	3 Sr Geol	14 Env. Sci (Std)	15 Clerical	16 CADD	17 Survey	Sub-contractor
1	Notice to Proceed (PO)	1	Day														1	-	-	-	-	-	-
2	Sampling Plan and Site-Specific HASP	5	Days														-	24	-	4	2	-	-
3	PennDOT Review and Approval	5	Days														-	-	-	-	-	-	-
4	Scheduling of Geoprobe/Geophysical Subcontractors	1	Day														2	-	1	-	-	-	X
5	Markout of Drilling Locations	1	Day														-	-	8	-	-	-	-
6	PA-1-Call Notification	3	Days														1	-	-	-	-	-	-
7	Geophysical Survey of Buried Utilities	1	Day														1	-	10	-	-	-	X
8	Mobilization	1	Day														-	-	-	-	-	-	X
9	Complete Installation of Soil Borings	3	Days														1	-	24	-	-	-	X
10	Laboratory Testing (Delineation/Waste Char. Soil Samples)	3	Days														-	-	-	-	-	-	X
11	Arrangements with Disposal Facility	1	Day														1	-	-	-	-	-	X
12	Scheduling of Waste Hauling Subcontractor	1	Day														1	-	2	-	-	-	X
13	Mobilization	2	Days														-	-	-	-	-	-	X
14	Coordination of Off-Site Disposal (Ex Situ/Direct Loading)	2	Days														1	-	10	-	-	-	X
15	Complete Installation of Monitoring Wells	3	Days														1	-	30	-	4	2	X
16	Laboratory Testing (Groundwater Samples)	3	Days														-	-	-	-	-	-	X
17	Develop Treatability/Feasibility Work Plan	5	Days														10	24	-	4	2	-	X
18	PennDOT Review and Approval	5	Days														-	-	-	-	-	-	-
19	Perform Treatability/Feasibility Studies	30	Days														8	16	60	-	-	-	X
20	PennDOT Review and Approval	5	Days														-	-	-	-	-	-	-
21	Implement In Situ Groundwater Remediation	30	Days														8	60	60	-	-	-	X
22	Attainment Demonstration Groundwater Monitoring (2 years)	730	Days														40	64	112	-	-	-	X
23	Preparation of Report	28	Days														40	80	20	4	6	-	-
24	Submittal of Report to PennDOT	1	Day														1	1	-	2	-	-	-
Totals		**870**	**Days**														**117**	**269**	**337**	**14**	**14**	**2**	**NA**

Labor Bid Item Numbers

2 Project Manager
3 Sr. Geologist/Hydrogeologist
5 Sr. Environmental/Sanitary Engineers
9 Technician, Hazardous Materials
11 Environmental/Sanitary Engineers
14 Environmental Scientist (Standard)
15 Clerical/Secretarial Personnel
16 Draftsperson/CADD Operator
17 Survey Crew: Includes PA Certified Surveyor
22 Environmental Scientist (Standard Rate)
34 Environmental Scientist (Emergency)
40 Environmental Scientist (Emergency)

1 For this example project, the impacted soil can be delineated with a Geoprobe® direct push machine and either disposed at a permitted offsite facility or treated onsite using in situ methods.

2 For this example, laboratory testing of soil and groundwater samples collected for site characterization will be expedited on a three-day turnaround basis.

3 For this example, laboratory testing of attainment soil/groundwater samples was completed on a standard turnaround basis (ten business days) since the area of residual impact was determined in advance based on the delineation of impacted soils/groundwater for in situ treatability. This example also assumes two years of groundwater monitoring (eight quarterly sampling events) will be needed to demonstrate attainment of a Statewide Health Standard for groundwater in compliance with Act 2 regulations.

4 The schedule for implementing in situ remediation does not include review timeframes for PA DEP review of treatability study results, approval of the environmental covenant (if needed), and in situ attainment sampling or plan/report review as these timeframes are cannot be determined with any degree of reliability. Most regulatory review timeframes vary considerably based on site-specific conditions and regulatory office/staff involved.

Typical Extraction and Treatment of Contaminated Groundwater Project

Upon receipt of a Purchase Order (Notice to Proceed) from PennDOT, Skelly and Loy will begin the planning efforts to mobilize equipment appropriate for treating the contaminated groundwater. This project involves dewatering of an existing excavation found to be impacted by petroleum-contaminated groundwater and other VOCs. We have assumed that this is a short-term project performed within a one-week period. The initial phase of this work involves preparing a written work plan for dewatering and excavation, maintaining a dry condition to allow other construction (e.g., tank removal, bridge abutment, bridge pier, etc.) to proceed safely, and removing petroleum-based VOCs from the groundwater prior to discharge. The work plan will then be submitted to the issuing PennDOT office or PennDOT's Central Office for review and approval. The work plan will include a site-specific HASP to ensure employees and subcontractors complete the work safely. The design of the treatment system will be overseen by a Pennsylvania-licensed Professional Geologist. Activities involved with completing a typical groundwater treatment project include the following:

- Prepare/submit (if required by PennDOT) a Work Plan and site-specific HASP
- Schedule the groundwater treatment equipment/subcontractor
- Site mobilization and setup
  - Conduct tailgate safety meetings with contractor personnel (daily) and record it through our internal tailgate meeting app or completing a paper copy after every meeting (copies are stored in our electronic project file)
    - Review equipment needs, site access, and staging areas with the subcontractor and address conflicts/concerns with appropriate overhead/ underground utilities
  - Implement site security controls to prohibit public access for Class C1 Non-Roadway work (including temporary fencing, cones, or barricades) as deemed necessary based on site conditions and in accordance with the Site Work Plan and site-specific HASP
- Designate temporary staging areas for dewatering equipment, materials, frac tanks, and appurtenances or temporary storage of contaminated materials (e.g., groundwater, decontamination fluids) generated during dewatering and treatment
- Set up the equipment decontamination pad and construct appropriate E&S controls
  - For treating water on the site through a mobile treatment system, follow all E&S controls to ensure compliance with local, state, and/or federal regulations
  - The design of the treatment system will be overseen by a Pennsylvania-licensed Professional Geologist
- Complete installation and setup of the excavation dewatering and groundwater treatment system
  - Begin pumping the water through a sediment filter for removal of suspended solids

  - Treat the water using liquid-phase granular activated carbon absorbers to remove the VOCs

- Collect treatment system influent and effluent samples to determine if the discharge water quality is suitable for discharge to the local stream

- Conduct periodic safety check-ins through our internal check-in app installed on every Skelly and Loy staff members' phones

- Remove and demobilize the treatment system equipment staged on the site

- Restore the area in accordance with PennDOT specifications

- Prepare/submit a draft report with all associated documentation to appropriate PennDOT staff

- Revise the report by incorporating PennDOT comments and submit the final report to PennDOT and/or PA DEP, as required

Project Schedule and Manhour Estimate
Typical Extraction and Treatment of Contaminated Groundwater Project

ID	Task Name	Duration	Week 1	Week 2	Week 3	Week 4	Week 5	Estimated Labor Hours Per Bid Item Numbers					
								2 PM	3 Sr. Geol	14 Env. Sci (Std)	15 Clerical	16 CADD	Sub-contractor
1	Notice to Proceed (PO)	1 Day						1	-	-	-	-	-
2	Work Plan and Site-Specific HASP	3 Days						-	24	-	4	2	-
3	PennDOT Review and Approval	1 Day						-	-	-	-	-	-
4	Procurement and Scheduling of Treatment Subcontractors	2 Days						1	-	-	-	-	-
5	Mobilization, Treatment System Setup and Test Pumping	3 Days						1	-	24	-	-	X
6	Excavation Dewatering (Pump to Frac Tank and On-Site Treatment)	5 Days						-	-	-	-	-	X
7	Dewatering and Effluent Sampling/Testing	5 Days						1	8	60	-	-	X
8	Laboratory Testing (System Effluent Samples)	10 Days						-	-	-	-	-	X
9	Demobilization	1 Day						-	-	8	-	-	X
10	Preparation of Letter Report	3 Days						-	8	8	4	2	-
11	Submittal of Letter Report to PennDOT	1 Day						1	1	-	-	-	-
Totals		**35 Days**						**5**	**41**	**100**	**8**	**4**	**NA**

Labor Bid Item Numbers

2 Project Manager
3 Sr. Geologist/Hydrogeologist
5 Sr. Environmental/Sanitary Engineers
9 Technician, Hazardous Materials
11 Environmental/Sanitary Engineers
14 Environmental Scientist (Standard)
15 Clerical/Secretarial Personnel
16 Draftsperson/CADD Operator
17 Survey Crew: Includes PA Certified Surveyor
22 Environmental Scientist (Standard Rate)
34 Environmental Scientist (Emergency)
40 Environmental Scientist (Emergency)

1 For this example project, a soil excavation was created by others in advance of mobilizing the groundwater extraction and treatment system.
2 Water extracted during excavation dewatering was temporarily stored in totes or frac-tanks and staged onsite until sampling/testing was completed and arrangements were made to dispose of the water offsite at a permitted disposal facility. Laboratory testing was expedited on a three-day turnaround basis.
3 Laboratory testing of treatment system effluent samples can also be completed to evaluate the potential for disposing to the local POTW eliminating the need for onsite staging/storage and subsequent offsite disposal. Although rapid turnaround of these sample results is often possible, and a three-day rapid turnaround of results is included in this example, any laboratory delays could affect the overall project completion schedule shown.

Typical Treatment of Contaminated Soil Project

Upon receipt of a Purchase Order (Notice to Proceed) from PennDOT, Skelly and Loy will begin the planning efforts for constructing soil treatment systems and earthmoving contaminated soils. Construction projects typically have limited space and access for the on-site treatment of contaminated soils. Where the conditions prevail, we typically loadout and dispose of the impacted soils at a permitted off-site facility (the timeliest and least-expensive treatment option). We also perform rapid response soil loadouts in as little as one day due to project construction, budget, time, or scheduling constraints. Where such limiting site constraints exist, we employ innovative techniques to perform in-situ soil remediation using bioremediation and chemical oxidation methods to achieve soil and groundwater remediation goals at maintenance facilities. The initial phase of this work involves preparation of a written work plan delineating the volume of soil to be treated (in-situ) which may be submitted to the issuing PennDOT office or PennDOT's Central Office, if required. The work plan will include a site-specific HASP to ensure employees and subcontractors complete the work safely. Activities involved with completing a typical contaminated soil treatment project include the following:

- Prepare/submit (if required by PennDOT) a Work Plan and site-specific HASP
- Schedule a waste hauling subcontractor certified and licensed (federal, PennDOT, and PA DEP) to transport such wastes
- Arrange with an off-site disposal facility permitted to accept such wastes
- Site mobilization and setup
  - Conduct tailgate safety meetings with contractor personnel (daily) and record it through our internal tailgate meeting app or completing a paper copy after every meeting (copies are stored in our electronic project file)
  - Perform a site reconnaissance to accurately delineate the volume of impacted soil stockpiled (requiring ex-situ treatment) and the area of impacted subsurface soils (requiring in-situ treatment)
  - Perform a reconnaissance of the stockpile size and access restrictions; develop a soil sampling grid used to determine the number of waste characterization samples needed to comply with PA DEP waste characterization sampling requirements and regulations
  - Mark out the proposed soil stockpile sampling locations
  - Review the loadout procedures, schedule, and truck staging areas with the on-site PennDOT PM
  - Implement site security controls to prohibit public access to areas needed for soil loading (including temporary fencing, cones, or barricades) as deemed necessary based on site conditions and in accordance with the Site Work Plan and site-specific HASP
- If contaminated media are being temporarily staged on the site, make the PennDOT PM aware of the schedule for loading out contaminated media for off-site disposal

- Set up a contaminated soil stockpile area using straw bales and plastic to serve as appropriate E&S controls to ensure compliance with local, state, and/or federal regulations prior to (if contaminated soil are being temporarily stage on the site prior to loadout) and during soil loadout

- Collect waste characterization samples and submit analyses to a permitted disposal facility (e.g., landfill)

- Coordinate the loadout/disposal of the impacted soils at a permitted off-site facility (the timeliest and least-expensive treatment option)

- Assess soil sample results to determine the feasibility of in-situ treatment options for soil remediation of remaining/residual impacted soil

  – Submit the soil samples for analysis using SPLP

  – Use the results to develop an alternate numeric standard for closure of soil in-situ under an Act 2 site-specific standard

- Begin in-situ treatability testing to address residual contaminated soil including collection and submission of in-situ soil quality samples for microbial DNA analysis (bioremediation alternative) or deployment of mobile treatability testing equipment (in-situ chemical oxidation alternative)

  – A Geoprobe® or other drilling equipment may be used to collect in-situ soil samples and characterize the degree and extent of residual contamination

- Conduct periodic safety check-ins through our internal check-in app installed on every Skelly and Loy staff members' phones

- Implement the selected remedial alternative based on the most favorable treatability results

- Perform additional soil sampling and analysis using a Geoprobe® for attainment demonstration according to Act 2 requirements

- Prepare an environmental covenant in compliance with Act 2 requirements for remaining residual areas of soil/groundwater impact

- Prepare/submit a draft report with all associated documentation to appropriate PennDOT staff

- Revise the report by incorporating PennDOT comments and submit the final report to PennDOT and/or PA DEP

Project Schedule and Manhour Estimate
Treatment of Contaminated Soil Project

ID	Task Name	Duration	Week 1	Week 2	Week 3	Week 4	Month 2	Month 3	Month 4	Month 5	Week 6	Estimated Labor Hours Per Bid Item Numbers					
												2 PM	3 Sr. Geol	14 Env. Sci (Std)	15 Clerical	16 CADD	Sub-contractor
1	Notice to Proceed (PO)	1 Day										1	-	-	-	-	-
2	Excavation and Sampling Plan and Site-Specific HASP	5 Days										-	24	-	4	2	-
3	PennDOT Review and Approval	5 Days										-	-	-	-	-	-
4	Arrangements with Disposal Facility	1 Day										1	2	-	-	-	X
5	Procurement/Scheduling of Waste Hauling Subcontractor	1 Day										1	2	-	-	-	X
6	Mobilization	2 Days										-	-	-	-	-	X
7	Site Scoping and Waste Characterization Sampling	1 Day										2	6	12	-	-	X
8	Laboratory Testing (Waste Characterization Samples)	3 Days										-	-	-	-	-	X
9	Coordination of Off-Site Disposal (Ex Situ/Direct Loading)	5 Days										1	4	60	-	-	X
10	In Situ Treatability Sampling/Testing (Impacted Soils)	20 Days										8	-	120	-	-	X
11	Implement In Situ Remediation	10 Days										8	24	80	-	-	X
12	Attainment Soil Sampling	1 Day										-	-	2	-	-	X
13	Laboratory Testing (Attainment Soil Samples)	10 Days										-	-	-	-	-	X
14	Site Restoration (Grading and Seeding)	1 Day										-	-	8	-	-	X
15	Preparation of Environmental Covenant (if necessary)	5 Days										4	32	-	-	2	-
16	Preparation of Letter Report	5 Days										10	40	20	4	4	-
17	Submittal of Letter Report to PennDOT	1 Day										1	1	-	2	-	-
Totals		**77 Days**										**37**	**135**	**302**	**10**	**8**	**NA**

Labor Bid Item Numbers

2 Project Manager
3 Sr. Geologist/Hydrogeologist
5 Sr. Environmental/Sanitary Engineers
9 Technician, Hazardous Materials
11 Environmental/Sanitary Engineers
14 Environmental Scientist (Standard)
15 Clerical/Secretarial Personnel
16 Draftsperson/CADD Operator
17 Survey Crew: Includes PA Certified Surveyor
22 Environmental Scientist (Standard Rate)
34 Environmental Scientist (Emergency)
40 Environmental Scientist (Emergency)

1 For this example project, the impacted soil can be delineated with a Geoprobe® direct push machine and either disposed at a permitted offsite facility or treated onsite using in situ methods.
2 In situ soil borings will be completed to collect samples used for attainment demonstration of a suitable PA DEP cleanup/Act 2 standard. The standard selected will be dependent on the soil sample results. Laboratory testing will be expedited on a three-day turnaround basis.
3 Laboratory testing of attainment soil samples was completed on a standard turnaround basis (ten business days) since the area of residual soil impact was determined in advance based on the delineation of impacted soils for in situ treatability.
4 The schedule for implementing in situ remediation does not include review timeframes for PA DEP review of treatability study results, approval of the environmental covenant (if needed), and in situ attainment sampling or plan/report review as these timeframes are cannot be determined with any degree of reliability. Most regulatory review timeframes vary considerably based on site-specific conditions and regulatory office/staff involved.

5. **Asbestos Inspection/Abatement.** Asbestos building inspections and abatement for structures, such as buildings and bridges, prior to demolition or renovation. **Demolition and renovation of said structures are <u>not</u> included under the scope of this Contract.**

   a. **Asbestos Inspection.** The Supplier shall perform inspections and provide reports necessary for sample collection and determination of ACM within the structure. All friable and non-friable suspected ACM shall be sampled, analyzed, and reported in order to verify the presence, or absence of asbestos. Sampling protocols and reporting format shall be consistent with 40 CFR § 763, Subpart E (AHERA) for building inspections. In addition, all reports shall include copies of sample analysis. Report preparation may be performed and billed under labor classification line items; not asbestos inspection line items.

   Supplier and Subcontractor(s), if any, must possess and maintain, as per services needed, current PA L&I Certified Asbestos Building Inspector certification/copy of photo license and NVLAP laboratory certification, for any services performed pertaining to asbestos inspection work.

   i. **Up to 25 structures:** Mobilization charges shall be determined by inspector's actual travel time, based on the shortest distance to the project site, times the hourly rate (Line Item 258, Asbestos Facility Inspection). The awarded Supplier shall be allowed or paid per diem expenses for asbestos survey work assignments that involve less than twenty-five (25) structures (Line Item 258, Asbestos Facility Inspection).

   ii. **Greater than 25 structures:** Mobilization charges and per diem expenses shall be in accordance with Cost No Mark-Up Items (Subsistence, Lodging, Travel, Mileage, and Cost No Mark-Up Items services and equipment).

Offeror Response

I-6.A.5 Asbestos Inspection/Abatement

I-6.A.5.a Asbestos Inspection Experience and Qualifications

An asbestos materials inspection will be performed on an as-needed basis for each building and bridge project assigned by PennDOT. Skelly and Loy will provide fully certified Pennsylvania asbestos building inspectors to conduct asbestos inspections, sample collection, and reporting, as follows.

Skelly and Loy is committed to providing total asbestos services for all asbestos-related activities, including O&M plans, quality assurance compliance, abatement project design specification development and bid assistance, abatement project

Ranked #1
Terracon, Skelly and Loy's parent company, performs thousands of asbestos inspections each year, both AHERA (for re-occupancy) and NESHAP (for demolition) styles. In 2021, Terracon was ranked No. 1 in the nation by ENR for providing asbestos services.

management, laboratory services, and technical or regulatory compliance activities for PennDOT in accordance with appropriate federal, state, City of Philadelphia, and Allegheny County regulatory requirements.

Skelly and Loy will ensure that all environmental issues are resolved and that the required permits are obtained in compliance with all regulations and will adhere to all applicable environmental standards and requirements. Skelly and Loy has broad-based client experience in preparing, administering, and implementing asbestos services and environmental and safety programs.

Moreover, Skelly and Loy is committed to delivering professional services and operating as an extension of the PennDOT staff. Our approach is to provide services and responsiveness the continues our record of delivering successful environmental projects in a cost-effective manner.

Asbestos Inspection Approach

Delivering top quality professional asbestos consulting/environmental services requires continued adherence and compliance with federal, state, City of Philadelphia, and Allegheny County laws, regulations, permits, certifications, and licenses associated with the requested work. Skelly and Loy is committed to ensuring 24-hour response to emergency issue and timely response for non-emergency service by:

- Communicating efficiently and effectively scheduling all project work
- Evaluating the status of environmental and safety issues associated with the facility
- Maintaining regulatory compliance
- Identifying opportunities to reduce facility operating costs through health, environmental, and safety process improvements
- Organizing a uniform and comprehensive compliance plan that provides a structure for health, environmental, and safety programs listed in the work scope

Skelly and Loy has excellent working relationships with Pennsylvania agencies, including PennDOT, PA DEP, City of Philadelphia, and the Allegheny County Health Department. Our relationships with these agencies provide Skelly and Loy the ability to frankly communicate potential or new work procedures or practices, discuss unique site conditions, and/or provide alternate ideas beneficial to a select project site.

The following is a list of federal, state, City of Philadelphia, and Allegheny County Health Department regulatory requirements and guidelines that may be encountered for projects under this Remediation Contract.

Asbestos abatement project in Franklin Borough, Cambria County; PennDOT Engineering District 9-0

FEDERAL

Occupational Safety and Health Administration (OSHA)

- Code of Federal Regulations (CFR) – 29 CFR 1910.134-Respiratory Protection
- 29 CFR 1926.51-Sanitation
- 29 CFR 1926.200-Accident Prevention Signs and Tags
- 29 CFR 1926.59-Hazard Communication
- 29 CFR 1926.451-Scaffolding
- 29 CFR 1926.1101-Asbestos, Tremolite, Anthophyllite, Actinolite
- 29 CFR 1926.453-Aerial Lifts
- 29 CFR1926.500.503-Fall Protection
- 29 CFR 1926.1203-Confined Space
- 29 CFR 1910.12-Bloodborne Pathogens

United States Environmental Protection Agency (U.S. EPA)

- 40 CFR 61, SUBPART A – General Provisions
- 40 CFR 61, SUBPART M – National Emission Standard for Hazardous Air Pollutants Asbestos
- 40 CFR 763 – Asbestos-Containing Materials in Schools
- U.S. EPA 560/5-85-024 – Guidance for Controlling Asbestos-Containing Materials in Buildings

United States Department of Transportation

- 49 CFR 171 and 172-DOT regulations for the transportation of ACMs

Commonwealth of Pennsylvania

- Pennsylvania-Asbestos Occupations Abatement Accreditation and Certification Act of 1990, P.L. 805, No. 194
- PA DEP Technical Guidance Document 273-4130-001

Philadelphia and Allegheny County

- City of Philadelphia Health Code, Title 6, Chapter 6-600, and Allegheny County Health Department Article XXI regulations

Other Standards and Guidelines

- American National Standards Institute (ANSI)–ANSI Z88.2 (1992)-Respiratory Protection
- American Society for Testing and Materials (ASTM)–ASTM E 1368 (1990) Visual Inspection of Asbestos Abatement

Skelly and Loy understands that the purpose of the work is to perform comprehensive asbestos inspection services for buildings or other structures on an as-needed basis. The goal of our work will be to ensure the proper procedures for assessing each building facility for ACM sampling (in accordance with applicable regulations) of suspect materials, quantifying all identified and assumed ACM on a per building/structure basis, and providing the assessment information to PennDOT. The asbestos inspections will comply with U.S. EPA AHERA, NESHAP, OSHA, NIOSH, City of Philadelphia, and Allegheny County Health Department regulations. Our hazardous materials assessment services also incorporate appropriate Standard Operating Procedures (SOPs) in our Corporate Health and Safety Program.

Pre-Assessment Requirements

Prior to the commencement of on-site assessment activities, Skelly and Loy will review all previous asbestos reports, if applicable, provided by PennDOT. All pertinent information regarding the type, location, quantity, and asbestos content of previously sampled materials and assumed ACMs will be used to enhance our current inspection services.

Pre-Demolition Asbestos Inspections, HAZMAT Surveys, and Abatement Services
Lingle Avenue and S.R. 0422 Intersection Improvement Project
PennDOT Engineering District 8-0
Dauphin and Lebanon Counties, Pennsylvania

PennDOT retained Skelly and Loy to perform pre-demolition asbestos inspections, hazardous/environmentally regulated materials **surveys, and asbestos and hazardous materials abatement services for 12 residential homes and two commercial buildings**. In addition, Skelly and Loy performed a subsurface investigation at one of the commercial properties to determine if contaminated soils were present within the right-of-way area. **Skelly and Loy provided turnkey services which enabled the asbestos inspections, asbestos abatement**, and subsurface investigation work to be performed under a tight deadline, allowing PennDOT to maintain its construction letting schedule.

As part of our turnkey services for the project, Skelly and Loy also provided abatement and oversight services to remove the regulated asbestos-containing materials (RACMs), hazardous and environmentally regulated materials, and residual wastes within the buildings. In addition, Skelly and Loy removed of two USTs, six ASTs, and hundreds of fluorescent lamps and ballasts in addition to mercury-containing thermostats, residual used oils, numerous household chemicals, and mercury-containing dental wastes.

Information concerning the existing condition of assessed ACMs will be updated based on current observations.

Once the work scope has been established and tools, supplies, and forms have been acquired, the building assessment will commence. A minimum two-person team (comprised of Skelly and Loy and/or teaming subcontractor staff) will be utilized. If PennDOT wishes to expedite the inspections or minimize disruption of facility activities, Skelly and Loy can appropriately staff projects with additional experienced and certified staff as necessary to complete the assessments within the schedule and budget.

This “buddy system” approach minimizes unsafe and hazardous conditions typically found during building assessments and expedites the bulk sampling and assessment process. Specific team duties maximize data and sample collection during the assessment process. Skelly and Loy will ensure that, in addition to asbestos inspector training and certification, the inspection team has all appropriate training required to safely complete the on-site portion of the building inspection,

including but not limited to confined spaces, fall protection, respiratory protection, hazardous waste operations, bloodborne pathogens, etc.

Skelly and Loy will provide U.S. EPA-trained and Pennsylvania-certified asbestos building inspectors to inspect all areas within the buildings, including but not limited to offices, rest rooms, mechanical rooms, storage areas, shops, garages, laboratories, attics, building exteriors (roofs, windows, doors, etc.), and accessible crawlspaces. Skelly and Loy will rely on our experience in performing asbestos inspections and assessments in occupied and unoccupied buildings and performing sampling (when required) for ACM and other materials in discrete locations within each facility. Materials assessed on other structures may include coatings, panels, caulking, pipe insulation, etc.

Investigation and Testing Phase

Skelly and Loy will perform comprehensive review and limited materials assessment services (in accordance with proper procedures for sampling and quantification of ACM in significant quantities) and provide a materials list per building/structure. The asbestos inspection will comply with U.S. EPA AHERA, OSHA, NIOSH, City of Philadelphia, and Allegheny County Health Department regulations. Areas of investigation include the following.

Asbestos-Containing Materials

Our U.S. EPA-trained asbestos building inspectors will inspect all accessible areas within the buildings including but not limited to offices, rest rooms, mechanical rooms, storage areas, shops, plenums, and accessible crawlspaces. Skelly and Loy has considerable experience in performing hazardous materials assessments and sampling for ACM and other materials in occupied buildings and will employ discrete methods in such settings.

Skelly and Loy will perform a visual inspection for suspect ACM of occupied and building exteriors in each building space and will compile an inventory. This inventory will include the type, location, and approximate quantities of materials and will specify recommendations to address areas of concern. Surfacing and miscellaneous suspect ACM occurring in significant quantities will be sampled by our Pennsylvania-licensed Asbestos Inspectors. All suspect ACM will be segregated into homogeneous areas (HAs) per building. Should the first sample of a HA indicate greater than 1% asbestos, the samples will be analyzed using polarized light microscopy (PLM). An analyzed sample containing less than 10% asbestos will be PLM point counted at no extra cost. ***PLM point counting is a more precise method for determining the asbestos content in materials exhibiting low percentages of asbestos under PLM analysis.*** Moreover, point counting in such instances is recommended by the US EPA. Samples will be analyzed by an AIHA-accredited laboratory having NVLAP accreditation for the analysis of asbestos in bulk samples.

A detailed discussion of our proposed investigation and testing methodology follows.

Tools, Forms, and Sampling Supplies

Each asbestos building inspector will ensure that he or she has the following proper sampling and sample documentation supplies during the investigation and testing activities.

- A full complement of sampling tools required to collect samples (including hammers, chisels, utility knives, assorted screwdrivers, scrapers, coring devices, power drills, explosion-proof lights, ladders, etc.)

- Patching supplies for repairing sampled materials (i.e., plaster patch, caulking, roofing tar/ patch, etc.)
- All forms required by our SOPs (including asbestos bulk sampling forms, HA forms, and chain-of-custody [COC] forms)
- Maps or floor plans of the areas to be assessed to document the location of all ACMs and other hazardous materials
- Step and extension ladders needed to access materials at higher elevations (if not provided)
- PPE (i.e., respiratory protection, disposable coveralls, eye protection, gloves, fall protection, etc.)
- Drop plastic, wet wipes, spray bottles with amended water, rags etc. used for wetting and clean-up of suspect ACM
- Sampling vials, labels, and resealable air-tight bags

Building Walkthrough

The first step in performing a building assessment involves a walkthrough of the building's spaces. This walkthrough will include the following.

1. A floor-by-floor, room-by-room visual assessment of all areas will be conducted, starting in the basement or lower elevations and working toward the upper floors. By starting in the lowest areas of the building, the inspection team can acquaint themselves with the type of heating, ventilation, and air conditioning (HVAC) and mechanical systems in the building (i.e., steam, hot water, forced air, etc.) as well as domestic water line systems and where these systems feed to the upper floor levels.

Asbestos abatement project in Hazleton, Luzerne County, Pennsylvania;
PennDOT Engineering District 4-0

2. All suspect ACM will be noted on a per-room/area basis. Suspect ACM will be sorted into one of three categories.

   Surfacing – including but not limited to wall, ceiling, decorative, and acoustical plasters and sprayed-on or troweled-on fireproofing and exterior stuccos, etc.

   Thermal System Insulation (TSI) – including but not limited to pipe and fitting insulation; duct insulation and duct seam tape; boiler and boiler flue insulation and packing; incinerator, furnace, and tank insulation, etc.

Miscellaneous Materials – including but not limited to drywall and joint compound, floor tile and mastic, floor sheeting and mastic, cove base and mastic, ceiling tile and mastic, cement asbestos pipe, siding, wallboard and ceiling tile, asbestos siding, boiler gaskets, fire brick, window caulking and glazing, roofing materials, etc.

3. HAs will be identified in order to reduce the number of samples collected for surface and miscellaneous suspect materials occurring in significant quantities.

Condition Assessment and Quantification

During the on-site walkthrough of each building/structure, our inspectors will quantify suspect ACMs for documentation in the final report. Surfacing, select TSI, and miscellaneous materials will be quantified in square feet. Thermal system pipe insulation and miscellaneous cement asbestos pipe will be quantified in linear feet and outside diameter. Other TSI and miscellaneous materials may be quantified on a per-item basis (number of pipe fittings, windows, etc.)

Pre-Demolition Asbestos and Hazardous Materials Inspections and Abatement Services
I-95, Section CP1, PennDOT Engineering District 6-0
Philadelphia, Pennsylvania

Skelly and Loy was contracted to perform asbestos building inspections, hazardous waste assessments, and abatement and air monitoring services for **six parcels** located along S.R. 0095 in the City of Philadelphia. The inspections and abatement services were performed on structures that were planned to be demolished as part of a roadway reconstruction project.

The asbestos and hazardous materials inspections were performed on four multi-bedroom residences, an automotive garage, and a Philadelphia firehouse. **Over 300 samples were collected** from the parcels and submitted for laboratory analysis. Skelly and Loy also inventoried the six parcels for specified amounts of **hazardous materials** that were required to be removed prior to initiating the demolition work.

During the abatement activities, **Skelly and Loy provided air sample collection and analysis and hazardous materials and asbestos abatement supervision** for all parcels.

Preparation of the ACM Sampling Scheme

After documenting suspect ACMs in the building space by category and location, a distinct HA number for each separate material will be assigned. For materials of similar visual appearance, distinctions will be made based on size, color, texture, and differing ages of the materials.

Examples:	Floor Tile	HA – 01
	Mastic on Floor Tile	HA – 02
	Ceiling Tile	HA – 03
	Mastic on Ceiling Tile	HA – 04
	Drywall	HA – 05
	Drywall Joint Compound	HA – 06

Field observations may conclude that similar building materials exist in multiple building spaces (i.e., floor tile, ceiling tile, etc.). Similar materials will be sampled on a per-building space basis without regard to their existence in other building spaces.

Once HA designations have been assigned, the inspectors will determine the surfacing and miscellaneous materials that occur in significant quantities and identify the number of samples required for each HA category as follows:

Surfacing

Less than 1,000 square feet:	Collect 3 samples
Between 1,000 and 5,000 square feet:	Collect 5 samples
Between 5,000 and 10,000 square feet:	Collect 7 samples
10,000 square feet or more:	Collect 9 or more samples

Thermal System Insulation (TSI)

A minimum of three samples will be collected for each HA (i.e., cementitious block insulation, corrugated paper insulation, layered paper insulation, pipe fitting insulation, etc.). For patches of less than six square or linear feet, a minimum of one sample will be collected.

Miscellaneous

AHERA regulations state that miscellaneous materials must be sampled in a manner sufficient to determine whether or not the material is ACM. The common industry standard and our standard practice is to sample miscellaneous materials similar to TSI: three samples collected for each HA and one sample collected for patch materials of less than six square or linear feet.

Collecting Asbestos Bulk Samples

Skelly and Loy will collect representative samples in an appropriate number of the suspect ACM in compliance with the AHERA random sampling protocol using destructive testing methods.

When collecting asbestos bulk samples, the Skelly and Loy inspector will take great care in protecting himself/herself and the immediate environment from airborne asbestos. When sampling, the inspectors will assume that all materials being sampled have the potential to contain asbestos.

Appropriate PPE, wet sampling methods, and drop plastic below materials will be utilized. For all collected samples, inspectors will document the following assessment information.

Collection of asbestos samples, City of Lebanon Bridge Street Project in Lebanon County; PennDOT Engineering District 8-0

- Material type and size (6-inch O.D. pipe, 12x12-inch floor tile, etc.), color, texture, pattern, design, etc. of each material sampled
- Location of sample areas using floor designations, room number, and type of area to identify specific locations
- HA designation for each material sampled

- Condition of materials (if damaged or significantly damaged)
- Quantity of each sampled HA
- Location of the sampled building materials on floor plans

Sample Identification

A unique sample identification number will be designated for each bulk sample to facilitate sample tracking without revealing the identity of the sample makeup to the laboratory. All sample containers will be labeled immediately upon collection to ensure proper identification and to preserve sample integrity.

Sample Chain of Custody

Skelly and Loy will follow our standard COC protocol to document and ensure a continuous record of sample possession from the time of collection to its receipt by the analytical laboratory. Skelly and Loy will complete and maintain a copy of the COC forms for each set of samples shipped to the laboratory. The labeled sample vials will be placed into heavy-duty zipper-style bags then packaged and shipped in securely taped cardboard box containers. Corresponding COC documentation will accompany each shipping container. All shipping containers will be express mailed to the laboratory at regular intervals during inspection of larger buildings and daily where smaller building inspections are completed within one day.

Analysis of Building Material Samples

Collected asbestos bulk samples will be analyzed by PLM in accordance with 40 CFR 763. All sampled ACM will be grouped with HA materials submitted in separate bags. If the samples in that homogenous group are ultimately identified as containing greater than 1% asbestos, that material will be considered an ACM and the remaining samples will not be analyzed. ***For all samples initially analyzed containing less than 10% asbestos, PLM point counting methods will be conducted by the laboratory.*** PLM point counting is a more definitive method for determining the asbestos content in materials exhibiting low percentages of asbestos under PLM "visual estimation" analysis. All samples will be analyzed a fully accredited laboratory having NVLAP accreditation for the analysis of asbestos in bulk samples.

Collection of asbestos samples, City of Lebanon Bridge Street Project in Lebanon County; PennDOT Engineering District 8-0

It should be noted that, in order **to comply with a PennDOT directive** regarding the analysis of nonfriable, organically bound (NOB) materials, **Skelly and Loy will direct the laboratory to initially analyze all NOB materials by PLM NOB**. This involves a gravimetric reduction preparation step prior to actual analysis by PLM. NOB materials typically include materials such as asphaltic roofing and expansion joint material, vinyl floor tile and corresponding mastics, and caulking. NOB materials found to be free of asbestos by PLM NOB will be considered non-ACMs.

Conversely, materials found to contain greater than 1% asbestos by PLM NOB analysis will be considered ACM. Should a material analyzed by PLM NOB be found to contain asbestos, but at a concentration not greater than 1%, we will direct the laboratory to perform a follow-up analysis by transmission electron microscopy (TEM) after the sample undergoes and additional but different preparation step. In such cases, the results of the TEM NOB analysis will be final. Materials that have results by TEM NOB analysis not greater than 1% will not be considered ACM, but materials with TEM NOB results greater than 1% will be considered TEM NOB.

Assuming Materials as ACM

Select materials including but not limited to fire and elevator door insulations, interior boiler and/or flue stack materials, blackboard mastics and mirrors, electrical wiring insulations, roofing materials, etc. may be assumed as ACM, regardless of the quantity, if:

- the material is inaccessible for proper sampling (fire and elevator door insulation, interior boiler, and/or stack material. etc.),
- sampling of the material would void material warranties (i.e., roofing),
- sampling especially using amended water would be unsafe (electrified equipment and components), and/or
- sampling would damage the effectiveness of the material's intended use (roofing, electrical wiring insulation, elevator brake pads, fire and elevator door insulation, etc.).

These assumed ACMs will be quantified, and their locations documented for inclusion in the final report.

Asbestos/Hazardous Materials Inspections, Asbestos Abatement, Hazardous Materials Disposal, and Air Monitoring Services
I-95, Section GR1, PennDOT Engineering District 6-0
Philadelphia, Pennsylvania

Skelly and Loy performed asbestos and hazardous materials inspections for three large warehouses in the City of Philadelphia. One warehouse was five stories high and 70,000 square feet in size. The asbestos inspections were performed by Pennsylvania and City of Philadelphia certified Asbestos Investigators.

Abatement work included the removal of floor tile, mastics, pipe insulation, transite siding, and **approximately 2.9 miles of window caulking**. Due to the height of some of the buildings (+100 feet), abatement workers were required to use special fall and safety harnesses. During abatement activities, air sampling and analysis was performed in accordance with the City of Philadelphia Air Management Services regulations. In addition, clearance samples were collected following the abatement work.

During demolition activities, Skelly and Loy also **provided air monitoring services** to ensure that airborne dust and asbestos fiber concentrations were maintained within the limits established by the City of Philadelphia. **All work was performed within the proposed schedule and budget established for the project**.

Laboratory Turnaround Time

Sample analysis turnaround time will meet standard industry guidelines (generally five to ten business days), and the reporting will be expedited if required by the project.

Documentation Phase

At the conclusion of the inspection and bulk sampling, Skelly and Loy will prepare a letter report detailing the locations, quantities, and types of identified ACM identified for each building/structure inspected.

Example Asbestos Inspection Project

Upon receipt of a Purchase Order (Notice to Proceed) from PennDOT, Skelly and Loy will begin the planning and implementation phases for performing an asbestos inspection of a building. It is assumed that the building will be uninhabited and slated for demolition. Accordingly, destructive sampling techniques will be used to perform the asbestos inspection. As part of the Pre-Task Planning work, Skelly and Loy will evaluate the scope of the inspection work for selecting the proper equipment, determine if utilities are still connected and active in the building, and assess the potential site hazards will be identified and assessed in order to include measures for protecting on-site personnel including development of a HASP. In addition, Skelly and Loy will contact the local PennDOT District to make the arrangements for obtaining the keys to enter the building to perform the asbestos inspection. The following is an outline of the steps that will be completed for a typical asbestos inspection project.

- Receive the Notice to Proceed (receipt of Purchase Order) from PennDOT
- Review background documents or previous inspection reports (if available)
- Perform Pre-Task Planning, including development of a HASP
- Secure the necessary equipment, prepare paperwork, and mobilize to the site
- Perform the site inspection and collect samples for the analysis of asbestos fibers
    - Prepare floor plans of the building
    - Collect samples from clean to dirty
- Prepare the COC for the samples
- Prepare samples for bulk sample shipping and analysis
- Demobilize from the site
- Prepare the inspection report
- Review and QA/QC the final inspection report
- Submit the report to PennDOT

Project Schedule and Manhour Estimate
Asbestos Inspection
Multi-Structure Property/Multi-Story Building

ID	Task Name	Duration	Week 1	Week 2	Week 3	Week 4	Estimated Labor Hours Per Bid Item Numbers					
							2 PM	14 Env. Sci (Std)	15 Clerical	16 CADD	22 Env. Sci (std)	258 Asb Fac Inspect
1	Notice to Proceed (Receipt of Purchase Order)	1 Day					1	-	1	-	-	-
2	Documentation Review (if available)	1 Day					-	8	-	-	-	-
3	Equipment/Paperwork/Mobilization	1 Day					1	5	1	-	4	8
4	Site Inspection/Sample Collection	3 Days					2	16	-	-	16	32
5	Bulk Sample Shipping and Analysis	7 Days					-	-	1	-	-	-
6	Demobilization/COC	1 Day					-	4	-	-	4	8
7	Inspection Report Preparation	3 Days					-	24	4	6	24	-
8	Final Inspection Report Review/QA/QC	1 Day					1	4	1	1	2	-
9	Submittal of Report to PennDOT	1 Day					1	-	1	-	-	-
Totals		**19 Days**					**6**	**61**	**9**	**7**	**50**	**48**

Labor Bid Item Numbers

2 Project Manager
14 Environmental Scientist (Standard)
15 Clerical/Secretarial Personnel
16 Draftsperson/CADD Operator
22 Environmental Scientist (Standard Rate)
258 Asbestos Facility Inspection

Performing NESHAP Pre-Demolition Asbestos Inspection and Reporting Services for Bridges

To provide ACM assessments for bridge projects, Skelly and Loy uses fully certified asbestos inspectors to perform the asbestos inspection and reporting services.

It is assumed that the bridges will be structurally sound to inspect at the time the inspection work occurs.

The asbestos inspection efforts are intended to identify ACM in and on the bridge structures and but are not intended to identify other environmental issues on the bridges.

Additional costs associated with rail or other property access may be incurred. This would include additional insurance, training, snooper trucks, aerial lift equipment, traffic control, and railroad safety watchman fees.

Typical suspect ACMs to be encountered and sampled associated with the bridges will be the asphalt pavement, wingwall weep hole piping, expansion joints, bearing bases, railing and light fixture caulking, pipe wrapping on utility lines or cement type pipe runs underneath the bridge or even encased within concrete curbing and parapets. Prior to bridge inspection field efforts, we will review bridge construction plans provided to us for building materials suspected of containing asbestos.

Sampling of suspect asbestos-containing tar from outside of a corrugated drainpipe associated with a concrete bridge abutment, S.R. 00011 Bridge over Conodoguinet Creek in Cumberland County, Pennsylvania

All NOB bridge materials will be analyzed by PLM NOB. If the analytical results are greater than 1% asbestos, re-analysis by other method is not required; the NOB material is considered to be ACM. However, if the same NOB bridge material was analyzed by PLM NOB and the results showed asbestos present but at a concentration not greater than 1%, PennDOT recommends that the material be re-analyzed by TEM NOB. The results of the TEM NOB analysis will be final.

At the conclusion of the inspection and sampling, Skelly and Loy will prepare a letter report detailing the locations, quantities.

Rapid Response Asbestos Inspections
56 Bridges for Public-Private Partnership (P3) Contract
Statewide, Pennsylvania

Skelly and Loy provided pre-demolition/renovation asbestos inspections on **56 bridges located within 24 separate counties** to gather information associated with the letting of a P3 contract. Based on the solicitation schedule, the asbestos inspection and reporting work was performed as a Rapid Response initiative and was completed within **19 days of receiving the notice to proceed**.

Suspect asbestos samples were collected by L&I-certified asbestos inspectors. A comprehensive inspection report was compiled for each of the 56 bridges. All the inspection, laboratory analysis, and reporting work was performed in an expedited manor (i.e., 19 calendar days) to meet PennDOT's letting schedule for the P3 bridge contract.

b. **Asbestos Abatement.** Asbestos abatement services shall include all necessary equipment, labor, materials, incidentals, notifications, documentation, and certification fees for the abatement of ACM/PACM within the structure. All asbestos abatement will be in accordance with all applicable federal, state and local laws and regulations. The cost to have inspectors receive and maintain any Supplier safety and/or training necessary to access rail lines, etc. shall be incidental to the Contract and borne by the Supplier at no cost to PennDOT. At least one (1) PA L&I certified Supervisor shall be on-site and act as the OSHA competent person at all times. Asbestos abatement shall be performed so as not to cause asbestos contamination in adjacent areas. PCM clearance air testing shall be performed in work areas. Onsite asbestos air clearance sampling shall be performed by a NIOSH 582 certified asbestos analyst. PCM clearance criteria is <0.01 f/cc (fibers/cubic centimeter).

Supplier and Subcontractor(s), if any, must possess and maintain, as per services needed, the following current PA L&I certifications/copy of photo licenses for any services performed pertaining to asbestos abatement work:

- Supplier/Contractor
- Supervisor
- Worker
- Project Designer
- Management Planner

Upon completion of asbestos abatement projects that will be followed by structure re-occupancy, the Supplier shall provide written certification to PennDOT that a post-abatement visual inspection has been performed, and no asbestos-containing dust, debris, or residue remains in the structure.

Offeror Response

I-6.A.5.b Asbestos Abatement

Asbestos Abatement Experience and Qualifications

Asbestos is regulated by the U.S. EPA under the NESHAP program. The uncontrolled release of asbestos fibers can increase in fatalities or create serious, irreversible, or incapacitating illness.

Skelly and Loy has over 30 years of experience providing asbestos and hazardous material services associated with abatement oversight at public facilities located in in the Commonwealth of Pennsylvania. Our experience includes performing comprehensive development of project designs for asbestos abatement and contractor oversight during abatement.

Asbestos Abatement and Monitoring

Skelly and Loy and our asbestos abatement contractor will jointly conduct a performance-based methodology review of the building prior to removal or special handling and disposal of asbestos

materials. This methodology review will consist of asbestos abatement options which will outline existing site conditions, quantities of materials identified for removal and disposal, requirements (i.e., engineering controls and work practices, worker protection, worker and building occupant health and safety, notifications, packing, transport, and disposal of ACM, etc.), submittals and approvals, and execution.

Site specific procedure methods for asbestos removal will meet applicable federal, state, City of Philadelphia, and Allegheny County Health Department regulatory requirements. Contractor-submitted plans will be reviewed and approved by Skelly and Loy prior to work performance. Other hazardous building materials or debris will be incorporated and maybe included as part of the work. Special handling or disposal requirements will be noted for segregation of waste stream prior to work.

Our work for asbestos abatement will stipulate the staging, sequence, and material and equipment to be used by the asbestos abatement contractor and govern the following activities.

- Phasing and establishment of work areas
- Requirements for constructing work areas
- Decontamination and waste loadout
- Negative pressure and air circulation or moveable containment
- Respiratory protection
- Daily air monitoring
- Hazardous materials removal and disposal
- Work area and clearance air monitoring)
- Project closeout including preparation of a written statement verifying that no asbestos materials or debris remains

Asbestos/Hazardous Materials Inspections, Asbestos Abatement, Hazardous Materials Disposal, and Air Monitoring Services for Multiple Structures I-95, Section BSR, Philadelphia, Philadelphia County, Pennsylvania

PennDOT Engineering District 6-0 tasked Skelly and Loy with performing the pre-demolition asbestos and hazardous materials inspection and corresponding **abatement of 32 structures** located in the historic Bridesburg section of northeastern Philadelphia. These structures ranged from three-story row homes to a five-story former elementary school.

Over the 14-week abatement period, approximately 8,700 ft^2 of roofing material, 8,700 ft^2 of flooring, 3,700 lineal feet of caulking, 6,200 ft^2 of siding, and 778 ft^2 of TSI were removed from the 32 structures.

During the asbestos abatement activities, our L&I-certified Contractor Supervisor/Philadelphia-Licensed Asbestos Project Inspector performed **air monitoring** by to ensure worker safety, ensure contractor compliance, and document that asbestos fibers were not released to adjacent properties and streets.

This challenging project was completed on time, under budget, and without incident.

Skelly and Loy will provide daily monitoring of the asbestos abatement work. During abatement, our responsibilities will be to:

- verify that the work area containment barriers are properly constructed and maintained,
- confirm compliance with worker protection requirements and applicable regulations,

- perform daily work area and perimeter air monitoring and laboratory analysis, as required,
- ensure proper decontamination,
- perform a final visual inspection of each abatement containment,
- collect final clearance air sampling and analysis (site-specific air clearance samples are required for the City of Philadelphia and Allegheny County),
- review contractor transportation and disposal practices (including disposal containers), and
- the waste disposal manifest.

During abatement and on-site surveillance, Skelly and Loy will ensure that a qualified abatement supervisor will be on the site to oversee the abatement contractor and their work. The supervisor will monitor the performance of the asbestos abatement contractor's work procedures. The duties and responsibilities of the supervisor are to maintain regulatory compliance during the project's duration, including the following.

Asbestos abatement work to support the I-95, Section BSR project in Philadelphia, Pennsylvania

- Review the progress schedule
- Conduct on-site observations of the work in progress to assist in determining if the work is, in general, proceeding in accordance with the contract documents
- Collect baseline, during-abatement, and post-abatement air samples for subsequent analysis by phase contrast microscopy (PCM).
  - Should project needs require that PCM samples be analyzed on the site, Skelly and Loy will assign one of our five PCM field analysts who have been properly trained in accordance with NIOSH 582 sampling and analysis techniques for PCM; otherwise, all PCM air samples collected will be submitted to an AIHA and NVLAP industrial hygiene laboratory for off-site analysis
- Maintain a project logbook, recording the supervisor's hours on the job site, data relative to questions of work, directive changes, changed conditions, list of job site visitors, daily activities, decisions, observations in general, and specific observations in test procedures
- Record names, addresses, and phone numbers of all contractors and subcontractors
- Assist the project manager with review applications for payment with the Contractor for compliance with the established procedure for their submission, noting particularly the relationship of the payment requested to the schedule of values, work completed, and materials and equipment delivered at the site but not incorporated in the work

Abatement Oversight Final (Close-Out) Report

At the conclusion of the project, all close-out activities (such as coordination of final inspections and restoration of the site affected by the abatement of the asbestos and hazardous materials) will be conducted. A report will be prepared to summarize the abatement project and document all air monitoring (including ambient and final clearance air sampling), daily logs, visual inspection checklists, disposal records and waste manifests, inspection reports, and violations of specifications and regulations. The report, which will be reviewed internally by our CIH, will be comprehensive and serve as formal documentation for the permanent records of the abatement/remediation activities. For the City of Philadelphia abatement projects, one of our certified Asbestos Project Inspectors will complete the post-abatement Asbestos Inspection Report (AIR), submit it to PennDOT for signature, and then submit the signed AIR to the City of Philadelphia's Asbestos Control Unit.

Asbestos and Hazardous Materials inspections/Abatement
Interstate 83, Mt. Rose Avenue Exit Intersection Improvement Project
PennDOT Engineering District 8-0
York County, Pennsylvania

At the request of PennDOT, Skelly and Loy was tasked with completing pre-demolition asbestos inspections and subsequent abatement for the Mt. Rose Avenue Exit Intersection Improvement Project.

The inspection and abatement portion of the project lasted 17 months as properties were acquired, inspected, and abated. During this time, over **7,100 square feet and 2,700 linear feet of ACMs were abated** along with the removal of three ASTs, three USTs, and hundreds of different types of hazardous/ universal waste materials from these properties.

Working closely with PennDOT and its property acquisition consultant, Skelly and Loy was **able to complete the project on time and within budget, allowing PennDOT to continue the demolition and construction phases of this project on schedule**.

Example Asbestos Abatement Project

Upon receipt of a Purchase Order (Notice to Proceed) from PennDOT, Skelly and Loy will begin the planning and implementation phases for performing the asbestos abatement work within a building. It is assumed that the building will be uninhabited and slated for demolition. As part of the Pre-Task Planning work, Skelly and Loy will evaluate the scope of the abatement work for selecting the proper equipment, determine if utilities are still connected and active in the building, and assess the potential site hazards for protecting on-site personnel, including development of a HASP. In addition, Skelly and Loy will contact the local PennDOT District to make arrangements for obtaining the keys to enter the building to perform the asbestos abatement work. The following is an outline of the steps that will be completed for a typical asbestos inspection project.

- Receive the Notice to Proceed (receipt of Purchase Order) from PennDOT
- Submit the required ten-day Asbestos Abatement Notification
- Review background documents or previous inspection reports (if available)
- Perform Pre-Task Planning, including development of a HASP

- Secure the necessary equipment, prepare paperwork, and mobilize to the site
- Perform site preparation work (removal of materials within the abatement area) and perform demolition to access ACM
- Set up the containment around the abatement area
- Perform asbestos abatement
  - Conduct air monitoring during abatement
- Perform a visual inspection of the abatement area
  - Collect final air clearance samples
  - Submit the final air clearance samples to the testing laboratory
- Break down the containment structure and demobilize equipment and personnel from the site
- Make the necessary arrangements for the disposal of the asbestos waste materials
- Obtain the waste manifest(s) from the permitted waste disposal facility
- Prepare an asbestos abatement report
- Review and QA/QC the final abatement report
- Submit the asbestos abatement report to PennDOT

Project Schedule and Manhour Estimate
Asbestos Abatement
Multi-Structure Property/Multi-Story Building

ID	Task Name	Duration	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Estimated Labor Hours Per Bid Item Numbers				
													2 PM	7 Env. Sci (Std)	15 Clerical	22 Env. Sci (std)	Sub-contractor
1	Notice to Proceed (Receipt of Purchase Order)	1 Day															
2	Required 10-Day Asbestos Abatement Notification	10 Days															
3	Mobilization	1 Day															
4	Demolition to Access ACM/Containment Setup	3 Days															
5	Asbestos Abatement	5 Days															
6	Visual/Final Air Clearances/Analysis	2 Days															
7	Teardown/Demobilization	1 Day															
8	ACM Waste Disposal	1 Day															
9	Waste Manifest(s) from the Disposal Facility	35 Days															
10	Preparation of letter Report	2 Days															
11	Submittal of Letter Report to PennDOT	1 Day															
Totals		**62 Days**															

Labor Bid Item Numbers

2 Project manager
7 Site Health and Safety Officer
15 Clerical/Secretarial Personnel
22 Environmental Scientist (Standard Rate)
AC Abatement Contractor – 1 Competent Person and 3 Workers

6. **Lead-Based Paint Inspection.** Lead-based paint inspection for structures such as bridges, prior to demolition or renovation. **Lead-based paint abatement and the demolition and renovation of bridges are <u>not</u> included under the scope of this Contract.**

   Lead-based paint inspections shall include the analysis of paint chip samples for total lead, cadmium, chromium, and arsenic. Lead-based paint inspectors shall possess current Lead-Based Paint Inspector-Technician or Risk Assessor certification with the PA L&I, and inspection reports shall provide a photocopy of the inspector's certificate.

   PennDOT may require additional specifications from the awarded Supplier as part of the work proposal for an individual project.

Offeror Response

I-6.A.6 Lead-Based Paint Inspection

Proposed Approach for Conducting Lead and Heavy Metals in Paint Inspection and Reporting Services for Bridges

Skelly and Loy will provide a Commonwealth of Pennsylvania-licensed Lead Inspector and Risk Assessor to sample accessible painted surfaces for the presence of LBP associated with the bridge structure. Other heavy metals (including arsenic, cadmium, and chromium) will also be tested for in the collected paint chip samples.

Manual scraping or a heat gun will be used to collect the paint samples. Paint samples will be collected from areas free of rust to minimize interference with the paint sample analysis. If multiple topcoat colors are observed, samples will be collected from each topcoat color. Generally, two paint samples will be collected from each topcoat color from different accessible bridge components, including but not limited to girders, pier columns, decking, bearings, railings, and ladders, etc.

<u>Tools, Forms, and Sampling Supplies</u>

Each paint inspector will ensure that the following proper sampling and sample documentation supplies are available during the investigation and testing activities.

- A full complement of sampling tools required to collect samples (including hammers, chisels, utility knives, heat gun, ladders, etc.)
- All forms required by our SOPs (including paint sampling forms and COC custody forms)
- Diagrams of the bridge areas to be assessed to document the location of all tested areas
- Step and extension ladders needed to access materials at higher elevations (if not provided)

- PPE (i.e., respiratory protection, disposable coveralls, eye protection, gloves, fall protection, etc.)

- Sampling vials, labels, and resealable air-tight bags

Rapid Response Asbestos and LBP Bridge Inspections
I-95, PennDOT Engineering District 6-0
Philadelphia, Pennsylvania

Skelly and Loy provided pre-renovation asbestos and **LBP** inspections for "structurally deficient" bridge structures along Interstate I-95 in Philadelphia County, Pennsylvania. A total of 7 bridges were inspected for ACM and a **total of 12 bridges were inspected for paint containing lead and other heavy metals**.

The inspection work was complicated by the cumulative total length of these bridge sections that exceeded 24,700 feet or 4.67 miles. The longest individual bridge section inspected was more than 5,160 feet in length.

Based upon the short project schedule, the analysis of asbestos and paint chip samples were performed in an expedited manner by an NVLAP-accredited laboratory. After receipt of the analytical results, an inspection report was issued detailing the descriptions and locations of bridge building materials containing asbestos as well as coatings containing heavy metals.

Bridge Walkthrough

The first step in performing a bridge assessment involves a walkthrough of the bridge. This walkthrough will include the following.

1. An above- and below-decking visual inspection of similarly painted bridge structures, noting accessibility for sampling, the need for ladders or other equipment, traffic control, etc.

2. All suspect paint will be separated by topcoat color and bridge structure type.

Collecting Bulk Samples

Skelly and Loy will collect limited representative samples of the suspect paint in compliance with the U.S. EPA sampling protocol using destructive testing methods.

When collecting paint samples, our inspector/risk assessors will take great care in protecting themselves and the immediate environment from airborne lead and other heavy metals. When sampling, inspectors will assume that all paint being sampled have the potential to contain heavy metals, including lead.

Photograph of a bridge during a LBP inspection, S.R. 0202 near West Chester, Pennsylvania

Appropriate PPE and drop plastic below painted surfaces will be utilized. For all collected samples, inspectors will document the following assessment information.

- Paint color and bridge component type
- Substrate (i.e., metal, concrete, etc.)
- Location of the sampled paint on diagrams

Sample Identification

A unique sample identification number will be designated for each paint sample to facilitate sample tracking without revealing the identity of the sample to the laboratory. All sample containers will be labeled immediately upon collection to ensure proper identification and to preserve sample integrity.

Sample Chain of Custody

Skelly and Loy will follow our standard COC protocol to document and ensure a continuous record of sample possession from the time of collection to its receipt by the analytical laboratory. The COC forms will be completed and maintained for each set of samples shipped to the laboratory. The labeled sample vials will be placed into heavy-duty zipper-style bags, then packaged and shipped in securely taped cardboard box containers. Corresponding COC documentation will accompany each shipping container. All shipping containers will be express-mailed to the laboratory at regular intervals during the inspection of larger buildings and daily where smaller building inspections are completed within one day.

Analysis of Bridge Material Samples

Collected paint samples will be analyzed for lead content using U.S. EPA Method SW 846 – 3050B/7000B; Flame Atomic Absorption Spectrophotometry (FAAS). All samples will be analyzed by testing laboratories having AIHA and NVLAP accreditations for the analysis of environmental lead. If requested, paint samples may also be analyzed for total chromium, cadmium and arsenic and chromium vi (hexavalent chromium) metals.

At the conclusion of the inspection and sampling, Skelly and Loy will prepare a letter report detailing the locations, quantities, and types of identified LBP and paints containing other heavy metals identified for each bridge inspected

Example Asbestos and LBP Bridge Inspection Project

Upon receipt of a Purchase Order (Notice to Proceed) from PennDOT, Skelly and Loy will begin the planning and implementation phases for performing the asbestos and LBP inspection of the bridge. It is assumed that the bridge will be slated for demolition and structurally sound to walk upon. Destructive sampling techniques will be used to perform the asbestos and LBP inspection. As part of the Pre-Task Planning work, Skelly and Loy will evaluate the scope of the inspection work for selecting the proper equipment (ladders, booms, and/or lifts), determine if utilities are still connected and active on the bridge, and assess the potential site hazards for protecting on-site personnel, including development of a HASP. The following is an outline of the steps that will be completed for a typical asbestos and LBP inspection project.

- Receive the Notice to Proceed (receipt of Purchase Order) from PennDOT

- Review background documents or previous inspection reports (if available)

- Perform Pre-Task Planning, including development of a HASP
- Secure the necessary equipment (ladders, booms, and/or lifts), prepare paperwork, and mobilize to the site
- Perform the site inspection and collect samples for the analysis of asbestos fibers
  - In addition, collect paint chip samples for the analysis of lead
- Collect samples from clean to dirty
- Prepare the COC for the samples
- Prepare samples for bulk sample shipping and analysis
- Demobilize from the site
- Prepare the inspection report
- Review and QA/QC the final inspection report
- Submit the report to PennDOT

Project Schedule and Manhour Estimate
Asbestos or Lead Bridge Inspection
Large-Span/Multi-Lane Bridge

								Estimated Labor Hours Per Bid Item Numbers					
ID	Task Name	Duration	Week 1	Week 2	Week 3	Week 4		2 PM	14 Env. Sci (Std)	15 Clerical	16 CADD	22/24 Env. Sci/ Lead Insp. (std)	258 Asb Fac Inspect
1	Notice to Proceed (Receipt of Purchase Order)	1 Day						1	-	1	-	-	-
2	Documentation Review (if available)	1 Day						-	8	-	-	-	-
3	Equipment/Paperwork/Mobilization	1 Day						1	5	1	-	4	8
4	Traffic Control	3 Days						1	-	1		-	
5	Manlift/Boom Truck	3 Days						1	-	1		-	
6	Site Inspection/Sample Collection	3 Days						2	16	-	-	16	32
7	Bulk Sample Shipping and Analysis	7 Days						-	-	1	-	-	-
8	Demobilization/COC	1 Day						-	4	-	-	4	8
9	Inspection Report Preparation	3 Days						-	24	4	6	24	-
10	Final Inspection Report Review/QA/QC	1 Day						1	4	1	1	2	-
11	Submittal of Report to PennDOT	1 Day						1	-	1	-	-	-
Totals		**19 Days**						**8**	**61**	**11**	**7**	**50**	**48**

Labor Bid Item Numbers

2 Project Manager
14 Environmental Scientist (Standard)
15 Clerical/Secretarial Personnel
16 Draftsperson/CADD Operator
22 Environmental Scientist (Standard Rate)
24 Lead-Based Paint Inspector - Technician
258 Asbestos Facility Inspection

7. **Waste Survey.** Inspection of properties or structures for the purpose of identifying substances of potential environmental concern. Common examples are bridge paint sampling for lead prior to bridge replacement and waste inspections of properties to be taken for right-of-way expansion for a transportation development project. Waste surveys are often performed in combination with an asbestos inspection. Waste surveys shall only be performed by individuals who are compliant with the training requirements (initial and annual refresher) of 29 CFR § 1910.120, the Hazardous Waste Operations and Emergency Response (HAZWOPER) Standard.

Offeror Response

I-6.A.7 Waste Survey

Approach for Performing Waste Surveys

Skelly and Loy will conduct a visual inventory of building materials, components, and stored products suspected of containing hazardous/regulated materials. Building materials and components that typically contain hazardous/regulated materials may include fluorescent light tubes, high-intensity lamps, thermostats, gauges, etc. (mercury); fluorescent light ballasts, transformers, capacitors, hydraulic oils, etc. (PCBs); HVAC units, coolers, refrigerators, dehumidifiers, water fountains (ozone-depleting chlorofluorocarbon refrigerants and compressor oils); batteries (such as NiCad and lead-acid located in exit signs and emergency lighting units); stored chemicals; and other hazardous materials that may be present. These materials are typically referred to as universal wastes. Stored materials considered in our inventory include paints, solvents, oils, greases, other automotive type fluids, pesticides, herbicides, degreasers, detergents, etc.

Sampling of these suspect items or the contents of these items will be not performed, and the assumption of the presence of hazardous/environmentally regulated materials will be based on container labeling in addition to inspector experience and knowledge.

The inventory report will include summary tables of hazardous/regulated materials identified, captioned photographs, and the estimated quantity and locations of each material. If documented hazardous/regulated materials show damage, spills or container leakage, this information will also be included in the report.

Pre-Demolition Asbestos/Hazardous Materials Inspections and Abatement
Former Automotive Garage, S.R. 0322, PennDOT Engineering District 6-0
Concordville, Delaware County, Pennsylvania

To accommodate a roadway improvements project along S.R. 0322, Section 101 in Concordville, Delaware County, PennDOT Engineering District 6-0 acquired a former automotive garage. The property was improved with two single-story block buildings and multiple exterior tractor trailer storage units. The structures were planned to be demolished. PennDOT contracted Skelly and Loy to inspect the structures for **asbestos and hazardous materials prior to performing the demolition work**.

While on the site the inspectors **cataloged the hazardous/environmentally regulated materials**, including mercury-containing fluorescent lights, thermostats, high-pressure sodium lights, metal halide lights, flammable materials and liquids, corrosive liquids, and miscellaneous cleaning products. The results of the inspections were presented in a comprehensive inspection report that included an asbestos abatement plan for mitigating the RACM and hazardous materials.

Example Waste Survey Project

Upon receipt of a Purchase Order (Notice to Proceed) from PennDOT, Skelly and Loy will begin the planning and implementation phases for performing the waste inspection of a building. It should be noted that waste inspections are typically performed while performing an asbestos inspection on the site. As part of the Pre-Task Planning work, the scope of the inspection work for selecting the proper equipment will be evaluated and an assessment of the potential site hazards will be completed to determine measures for protecting on-site personnel, including development of a HASP. In addition, Skelly and Loy will contact the local PennDOT District to make the arrangements for obtaining the keys to enter the building to perform the waste inspection. The following is an outline of the steps that will be completed for a typical waste inspection project.

- Receive the Notice to Proceed (receipt of Purchase Order) from PennDOT
- Review background documents or previous inspection reports (if available)
- Perform Pre-Task Planning, including development of a HASP
- Secure the necessary equipment and mobilize to the site
- Perform the site inspection
- Demobilize from the site
- Prepare the inspection report
- Review and QA/QC the final inspection report
- Submit the report to PennDOT

Project Schedule and Manhour Estimate
Waste Inspection
Multi-Structure/Multi-Story Building

ID	Task Name	Duration	Week 1	Week 2	Week 3	Estimated Labor Hours Per Bid Item Numbers			
						2 PM	15 Clerical	22 Env. Sci (std)	23 Tech Hazardous Waste
1	Notice to Proceed (Receipt of Purchase Order)	1 Day				1	1	-	-
2	Documentation Review (if available)	1 Day				-	-	4	-
3	Equipment/Paperwork/Mobilization	1 Day				1	1	8	8
4	Site Inspection	2 Days				2	-	16	16
5	Demobilization/Documentation	1 Day				-	-	8	8
6	Inspection Report Preparation	2 Days				-	4	10	10
7	Final Inspection Report Review/QA/QC	1 Day				1	1	4	2
8	Submittal of Report to PennDOT	1 Day				1	1	-	-
Totals		**10 Days**				**6**	**8**	**50**	**44**

Labor Bid Item Numbers

2 Project Manager
14 Environmental Scientist (Standard)
15 Clerical/Secretarial Personnel
16 Draftsperson/CADD Operator
22 Environmental Scientist (Standard Rate)
23 Technician, Hazardous Materials

8. **Laboratory Sampling and Analysis.** Sample collection of Level 1 data consisting of sample analysis results, including method detection limits, appropriate QA/QC results, and chain of custody forms. Lab analysis line items shall include the disposal of unused portions of sample(s). All laboratory analysis shall be in accordance with PA DEP guidance and regulations, as applicable under the Storage Tank and Spill Prevention Act and the Land Recycling and Environmental Remediation Standards Act (Act 2). For dissolved metals analysis, sample filtration shall be performed in the field. Lab analysis results for each item shall be reported only for the compounds on the PA DEP Short List. As a reference, the most recent PA DEP Short List of Petroleum Products is attached to this RFP as **Appendix C – Short List of Petroleum Products.**

   Sampling and analysis shall be performed by the Supplier to sufficiently characterize and properly classify the material, and shall be performed only to the degree necessary to identify the waste to be disposed of. Waste capable of identification through process knowledge shall be used in lieu of testing when applicable. All laboratories used for the Contract, except for asbestos and physical parameters analysis, must have accreditation required by PA DEP for drinking water analysis and, if applicable, for environmental sampling analysis.

   All laboratories used during the Contract should reference the PA DEP Short List of Petroleum Products for specifications for the analytical method to be used for each petroleum product constituent on the "Short List." A copy of the most recent "Short List" is attached to this RFP as **Appendix C – Short List of Petroleum Products**.

   Lab analysis results for each item shall be reported only for the compounds on the PA DEP Short List <u>as per PennDOT's request on a case-by-case basis</u>.

   Supplier and Subcontractor(s), if any, must possess and maintain, as per services needed, the following current PA DEP documents for any services performed pertaining to laboratory analysis work:

   - Environmental laboratory registration
   - Drinking water certification, encompassing the following suites of compounds: SVOCs, VOCs, Metals, PCBs, Pesticides/Herbicides and Microbiology.

   If the cost of an analysis has increased due to a required regulatory or policy change in testing methodology, the Supplier must provide documentation providing proof that the sample analysis costs have increased and will affect the Supplier's cost of doing business. The documentation shall be provided to the PA DGS Commodity Specialist forty-five (45) days prior to the effective date of the proposed rate change for approval.

Normal Turn-around-Time for sample analysis and reporting shall be defined as ten (10) to fifteen (15) calendar days from the day the sample is delivered to the laboratory.

Expedited Laboratory Analysis Premium (Turn-around-Time) for sample analysis and reporting shall be defined as twenty-four (24) hours to forty-eight (48) hours, or one (1) week from the day the sample is delivered to the laboratory.

Offeror Response

I-6.A.8 Laboratory Sampling and Analysis

For supporting work order assignments involving the collection and analysis of environmental samples, Skelly and Loy has included on our team the following PA DEP Drinking Water and NELAP certified environmental analytical testing laboratories.

- ALS Global Laboratories
- Eurofins Lancaster Laboratories
- Fairway Laboratories Inc.
- Pace Analytical Services, Inc.

The PA DEP Drinking Water certifications and NELAP certifications for these testing laboratories are presented in Sections I-2.A.3e and I-2.A.3f of our technical proposal package, respectively.

Skelly and Loy understands that testing and analytical data services under the Remediation Contract must meet Level 1 data reporting protocols, including method detection limits, appropriate QA/QC results, and chain of custody forms. Moreover, laboratory analyses will be in accordance with PA DEP guidance and regulations, as applicable under the Storage Tank and Spill Prevention Act and Land Recycling and Environmental Remediation Standards Act (Act 2). We routinely follow industry-accepted sampling protocols for dissolved metals analysis, requiring that sample filtration be performed in the field. In regard to petroleum compounds, Skelly and Loy will ensure that environmental soil and groundwater samples be analyzed only for the compounds on the **PA DEP Short List** as included in Appendix C of the RFP (i.e., Short List of Petroleum Products).

Skelly and Loy routinely collects and analyzes waste characterization samples. We have been providing such services to PennDOT for the past 24 years. Such sampling and analyses are performed to sufficiently characterize and properly classify the waste material and are completed only to the degree necessary to identify the waste for disposal purposes. Where applicable, Skelly and Loy uses “generator knowledge” to eliminate environmental testing to reduce project costs.

Finally, we routinely manage environmental samples for analysis under normal turnaround time (i.e., ten business days from the day the sample is delivered to the laboratory). Where applicable and after discussion with the PennDOT PM, Skelly and Loy work with the selected laboratory to make the necessary arrangements for expediting the analysis of environmental samples for 24 hours, 48 hours, or 1 week turnaround time.

Lab analysis shall include, but not limited to:

a. Soil/Sediment/Debris.

i. **Short List Volatile Organic Compounds (VOCs) – Soil**: Volatile Organic Compounds (VOCs), Parameters to be Tested in Soil, as specified in PA DEP's Short List of Petroleum Products, presently consisting of Benzene, Toluene, Ethyl Benzene, Xylenes (total), Cumene (Isopropylbenzene), Naphthalene, Trimethylbenzene, 1,2,4-, Trimethylbenzene, 1,3,5-, Dichloroethane, 1,2- (EDC), Dibromoethane, 1,2- (EDB), and Methyl tert-butyl ether (MTBE). The line item for Short List VOC's, soil will include any future additions by PA DEP to the VOC Short List for soil. If analysis for the additional VOC's will directly result in additional costs charged by the laboratory, then the Supplier must provide documentation providing proof that the sample analysis costs have increased and will affect the Supplier's cost of doing business. The documentation shall be provided to the PA DGS Commodity Specialist forty-five (45) days prior to the effective date of the proposed rate change for approval.

ii. **Short List Semi Volatile Organic Compounds (SVOCs) – Soil**: Semi Volatile Organic Compounds (SVOC's), Parameters to be Tested in Soil, found in PA DEP's Short List of Petroleum Products, presently consisting of Fluorene, Anthracene, Phenanthrene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene and Benzo(g,h,i)perylene. The line item for Short List SVOC's, soil will include any future additions by PA DEP to the SVOC Short List for soil. If analysis for the additional SVOC's will directly result in additional costs charged by the laboratory, then the Supplier must provide documentation providing proof that the sample analysis costs have increased and will affect the Supplier's cost of doing business. The documentation shall be provided to the PA DGS Commodity Specialist forty-five (45) days prior to the effective date of the proposed rate change for approval.

Offeror Response

I-6.A.8.A Soil/Sediment/Debris

Skelly and Loy collects soil samples on a regular basis for the analysis of PA DEP's Short List of Petroleum Products. Based on our experience, we know that the organic compounds included on PA DEP's Short List of Petroleum Products can be segregated into VOCs and SVOCs.

The analysis of VOCs and SVOCs require different sampling procedures and sampling bottles/glassware. To meet the requirement of SW-846 Test Method 5035, Skelly and Loy utilizes Terra Core soil sampling kits for the collection of soil samples to be analyzed for VOC compounds.

To maintain a state of readiness for rapid response projects, Skelly and Loy stocks a supply of sample bottles in our offices that include Terra Core soil sampling kits and 100-milliliter jars for the collection and analysis of total solids (needed to report the dry weight of the VOC and SVOC testing results).

As mentioned above, Skelly and Loy has included on our team the following NELAP certified environmental analytical testing laboratories for the analysis of soils, sediments, and debris for organic and inorganic parameters.

- ALS Global Laboratories
- Eurofins Lancaster Laboratories
- Fairway Laboratories Inc.
- Pace Analytical Services, Inc.

The NELAP certifications for these testing laboratories are presented in Section 1.1, Technical Questions, in the JAGGAER system.

b. Liquids.

i. **Short List Volatile Organic Compounds (VOCs) – Liquids**: Volatile Organic Compounds (VOCs), Parameters to be Tested in Water, as specified in PA DEP's Short List of Petroleum Products, presently consisting of Benzene, Toluene, Ethyl Benzene, Xylenes (total), Cumene (Isopropylbenzene), Naphthalene, Trimethylbenzene, 1,2,4-, Trimethylbenzene, 1,3,5-, Dichloroethane, 1,2- (EDC), and Methyl tert-butyl ether (MTBE). Dibromoethane, 1,2- (EDB) in water requires a different analytical method than other Short List VOC's in water, and is therefore addressed under a different line item. The line item for Short List VOC's, liquids will include any future additions by PA DEP to the VOC Short List for water. If analysis for the additional VOC's will directly result in additional costs charged by the laboratory, then the Supplier must provide documentation providing proof that the sample analysis costs have increased and will affect the Supplier's cost of doing business. The documentation shall be provided to the PA DGS Commodity Specialist forty-five (45) days prior to the effective date of the proposed rate change for approval.

ii. **Short List Semi Volatile Organic Compounds (SVOCs) – Liquids:** Semi Volatile Organic Compounds (SVOC's), Parameters to be Tested in Water, found in PA DEP's Short List of Petroleum Products, presently consisting of Fluorene, Anthracene, Phenanthrene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-c,d) pyrene, and Benzo(g,h,i)perylene. The line item for Short List SVOC's, liquids will include any future additions by PA DEP to the SVOC Short List for water. If analysis for the additional SVOC's will directly result in additional costs charged by the laboratory, then the Supplier must provide documentation providing proof that the sample analysis costs have increased and will affect the Supplier's cost of doing business. The documentation shall be provided to the PA DGS Commodity Specialist forty-five (45) days prior to the effective date of the proposed rate change for approval.

Offeror Response

I-6.A.8.B Liquids

Skelly and Loy collects liquid (water and groundwater) samples on a regular basis for the analysis of PA DEP's Short List of Petroleum Products. Based on our experience, we know that the organic compounds included on PA DEP's Short List of Petroleum Products can be segregated into VOCs and SVOCs.

The analysis of VOCs and SVOCs require different sampling procedures and sampling bottles/glassware. Skelly and Loy utilizes 40-milliliter vials fixed with hydrochloric acid for the collection of liquid samples to be analyzed for VOC compounds. To maintain a state of readiness for rapid response projects, Skelly and Loy stocks a supply of sample bottles and sampling kits in

our offices that include 40-milliliter VOC vials and 100-milliliter jars for the collection/analysis of SVOC compounds.

As mentioned above, Skelly and Loy has included on our team the following NELAP certified environmental analytical testing laboratories for the analysis of liquids for organic and inorganic parameters.

- ALS Global Laboratories
- Eurofins Lancaster Laboratories
- Fairway Laboratories Inc.
- Pace Analytical Services, Inc.

The NELAP certifications for these testing laboratories are presented in Section 1.1, Technical Questions, in the JAGGAER system.

c. Air. Includes airborne asbestos testing as specified below, work site air emissions testing, and soil gas sample analysis**.**

Asbestos. Supplier and Subcontractor(s), if any, must possess and maintain, as per services needed, current NVLAP laboratory certification, for any services performed pertaining to asbestos related laboratory analysis work in the following manner:

Laboratories performing asbestos or airborne fiber analysis under this Contract shall adhere to NIST standards in the following manner:

i. PCM (air) – Proficiency Analytical Testing Program with Proficient status
NIST Handbook 150-13:2006

ii. TEM (air) – NVLAP
NIST Handbook 150-13:2006

iii. PLM (bulk) – NVLAP
NIST Handbook 150-3:2006

Offeror Response

I-6.A.8.C Air/Asbestos

For supporting work order assignments involving the collection and analysis of air samples for asbestos, Skelly and Loy has included on our team the following NVLAP and PA DEP certified testing laboratories.

- ALS Global
- Batta Laboratories, LLC
- Eurofins Lancaster Laboratories
- International Asbestos Testing Laboratories (iATL)

The PA DEP laboratory certifications and NVLAP certifications for these testing laboratories are presented in Section 1.1, Technical Questions, in the JAGGAER system. The above-referenced laboratories perform asbestos or airborne fiber analysis under the Remediation Contract and adhere to National Institute of Standards and Technology (NIST) standards for testing the following samples:

- PCM – Phase Contrast Microscopy
- PLM – Polarized Light Microscopy
- TEM – Transmission Electron Microscopy

Skelly and Loy collects air samples for the analysis of asbestos fibers prior to, during, and following asbestos abatement work. Specifically, the process includes the collection of baseline, during-abatement, and post-abatement air samples for subsequent analysis by PCM. Should the project needs require that PCM samples be analyzed on site (i.e., real-time data), Skelly and Loy

will assign one of our PCM field analysts who have been properly trained in accordance with NIOSH 582 sampling and analysis techniques for PCM. Otherwise, all PCM air samples collected will be submitted to an AIHA and NVLAP industrial hygiene laboratory for offsite analysis.

It should be noted that, in order **to comply with a PennDOT directive** regarding the analysis of NOB materials, **Skelly and Loy will direct the testing laboratory to initially analyze all NOB materials by PLM NOB** (which involves a gravimetric reduction preparation step prior to actual analysis by PLM). NOB materials typically include materials such as asphaltic roofing and expansion joint material, vinyl floor tile and corresponding mastics, and caulking. NOB materials found to be free of asbestos by PLM NOB will be considered non-ACM. Conversely, materials found to contain greater than 1% asbestos by PLM NOB analysis will be considered ACM. Should a material analyzed by PLM NOB be identified as containing asbestos, but at a concentration not greater than 1%, we will direct the laboratory to perform a follow-up analysis by TEM after the sample undergoes an additional but different preparation step. In such cases the results of the TEM NOB analysis will be final. Materials that have results by TEM NOB analysis not greater than 1% will not be considered ACM, but materials with TEM NOB results greater than 1% will be considered TEM NOB.

Collected asbestos bulk samples will be analyzed by PLM in accordance with 40 CFR 763. All sampled ACM will be grouped with homogeneous area materials submitted in separate bags. If the samples in that homogenous group is identified as containing greater than 1% asbestos, the remaining samples will not be analyzed, and that material will be considered an ACM. ***For all samples initially analyzed containing less than 10% asbestos, PLM point counting methods will be conducted by the laboratory.*** PLM point counting is a more definitive method for determining the asbestos content in materials exhibiting low percentages of asbestos under PLM “visual estimation” analysis. Moreover, point counting in such instances is recommended by the U.S. EPA. All samples will be analyzed by a fully accredited laboratory having NVLAP accreditation for the analysis of asbestos in bulk samples.

9. **Waste Disposal Services.** Temporary (on-site) storage, containers, loading, transportation, preparation of waste disposal documents, and off-site disposal of hazardous and non-hazardous wastes at a properly permitted facility. Services may include waste identification (characterization), excavation, containment and selective placement (in accordance with PennDOT Publication 408, current edition) of contaminated media on-site, such that the effected work area is returned to a Level D health and safety condition.

   The awarded Supplier shall prepare and provide a completed copy of the Pennsylvania Hazardous Waste Manifest and Land Ban Notification for hazardous wastes and all applicable documents required for non-hazardous wastes (e.g. PA DEP Forms "U" and "FC-1"). Waste disposal cannot be performed until the applicable signed forms have been submitted to the proper regulatory agencies. For residual and municipal waste disposal, Supplier may sign Bills of Lading, but PennDOT will sign PA DEP Form 26R and Form U for submission to PA DEP, as applicable. For hazardous waste manifests, PennDOT will sign as the Generator, and Supplier will sign as the Offeror, as required by state and federal regulations.

   PennDOT must receive, within ten (10) calendar days after disposal, detailed and legible uniform manifests (hazardous waste) or bills of lading (non-hazardous waste), as appropriate, that have been prepared, signed, and dated by an authorized person of the disposal/treatment facility certifying receipt of (and quantifying) the types of wastes to be disposed.

   All waste transporters used under the Contract must provide, upon request, copies of valid permits appropriate for transportation for the types of wastes to be disposed.

   All waste testing and analysis required by Federal and State laws for the proper disposal of wastes, shall be the responsibility of the Supplier, and shall be included in the unit costs for waste disposal.

   All contaminated soil must be properly stored while awaiting sample analysis results. Drummed media, including site investigation derived waste, must be properly labeled and stored. Supplier must remove from the site, all contaminated soil requiring off-site treatment or disposal within fifteen (15) calendar days of receipt of sample analysis results.

Offeror Response

I-6.A.9 Waste Disposal Services

Approach for Providing Waste Disposal Services

Photograph showing properly labeled drums awaiting disposal at the PennDOT Blair County Maintenance Facility

For the past 24 years Skelly and Loy has been furnishing PennDOT with services for the characterization, management, transport, and disposal of non-hazardous and hazardous wastes. Waste materials generated during remedial projects are often placed in temporary storage containers. Such temporary containers may include as 55-gallon capacity DOT shippable drums (typically used for spill cleanup projects or small quantities of waste materials) and roll-off containers to store soils and waste materials generated during excavation or storage tank removal projects. For larger remedial projects, contaminated soils are placed in stockpiles. For containment purposes, Skelly and Loy uses straw bales and/or silt fencing as E&S controls along the edges of soil stockpiles. In addition, such stock-piles are covered by plastic sheeting. Skelly and Loy routinely furnishes PennDOT with sampling services to identify and characterize waste materials. Such characterization may involve the sampling of drums or larger soil stockpiles requiring the development of a sampling plan and the collection of composite samples. Skelly and Loy makes arrangements for the disposal of waste materials within 15 calendar days of receipt of the analytical results for the waste characterization samples.

The waste management services which Skelly and Loy has been furnishing PennDOT not only include furnishing the waste containers, but also preparation of waste disposal documents, loading, and transportation of waste materials to off-site permitted hazardous and non-hazardous waste facilities. Skelly and Loy routinely works with our network of disposal facilities to process the waste characterization and generation paperwork. This documentation includes the processing of the Pennsylvania Hazardous Waste Manifests and Land Ban Notification for hazardous wastes and all applicable documents required for non-hazardous wastes (e.g., PA DEP Forms “U” and “FC-1”). To assist PennDOT, our staff of field scientists and technicians routinely sign bills of lading for the loadout of (non-hazardous waste). Following remedial actions, our reports to the local PennDOT District include uniform manifests for hazardous wastes or bills of lading for non-hazardous wastes. In addition, our reports include the receipts from the disposal facility quantifying the types and volume of wastes disposed. These reports are routinely submitted to PennDOT within ten calendar days following disposal of the waste materials.

Where applicable, Skelly and Loy has furnished PennDOT with excavation services for the containment and selective on-site placement of residual waste materials (i.e., in embankment fill), effectively eliminating direct contact by potential receptors to the buried wastes. Such projects were performed in accordance with PennDOT Publication 408 (current edition).

Being a good steward of the environment for effectively managing waste materials is important to Skelly and Loy. In addition, using **sustainable remediation and waste management strategies** makes good business sense. Accordingly, Skelly and Loy looks for options to recycle soil

materials rather disposal. The project example presented below is one example of many projects which Skelly and Loy managed under the Remediation Contract than involved the recycling of waste materials.

Waste Characterization and Waste Recycling Activities (Rapid Response)
S.R. 0412, Section 01S, PennDOT Engineering District 5-0
City of Bethlehem, Northampton County, Pennsylvania

Skelly and Loy completed **waste characterization sampling and waste management activities** for miscellaneous materials unearthed during the construction of a storm water management basin within the PennDOT right-of-way for the expansion of a Park 'n Ride facility. Based on the construction schedule, PennDOT initiated a **Rapid Response Purchase Order** for management of the unearthed materials.

Skelly and Loy utilized a multi-pronged approach in an attempt to maximize beneficial reuse of the generated waste materials. Soils deemed unsuitable to meet site-specific compaction requirements were sampled for both PA DEP clean fill requirements and industry standard recycling requirements. Skelly and Loy collected the waste characterization soil samples and submitted them for laboratory analysis. Based on the analytical results, the soils were deemed unsuitable for reuse on the site. To reduce disposal costs, **Skelly and Loy coordinated the loading and transport of 970.72 tons of soil to a permitted environmental management facility for treatment and beneficial reuse**.

Approximately **1,085 tons of waste materials** were generated and managed from the area of the storm-water management basin. Of this total, approximately 94% of the waste materials (1,021 tons) were beneficially reused.

The characterization, disposal, and reporting work associated with the unearthed waste materials were all completed in a timely fashion, allowing PennDOT to maintain the construction schedule for expanding the Park 'n Ride facility.

Example Waste Disposal Project (Normal Response)

Skelly and Loy has successfully managed numerous work order assignments involving waste materials. For this example, we present the procedure for characterizing and disposing the stockpiled soils generated during a roadway improvements project (a very typical project). Upon receipt of a Purchase Order (Notice to Proceed) from PennDOT, Skelly and Loy will begin the planning and implementation phases for managing the disposal of the stockpiled soils. Initial steps will be to get feedback from PennDOT or their construction contractor regarding origin of the soils and potential contaminants. As part of the Pre-Task Planning work, Skelly and Loy will evaluate the scope of the sampling and disposal work selecting the proper equipment and assess the potential site hazards for protecting on-site personnel, including development of a HASP. The following is an outline of the steps that will be completed for a typical project involving the characterization, loadout, transportation, and disposal of stockpiled soils.

- Receive the Notice to Proceed (receipt of Purchase Order) from PennDOT
- Obtain information from PennDOT or the construction contractor regarding the origin of the soils and potential contaminants.
- Perform Pre-Task Planning, including development of a HASP

- Conduct a site visit to measure the dimensions of the soil pile and estimate the volume of soils to be disposed
- Develop a sampling plan
- Contact the testing laboratory to order the sampling glassware and bottles
- Secure the necessary sampling equipment and mobilize to the site to collect waste characterization samples
- Laboratory analysis of waste samples (assume waste characterization and TCLP testing)
- Assuming that the soils are non-hazardous, submit waste characterization paperwork to the soil recycling facility.
- Make arrangements to mobilize equipment to the site for the load out the soils
- Coordinate with a trucking firm(s) for the transportation of the soils to the disposal facility
- Loadout of the soils at the site
- Site Restoration (cleanup, grading, and seeding)
- Within ten days, prepare a waste disposal report to PennDOT containing the waste characterization and disposal information
- Review and QA/QC the final waste report
- Submit the report to PennDOT

Project Schedule and Manhour Estimate
Example Waste Disposal Project (Normal Response)

ID	Task Name	Duration	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Estimated Labor Hours Per Bid Item Numbers					
									2 PM	3 Sr. Geol	14 Env. Sci (Std)	15 Clerical	16 CADD	Sub-contractor
1	Notice to Proceed (PO)	0.5 Day							1	-	-	-	-	-
2	Conduct Site Visit to Determine Volume of Soils	0.5 Day							-	-	4	-	-	-
3	Sampling Plan for Characterizing the Soil Materials	5 Days							1	4	-	1	1	-
4	PennDOT Review and Approval	5 Days							-	-	-	-	-	-
5	Order Sampling Glassware and Bottles from Laboratory	0.5 Day							-	1	-	-	-	-
6	Collection of Waste Samples from Stockpile	0.5 Day							1	1	8	-	-	-
7	Laboratory Testing (Waste Soil Samples)	10 Days							-	-	-	-	-	X
8	Schedule TriAxle Trucks for Waste Pickup	0.33 Day							-	0.5	-	-	-	-
9	Schedule Delivery of Waste Materials to Disposal Facility	0.33 Day							-	0.5	-	-	-	-
10	Schedule Backhoe and Equipment for Loadout of Soils	0.34 Day							-	1	-	-	-	-
11	Submit Waste Disposal Information to Disposal Facility	1 Day							1	2	-	-	-	-
12	Mobilization	0.25 Day							-	-	-	-	-	X
13	Loadout of Soils	0.25 Day							1	2	12	-	-	X
14	Site Restoration (Cleanup, Grading and Seeding)	0.25 Day							-	-	-	-	-	X
15	Demobilization	0.25 Day							-	-	-	-	-	X
16	Preparation of Letter Report	5 Days							1	8	8	2	1	-
17	Submittal of Letter Report to PennDOT	1 Day							1	1	-	-	-	-
Totals		**31 Days**							**7**	**21**	**32**	**8**	**4**	**NA**

Labor Bid Item Numbers

2 Project Manager
3 Sr. Geologist/Hydrogeologist
5 Sr. Environmental/Sanitary Engineers
9 Technician, Hazardous Materials
11 Environmental/Sanitary Engineers
14 Environmental Scientist (Standard)
15 Clerical/Secretarial Personnel
16 Draftsperson/CADD Operator
17 Survey Crew: Includes PA Certified Surveyor
22 Environmental Scientist (Standard Rate)
34 Environmental Scientist (Emergency)
40 Environmental Scientist (Emergency)

1 For this example project, the impacted soil was delineated in advance of the excavation and clearance for disposal at a permitted off-site facility was received in advance of the direct loading of the solvent-impacted soils.
2 Water extracted during excavation dewatering was temporarily stored in totes and staged on-site until sampling/testing was completed and arrangements were made to dispose of the water off-site at a permitted disposal facility. Laboratory testing was expedited on a three-day turnaround basis.
3 Laboratory testing of post-excavation soil samples was completed on a standard turnaround basis (ten business days) since the limits of excavation were determined in advance based on the delineation of impacted soils in advance of the excavation activities. The excavation was backfilled upon completion of the sampling to avoid any open excavation safety concerns due to proximity of excavation to nearby busy roadway.

10. **Health and Safety.** The Supplier and Subcontractor's applicable personnel must have the appropriate Health and Safety training and medical monitoring, as specified by the following OSHA regulations:

    a. 29 CFR § 1910.120 (Hazardous Waste Operations & Emergency Response)
    b. 29 CFR § 1926.1101 (Asbestos Abatement)

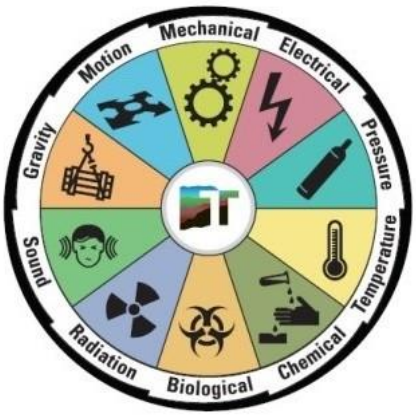
    The Supplier shall prepare, maintain, and implement project-specific Health & Safety Plans (HASP), which shall comply with the appropriate OSHA regulations. The HASP shall include, at a minimum, personnel protection equipment, worker training and medical surveillance requirements, air and personnel monitoring, site control measures, decontamination procedures, confined space procedures (if applicable), emergency response plan, and hazard communication plan. The supplier may utilize their company/corporate health and safety Program as a base plan with site-specific addenda.
    The Supplier shall provide a copy of the site-specific health and safety plan upon request by PennDOT. The development of the Supplier's site-specific health and safety plan is considered incidental to the work and shall be provided at no extra cost.
    All personnel shall adhere to OSHA Standard 1910.120, App B, General Description and Discussion of the Levels of Protection and Protective Equipment.
    The Supplier will not be reimbursed for any personal protective clothing and equipment required for performing work under this Contract.

Offeror Response

I-6.A.10 Health and Safety

As presented previously in Section I-2.A.3g, Skelly and Loy takes safety seriously and implements our *IIF*™ program which is based on care and concern and a commitment to everyone going home safely to their families every day.

As part of our IFF program, employees are required to perform "**Pre-Task Planning**" prior to initiating work at a site. Skelly and Loy considers Pre-Task Planning to be the most important step an employee can take to identify hazards in their work area. By performing Pre-Task Planning, an employee can take action to correct hazards before beginning work or, if necessary, STOP work and request assistance. Importantly, Pre-Task Planning helps ensure work is performed and completed in a safe manner. Our employees perform Pre-Task Planning when:



ENERGY WHEEL

- Beginning work in the lab or at the office,
- Loading equipment and driving to a site,
- Upon arrival on a project site,
- A change a job task, or
- Immediately when site conditions or personnel change.

The steps Skelly and Loy employees perform in Pre-Task Planning include:

- What work will I be doing?
- What hazards can I expect while doing my work?
- How can I protect myself from those hazards?
- What changing conditions should alert me to stop work and contact my supervisor?

Project-Specific Health and Safety Protocols

Skelly and Loy develops a site-specific HASP for each project site where activities performed by employees involve or may involve the presence of hazardous or environmentally sensitive materials including airborne inhalation hazards (i.e., asbestos, mold, and dusts). The HASP is a major tool for providing information to employees regarding the nature, level, and degree of hazards that may be encountered and covers the following topics.

- Site characterization
- Site preparation and establishment of work zones
- Health and safety risks for each activity on the site (hazard analysis)
- Establishment of a competent person to inspect equipment, materials, and procedures at the job site
- Employee training assignments to ensure compliance with the training requirements of 29 CFR § 1910.120 (Hazardous Waste Operations and Emergency Response) and 29 CFR § 1926.1101 (Asbestos Abatement)
- PPE to be used for each activity at the site
- Worker training to ensure compliance with 29 CFR 1910.120
- Medical surveillance requirements to ensure compliance with the medical monitoring requirements of 29 CFR 1910.120

- Types of air monitoring and personnel monitoring to be used
- Sampling techniques to be used
- Instrumentation to be used for monitoring and sampling, including maintenance and calibration methods
- Methods of site control and security
- Decontamination procedures
- An emergency response plan, including phone numbers of local emergency response agencies, directions to the nearest medical facility, and evacuation routes and gathering areas off-site
- Confined space entry procedures (if applicable)
- Spill containment procedures
- Hazards identified at the site
- Hazard communication plan

Skelly and Loy understands that PennDOT typically does not review or approve the HASP, but a copy of the HASP will be provided to PennDOT upon request. As part of our Pre-Task Planning efforts, a copy of the HASP will be provided to all employees and subcontractors who will be working at the project site. The HASP will specify that all personnel will adhere to OSHA Standard 1910.120, App B, General Description and Discussion of the Levels of Protection and Protective Equipment while working on job sites. Site inspections will be conducted by the designated Site Safety Officer (SSO) to ensure the effectiveness of the plan. The SSO will be responsible for updating the HASP if deficiencies are noted or changes are required due to changing site conditions. All site employees working under the HASP will read and acknowledge, by signature, understanding of the HASP requirements. In addition, the SSO will conduct daily safety briefings at the project site. The briefings will identify changes to the HASP as well as daily work activities and associated risks.

Training

Skelly and Loy maintains a training program that meets the requirements of 29 CFR 1910.120 and 29 CFR 1926.21 for all employees who work on sites with hazardous substances, health hazards, and/or safety hazards. The Corporate Health and Safety Manager is responsible for implementing this program, and training is provided by a qualified instructor as defined in 29 CFR 1910.120. Our health and safety training may be conducted by either in-house instructors or those from an outside qualified training provider. Our training requirements are presented below

- Initial training for general site workers requires a minimum of 40 hours of off-site instruction and three days actual field experience under the direct supervision of a trained, experienced supervisor.
- On-site managers and supervisors who directly supervise or are directly responsible for employees engaged in hazardous waste operations require an additional eight hours of

specialized training regarding managing hazardous waste operations. This is designed to enhance their ability to monitor, provide guidance, and institute emergency incident command procedures when necessary.

- All employees (supervisory and non-supervisory) are required to complete an eight-hour annual update refresher training course.

- All employees who work on hazardous waste sites are required to receive training in cardiopulmonary resuscitation (CPR) and standard first aid. Training courses in these areas are authorized by the American Red Cross.

- Employees receive specialized training when necessary to complete assignments not covered in the current program.

Training is provided by instructors who meet the requirements for trainers as specified in 29 CFR 1910.120(e)(5). Upon successful completion of training, evaluation, and field experience, the employee receives a written certification from the instructor. A copy of this written certification is kept on file with the Corporate Health and Safety Manager; the original is kept by the employee. It is the responsibility of the Corporate Health and Safety Manger to maintain records of training certification and to ensure compliance with the training requirements of 29 CFR 1910.120 and 1926.21.

Medical Monitoring Program

The medical surveillance program that Skelly and Loy implements meets the requirements of 29 CFR 1910.120. Our Corporate Health and Safety Manager is responsible for implementing this program. Medical monitoring is completed on an annual basis by a qualified physician or physician's representative, as defined in 29 CFR 1910.120, and is provided at no cost to the employee. All Skelly and Loy/Terracon employees who routinely perform work at sites governed by 29 CFR 1910.120 are given medical examinations under the medical surveillance program. It should be noted that our asbestos inspectors also undergo medical monitoring on an annual basis.

Details regarding our medical monitoring program are summarized in Table I-6.10-1.

Table I-6.10-1
Summary of Skelly and Loy's Medical Monitoring Program

Title	Activity
Frequency of Monitoring	• Prior to starting employment at Terracon (to provide baseline data) • At least once every 12 months for each employee unless the physician believes a longer interval is appropriate • At termination of employment • After notification that the employee has been injured/exposed to a hazardous substance above published exposure levels • After an employee has permanently been taken off a project where specific constituents of concern exist
Monitoring Parameters	• Occupational/general medical history questionnaire • Asbestos Questionnaire (asbestos workers only) • Blood Lead/ZPP • ChemProfile/CBC/UA Micro • Heavy Metal Urine Testing • Audiogram • General Eyesight Testing • Pulmonary Function Test • Chest X-ray/B-Reader of x-ray (every two years) • EKG (every two years if over 40 years in age) • Physical (hazmat/respirator and asbestos, if applicable)
Medical Reporting Requirements	**The corporate health and safety office provides the examining physician with the following:** • a copy of relevant regulations and appendices • a description of the employee's duties • available medical history **Each employee is provided with a written copy of the physician's opinion regarding:** • medical conditions which could place employee at increased risk during work activities or from respirator use • physician's recommended limitations, if any, on the employee's assigned work **Employees are required to:** • provide complete and detailed occupational and medical history • report suspected exposures, regardless of degree • bring unusual physical or psychological condition to the physician's attention
Health Recordkeeping	**Medical records are maintained and preserved for 30 years, including the following information:** • employee's name • Social Security number • physician's written opinions and recommended limitations • results of exam and tests • employee medical complaints related to hazardous substance exposure

11. **Mobilization and Response Times.** The awarded Supplier must be prepared to provide the services of this Contract twenty-four (24) hours per day, seven (7) days per week, including holidays. An eight (8) hour day includes normal work breaks, but does not include lunch.

    PennDOT will contact the awarded Supplier to request new services. All known information of the situation will be provided to the Supplier. Upon notification by PennDOT, or within two (2) hours after arrival at the site, the awarded Supplier must accept the assignment, unless the Supplier can demonstrate that they do not have the necessary personnel or equipment to adequately respond, or complete the proposed work. Refusal of two (2) consecutive services or consistent failure to respond within the allowable time frames (non-emergency or rapid responses) may, at the discretion of PA DGS, place the Supplier in default and cancel the contract. Consistent failure shall be defined as "not responding within the allowed response time on two occasions."

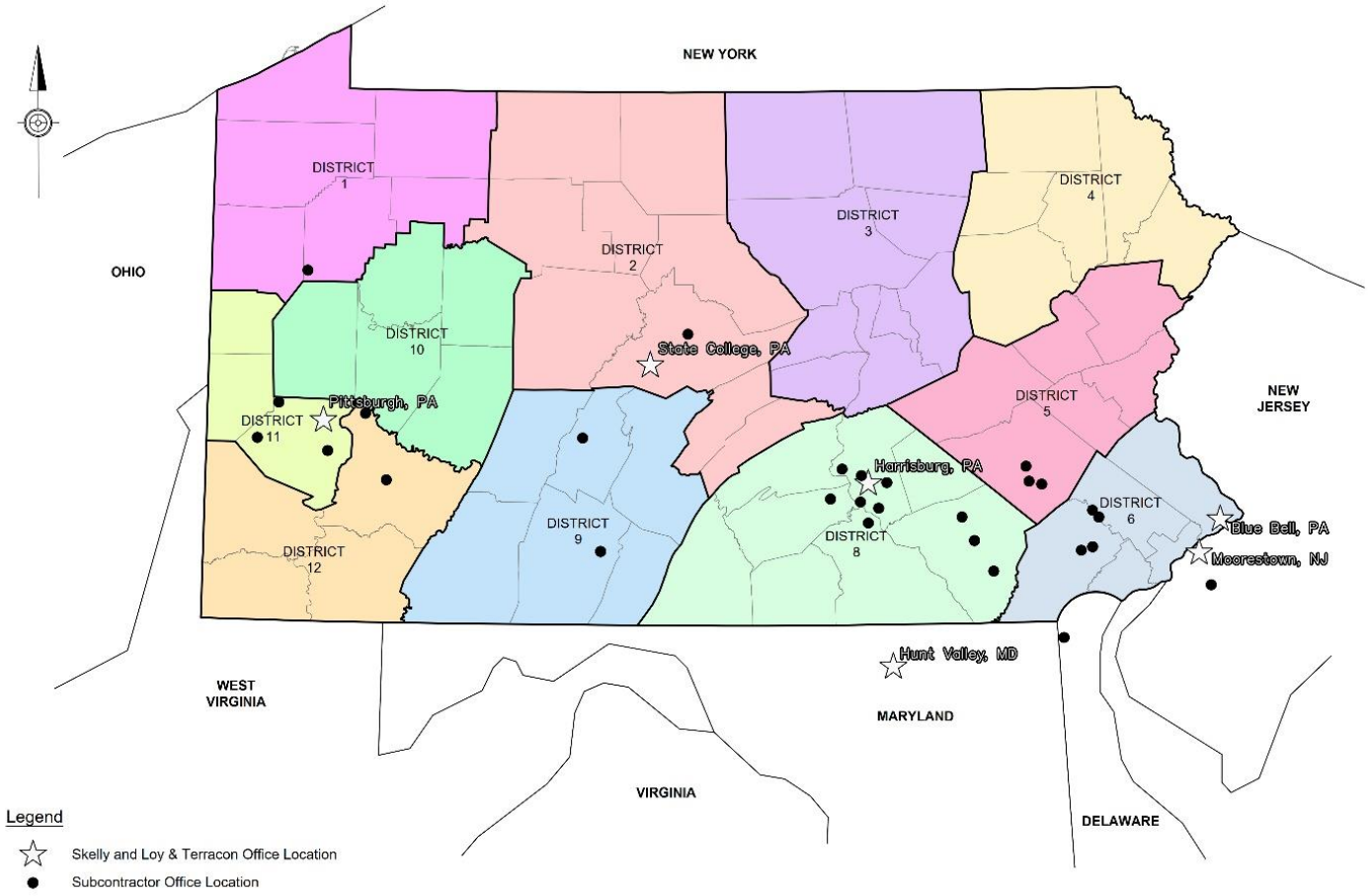
    There are two different types of response times within the scope of services under this Contract: Normal Response (non-emergency) and Rapid Response (emergency). **All services shall be deemed Normal Response unless otherwise indicated.** If the services required are deemed Rapid Response, the Supplier shall respond in accordance with the Rapid Response guidelines listed herein. In the past, approximately sixty percent (60%) of purchase orders were for Rapid Response.

Offeror Response

I-6.A.11 Mobilization and Response Times

Capabilities and Resources

As presented in Section I-2.C (Personnel), Skelly and Loy has been furnishing environmental and remediation services for supporting the Remediation Contract for 24 years. We have offices across and adjacent to the Commonwealth to meet PennDOT's rapid response needs: Harrisburg, Philadelphia West (Blue Bell), Pittsburgh, and State College, Pennsylvania; Hunt Valley, Maryland; and Philadelphia East (Moorestown, New Jersey) office locations. The central location of our office in Harrisburg and the locations of our other offices will provide us with the staff and capabilities to respond to work order assignments. The map presented below shows our office locations as well as the office locations for our subcontractor teaming members. Our team's widely dispersed network will ensure that we will be able to respond to work order assignments in a timely manner.



Our ability to rapidly respond to emergency situations is best exemplified by the remediation services that Skelly and Loy has provided to PennDOT over the past 24 years. Under several agency-wide remediation contracts, Skelly and Loy has furnished Rapid Response services, 24/7, to PennDOT statewide with as little as two hours' notice. Our staff's emergency response activities have included responding to spills/leaks of hydrocarbon compounds, cleanup of hazardous substances from roadway surfaces, and removal of USTs by utilizing staff members from our office locations based in Pennsylvania, Maryland, and New Jersey.

In addition, for supporting work assignments, Skelly and Loy utilizes our existing network of small businesses, SDBs, and VBEs to support the Remediation Contract, ensuring that environmental and remediation services will be delivered both promptly and cost-effectively.

Acknowledgements

As stated previously, Skelly and Loy is the ***Partner You Know and Trust***. We have been providing PennDOT with environmental remediation services under the current and previous Remediation Contracts spanning a timeframe of 24 years.

Based on this experience and understanding of the services required, we provide:

- Environmental and remediation services to support the needs of PennDOT 24 hours per day, 7 days per week, including holidays

- Work days for providing services will be based on an eight-hour day that includes normal work breaks but does not include lunch

For new work order assignments (i.e., Normal Response and Rapid Response), PennDOT will contact Skelly and Loy (supplier) to request environmental and remediation services through the issuance of a Purchase Order number.

Upon notification by PennDOT, or within two hours after arrival at the site, Skelly and Loy (supplier) must accept the work order assignment. The exception to this is if Skelly and Loy can demonstrate that we do not have the necessary personnel or equipment to adequately respond or complete the proposed work. In the past 24 years that Skelly and Loy has been providing environmental and remediation services to PennDOT, **we have completed over 600 Rapid Response work order assignments**. Importantly, for supporting PennDOT needs in the previous and current Remediation Contract, we have **successfully provided Rapid Response services statewide with as little as two hours' notice**.

We understand that refusal of two consecutive services or consistent failure to respond within the allowable time frames (non-emergency or rapid responses) may place the Skelly and Loy in default and cancel the contract.

i. **Normal Response.** The Supplier must report to the site to conduct a preliminary assessment of the situation within seventy-two (72) hours of notification or as otherwise directed by the PennDOT designated representative.

a. **Technical Proposal & Cost Estimate.** After the preliminary assessment, the Supplier must prepare a Technical Proposal and Cost Estimate. Development of the proposal & estimate will often require PennDOT to provide the Supplier with state and federal prevailing wage data beforehand and such rates shall be included in any resulting purchase orders.

b. The Technical Proposal and Cost Estimate shall include:

i. All labor, equipment, materials, incidentals, and disposal/treatment cost required to address the identified problem and return the site to an accepted health and safety condition, as per 1910.120, App B, General Description and Discussion of the Levels of Protection and Protective Equipment;

ii. A description of the work to be completed, by task.

iii. A site-specific health and safety plan;

iv. The total estimated costs to complete the work, in accordance with the awarded line item prices; and

v. A project schedule.

c. For projects involving highway construction, the Supplier must prepare a work schedule, which must indicate the areas within the construction project limits that will be affected by the Supplier's testing, monitoring, or remediation of waste(s), and the estimated dates and duration of the required activities, in order to determine the effect upon the construction work schedule.

d. Upon receipt and evaluation of the Technical Proposal and Cost Estimate, PennDOT will issue a Purchase Order based upon the proposal & estimate for the requested services. The Purchase Order shall be the Supplier's "notice to proceed" for services.

e. For all Normal Responses, unless otherwise directed by PennDOT, Supplier will coordinate field activities with the facility or project manager at least forty-eight (48) hours before the start of field activities.

f. Following completion of the work, the Supplier submits an invoice to the Comptroller and simultaneously submits a Confirmation of Services Form

(COSF), [which shall be an agreed upon format to be determined upon contract award], as well as any supporting documentation, to the agency purchaser in order to make any adjustments to the Purchase Order items and/or quantities and initiate payment.

The awarded Supplier shall be allowed paid travel and/or per diem expenses for Normal Reponses as applicable per Commonwealth Management Directive 230.10.

Offeror Response

I-6.A.11.i Normal Response Work Orders

Based on our 24 years of managing projects under the Remediation Contract, Skelly and Loy understands that there are two types of work order assignments under the contract: 1) Normal Response and 2) Rapid Response.

For Normal Response work order assignments, PennDOT will contact Skelly and Loy and request that a written technical and cost proposal be developed to furnish the environmental and/or remediation services needed by PennDOT. If applicable, a site visit may be performed during the proposal stage. Skelly and Loy will then furnish PennDOT with a Technical Proposal and Cost Estimate. The Technical Proposal and Cost Estimate will include all labor, equipment, materials, incidentals, and disposal/treatment cost required to address the identified problem and return the site to an accepted health and safety condition. In addition, the Technical Proposal and Cost Estimate will include the following elements as applicable to for the environmental and remediation services to be performed:

- description of the work to be completed, by task
- site-specific health and safety plan
- total estimated costs to complete the work, in accordance with the awarded line item prices
- project schedule

Once a Purchase Order number is received from PennDOT, work on the assignment will be initiated. Skelly and Loy understands that, unless otherwise directed by PennDOT, we will coordinate field activities for Normal Response work order assignments with the facility or project manager at least 48 hours before the start of the site work.

Finally, we understand that, following completion of the work, Skelly and Loy will submit an invoice to the Comptroller and will simultaneously submit a Confirmation of Services Form (COSF) in an acceptable format as well as supporting documentation to the PennDOT PM and purchaser in order to make adjustments to the Purchase Order items and/or quantities and initiate payment.

Example Normal Response Proposal

Presented below is an example proposal prepared for furnishing tractor trailer wreck cleanup, remediation, and related services.

SKELLY AND LOY
A Terracon COMPANY

May 5, 2021

Joshua Clinger, County Manager
Pennsylvania Department of Transportation
Clarion County Maintenance District 10-3
21057 Paint Boulevard
Shippenville, Pennsylvania 16254

Re: Technical Proposal and Cost Estimate, Revision 1
Produce Tractor Trailer Wreck Cleanup, Remediation, and Related Services
Mile Marker 55 Westbound, Beaver Township, Clarion County, Pennsylvania
Agency-Wide Remedial Services SRM Contract No. 4400015716

Dear Mr. Clinger:

Skelly and Loy, Inc. is pleased to submit this revised Work Order proposal to provide various waste cleanup, loading, disposal, and related services at the subject site located in Beaver Township, Clarion County, Pennsylvania. This revised proposal has been prepared for the Pennsylvania Department of Transportation (PennDOT) using approved rates under the referenced contract and based on discussions and e-mail correspondence with PennDOT and a qualified subcontractor (Eagle Towing and Recovery) who visited the site recently. The reason for the revision to the proposal is due to a slight change in how the removal of the abandoned tractor and trailer will be handled.

Due to the nature of the work proposed herein and as advised by PennDOT, prevailing wage rates do not apply to the proposed work. The estimated itemized costs are presented in the Cost Estimate in accordance with the provisions of the above-referenced contract. Any encumbered funds unused at the completion of the project can be released by the Department. Please note that the costs in this revised submission have not changed from our original proposal.

Skelly and Loy appreciates the opportunity to provide professional environmental remediation services to PennDOT Clarion County Maintenance District 10-3. We look forward to assisting you in cleaning up and remediating this site. If you have any questions regarding this revised submittal, or the proposed work scope and associated cost estimate in general, please contact me.

Sincerely yours,

SKELLY and LOY, Inc.

Robert D. Rowley, CIH, CSP
Director of Industrial Hygiene Services

Enclosures
cc: Luke Crawford, PennDOT Central Office-SEMP (e-mail)
Kira Shaffir-Lupo (e-mail)
Jason McCabe (e-mail)
Jacque Foster (e-mail)
PJD/PJN217206
File: PJN217206 REV 1.docx

REVISED TECHNICAL PROPOSAL
PENNDOT MAINTENANCE DISTRICT 10-3
PRODUCE TRUCK WRECK CLEANUP, REMEDIATION, AND RELATED SERVICES
TRANSPORTATION, DISPOSAL, AND RELATED SERVICES
INTERSTATE 80 MILE MARKER 55 WESTBOUND, BEAVER TOWNSHIP
CLARION COUNTY, PENNSYLVANIA
AGENCY-WIDE REMEDIAL SERVICES SRM CONTRACT NO. 4400015716

The work scope in this revised proposal includes waste characterization, loading, transportation, disposal, and related services located at mile marker 55 Westbound on Interstate 80 (I80) in Beaver Township, Clarion County, Pennsylvania. The Pennsylvania Department of Transportation (PennDOT) has provided information indicating that a tractor trailer hauling produce went off the highway and wrecked in a wooded area within PennDOT Right of Way causing its load and possibly petroleum liquids to be released. Reportedly, the tractor and trailer have been recovered out of the wooded area and moved to an open and flatter location in the same general area. Some soil staining indicative of a release of petroleum hydrocarbons to the ground surface was noted at the site by a representative of Eagle Towing and Recovery, our proposed subcontractor for most of the site cleanup and waste disposal work.

Our specific work scope includes, but is not limited to, the following.

- Coordinate with PennDOT Maintenance District 10-3 to schedule the site cleanup work which will include the loading, transportation, and disposal of the spilled produce and produce containers as well as petroleum-impacted soil.
- Arrange for having PennDOT Maintenance District 10-3 provide any needed traffic control and highway occupancy permits throughout the site work.
- Screening, excavation, loading, and disposal of any petroleum-stained soil present where the tractor came to rest after wrecking. Soil screening will be performed using a combination of visual observations (staining and sheens), hydrocarbon odors, and a photoionization detector which indicates the presence of volatile organic compounds in the air as they are released from the impacted soil.

- Post-excavation/pre-backfilling documentation sampling and analysis of the soil remaining in the excavation resulting from removal of petroleum-stained soil. Two samples are proposed.

- Revegetation of the remediated portion of the site including replacement of any soil removed, followed by seeding and mulching;

- Transporting the wrecked tractor and the door frame and nose cone of the trailer to Frye's Garage located at 330 Highpoint Road in Knox Pennsylvania near Exit 53 off of I80 as previously requested and arranged by the Pennsylvania State Police. Frye's Garage is considered a certified "salvor" and, as such, is allowed to take ownership of the tractor and trailer after completing Commonwealth of Pennsylvania Form MV 592. The remaining portions of the trailer not transported to Frye's Garage will be treated as waste and hauled to and disposed of at a permitted landfill by Eagle Towing and Recovery. Prior to transporting the Tractor and the above-identified portions of the trailer to Frye's Garage, Frye's will complete the MV 592 Form and arrange to have it signed by the Pennsylvania State Police, allowing Frye's to take ownership of the abandoned tractor and trailer.

- Preparation of a brief site cleanup and remediation documentation letter report after completion of the work and receipt of all waste disposal weigh slips/manifests and soil sample analytical results.

SUMMARY OF PROJECT ASSUMPTIONS AND COSTS

Skelly and Loy's estimated costs to complete the work scope described herein is summarized in the Cost Estimate and are based on the following assumptions.

- Petroleum-impacted soil loading and transportation to and disposal at GFL Environmental, Inc. landfill in Kersey, Pennsylvania is proposed as Bid Item 225, Petroleum Contaminated Media and Debris.

- Rotten produce and produce containers loading and transportation to and disposal at GFL Environmental, Inc. landfill in Kersey, Pennsylvania is proposed as Bid Item 223, Municipal Waste. Portions of the trailer not salvaged by Frye's Garage will also be disposed of in this same manner by Eagle Towing and Recovery.

- An employee of PennDOT may be required to sign waste material profile sheets and disposal manifests. If such need arises, said documents can

and will be signed by PennDOT promptly whether on-site the day of remediation and waste loading or before mobilization to the site. Waste will be profiled based on "generator knowledge," and no sampling nor analysis of excavated soil or other waste streams will be required.

- The loading, transportation, sampling, and disposal of any other wastes including residual liquids or petroleum contaminated (hazardous) liquids is not anticipated and as such is not being proposed herein.

- The post-excavation/pre-backfilling sampling of soil exposed in the open excavation will be for documentation purposes only. The excavation will be backfilled, seeded, and mulched on the same day the impacted soil is excavated and the closure samples collected. After achieving suitable photo-ionization detector (PID) readings and depth of excavation, Skelly and Loy will collect up to two biased soil samples from the open excavation prior to backfilling by our subcontractor. The samples will be submitted to a qualified and certified laboratory for analysis of volatile organic carbons indicative of diesel fuel and lubricating oils according to PA DEP Petroleum Spill Guidance documents using U.S. Environmental Protection Agency (U.S. EPA) Method 8260B. Analysis of the samples will be performed under one-week turnaround time.

- Any needed or required traffic control/maintenance and protection of traffic, and highway occupancy permits will be provided/obtained by PennDOT.

- Once on the site, we anticipate that all site cleanup and remediation work requiring such traffic control can be completed in one 8-hour shift working during daylight hours of a normal weekday. However, travel costs for mileage and (if necessary) one night of lodging and meals for one site representative is included in the Cost Estimate.

- Work proposed herein at the bid item unit prices presented can be performed through December 31, 2021, which is the expiration date of Contract No. 4400015716. However, the nonbid item costs are guaranteed for only 60 days from submission of this proposal.

- Skelly and Loy reserves the right to submit a Change Order(s) to this proposed work scope if site conditions are encountered that could not have been reasonably foreseen or if bid or non-bid item quantities proposed are inadequate to complete the work. If any such conditions or budget shortages are discovered, Skelly and Loy will immediately notify PennDOT and discuss any necessary modifications to the work scope and cost estimate.

REVISED COST ESTIMATE
PENNDOT MAINTENANCE DISTRICT 10-3
PRODUCE TRUCK WRECK CLEANUP, REMEDIATION, AND RELATED SERVICES
TRANSPORTATION, DISPOSAL, AND RELATED SERVICES
INTERSTATE 80 MILE MARKER 55 WESTBOUND, BEAVER TOWNSHIP
CLARION COUNTY, PENNSYLVANIA
AGENCY-WIDE REMEDIAL SERVICES SRM CONTRACT NO. 4400015716

BID ITEMS

BID LINE ITEM #	SAP DESCRIPTION	QTY*	UNIT	UNIT PRICE	AMOUNT
2	Project Manager	10	Hour	$162.24	$1,622.40
3	Sr. Geologist/Hydrogeologist	4	Hour	124.38	497.52
15	Clerical/Secretarial Personnel	4	Hour	56.24	224.96
34	Environmental Scientist	26	Hour	97.34	2,530.84
43	PA DEP SHORT LIST - VOLATILE ORGANIC COMPOUNDS (VOC) - SOIL - Turnaround Time: 1 Week	2	Test	43.72	87.44
46	PA DEP SHORT LIST - SEMI VOLATILE ORGANIC COMPOUNDS (SVOC) - SOIL - Turnaround Time: 1 Week	2	Test	81.20	162.40
118	Total Solids - Soil Test, 1 Week	2	Test	6.25	12.50
186	Photo ionization Detector (PID)	1	Day	86.53	86.53
223	Municipal Waste	5,500**	Ton (dollars)	1.09%	5,995.00***
225	Petroleum Contaminated Media & Debris	5,500**	Ton (dollars)	1.13%	6,215.00***
	Total Bid Items				**$17,434.59**

* All quantities are estimated.
** The quantity presented is in dollars and does not include the allowable percent markup for this bid item.
*** The amount presented is in dollars and does include the allowable percent markup for this bid item.

NONBID ITEMS

The following nonbid items are required. All nonbid items will be provided at cost with no markup, and the nonbid prices presented are guaranteed for 60 days from the date of this proposal.

ITEM #	SAP DESCRIPTION	QTY*	UNIT	UNIT PRICE	AMOUNT
N/A-A-D	Miscellaneous Nonbid Travel Costs	500.81	Each	$1.00	$ 500.81
N/A-L	Subcontractor - Other (Tractor Trailer Relocation and Site Restoration/Revegetation)	10,000	Each	1.00	10,000.00
N/A-P	Subcontractor - Mobilization/Demobilization	4,000	Each	1.00	4,000.00
	Total Nonbid Items				**$14,500.81**

* All quantities are estimated.

TOTAL PURCHASE ORDER PRICE **$31,935.40**

ii. **Rapid Response.** The Supplier must initiate mobilization to the work site within two (2) hours or as otherwise directed by the PennDOT designated representative upon notification of the need for a "rapid response." "Mobilize to the work site within two (2) hours" means the Supplier must be en route to the site with personnel, materials, and/or equipment necessary to conduct any adequate response determined by the PennDOT designated representative. The Supplier must arrive at the site within five (5) hours or as otherwise directed by the PennDOT designated representative of the initial notification.

a. There is no preliminary assessment and/or Technical Proposal & Cost Estimate to be submitted with rapid response projects.

b. The Supplier cannot proceed with mobilization until a Purchase Order marked *"Draft Copy – Not For Issue"* is received by the Supplier, which shall serve as the "Notice to Proceed".

c. Under extenuating circumstances, such as an emergency response occurring on a weekend and/or in cases where a draft purchase order cannot be created, a verbal notice to proceed will be permitted. Agency user must create the *"Draft Copy – Not For Issue*" of the purchase order within forty-eight (48) hours after verbal notice.

d. The PennDOT designated representative will determine and notify the Supplier's on-site representative, if the rapid response situation is warranted beyond the initial 5-hour period. When the PennDOT designated representative determines a rapid response situation no longer exists, Supplier shall cease all work. If it is determined that additional work of a non-emergency nature is required, "Technical Proposal and Cost Estimate" development procedures for a Normal Response must be followed.

e. For projects involving highway construction, the Supplier shall prepare a work schedule, which shall indicate the areas within the construction project limits that will be affected by the Supplier's testing, monitoring, or remediation of waste(s), and the estimated dates and duration of the required activities, in order to determine the effect on the construction work schedule.

f. Following completion of the work, the Supplier will submit a Confirmation of Services Form, as well as any supporting documentation to the agency purchaser for review.

g. Upon verification of the Confirmation of Services Form, the agency purchaser will complete the draft copy of the purchase order. After the purchase order is fully executed, the Supplier will submit an invoice to Comptroller. The Supplier will be compensated at the Rapid Response "emergency" labor rate(s). The Supplier will be compensated for all non-labor items at the

applicable established contract price**. The awarded Supplier shall be allowed paid travel and/or per diem expenses for Rapid Responses as applicable per Commonwealth Management Directive 230.10.**

h. Rapid Response POs have a limited life cycle of forty-five (45) calendar days from the response date in which all work shall be completed. If during this forty-five (45) calendar day life cycle it is determined that work covered for this rapid response will exceed forty-five (45) calendar days the supplier shall notify the Material Services Management Division Chief or designee for approval to extend the PO.

i. Additional Work outside the Scope of the previous Rapid Response PO, not receiving approval to exceed the forty-five (45) calendar day life cycle shall follow the requirements of a Normal Response PO.

Offeror Response

I-6.A.11.ii Rapid Response Work Orders

Under the current and previous Remediation Contracts, Skelly and Loy has provided environmental and remediation services to PennDOT on over 600 Rapid Response work order assignments. A few examples of these Rapid Response work order assignments have included providing:

Photograph showing a bridge fire on the Cameron Street and I-81 interchange in Harrisburg, Dauphin County, Pennsylvania

- Spill cleanups
- Asbestos inspections
- Asbestos abatement and mold remediation services
- IAQ and industrial hygiene services
- Removal of USTs
- Excavation and disposal of waste materials
- Drilling of borings and monitoring wells
- Collection of environmental samples (soil, sediment, surface water, and groundwater)
- Contractor oversight services

For Rapid Response work order assignments, PennDOT will contact Skelly and Loy to initiate mobilization to the work site within two hours or as otherwise directed by the PennDOT-designated representative. Whether this notification is by phone call or email message, action to provide Rapid Response services will begin once a "*Draft Copy – Not For Issue*" or "verbal notice to proceed" Purchase Order number is received from PennDOT. Upon receiving the Purchase Order number, Skelly and Loy mobilize personnel, materials, and/or equipment to the work site within two hours or as designated by the PennDOT representative. Skelly and Loy will arrive at the site within five hours or as otherwise directed by the PennDOT representative following the initial notification.

Rapid/Emergency Response
I-81 and Cameron Street Interchange Bridge Fire, PennDOT Engineering District 8-0
Lower Paxton Township, Dauphin County, Pennsylvania

A tanker truck hauling 7,500 gallons of diesel fuel capsized on Ramp B from Northbound I-81 to Westbound S.R. 0022/0322 on the Cameron Street Interchange. The tanker and its contents caught fire, and heat from the fire buckled the beams on the Eastbound S.R. 0022/0322 "flyover" bridge. PennDOT issued Skelly and Loy a Rapid Response work order to provide initial emergency response and follow site assessment services.

Because the fire required the closure of I-81, Skelly and Loy met with officials from PennDOT and PA DEP to discuss potential asbestos materials on the bridge structure that would be disturbed by the planned demolition work. To address this concern, **Skelly and Loy furnished certified asbestos inspectors to oversee/monitor the demolition of the S.R. 0022/0322 bridge. Demolition was performed around the clock over a four-day period**.

Skelly and Loy's assistance helped open up I-81 to traffic promptly, reduced costs associated with the management and disposal of the waste materials, and ensured that work was performed in compliance with federal/state environmental regulations.

We understand that the PennDOT representative will determine, and notify Skelly and Loy, if the Rapid Response situation is warranted beyond the initial five-hour period. When PennDOT determines a rapid response situation no longer exists, Skelly and Loy will cease all work. Skelly and Loy understands that Rapid Response work order assignments have a limited life cycle of 45 calendar days from the initial response date in which all work will be completed. If during this 45-calendar-day lifecycle it is determined that work covered for this Rapid Response project will exceed 45 calendar days, Skelly and Loy will notify the PennDOT PM for approval to extend the Purchase Order. Moreover, if it is determined that additional work of a non-emergency nature is required, Skelly and Loy will prepare a "Technical Proposal and Cost Estimate" under the procedures referenced above for a Normal Response project.

Skelly and Loy understands that for projects involving highway construction, we will be required to prepare a work schedule indicating the areas within the construction project limits that will be affected by the testing, monitoring, or remediation of waste(s) as well as the estimated dates and duration of the required activities. This information is needed to determine the effect on the construction work schedule.

We have routinely provided environmental and remediation services under the current and previous Remediation Contracts for 24 years. Based on our management experience, Skelly and Loy knows that the invoicing procedures are different for billing charges associated with Rapid Response work order assignments than with Normal Response work orders. Following completion of work associated with a Rapid Response project, Skelly and Loy submits a COSF, as well as the supporting documentation to the PennDOT PM and purchaser for review. Upon verification of the COSF, PennDOT will enter/complete a draft copy of the bid item quantities and non-bid items into the Purchase Order. After the Purchase Order is fully executed and provided to Skelly and Loy, we will submit an invoice to the Comptroller. Upon approval and processing of the invoice by the Comptroller's office, Skelly and Loy will be compensated for the bid items and non-labor items at the applicable established contract price.

I-7. Monthly Status Reports. The Offeror/awarded Supplier will furnish an electronic report no later than the fifteenth (15th) calendar day after the end of each month. The awarded Supplier shall e-mail the reports to Commonwealth individual(s) to be determined upon Contract award. On each report, Supplier must include the below project status information for each month covered by the report:

- Purchase Order Number
- Supplier's project number (if applicable)
- County in which work is being performed
- Project Name
- Project Type
- PennDOT District (see **Appendix B – Regional District Map**)
- Confirmation of Services Form (COSF) Recipient individual(s) within PennDOT who should receive copie(s) of COSF's.
- Original Work Order Amount
- Total Amount Contracted
- Number of Invoices to Date
- Amount Invoiced to Date
- Percentage of Work Complete
- Bond Number
- Project Validity Start Date
- Project Validity End Date
- Comments

Offeror Response

I-7 Monthly Status Reports

Managing a program with multiple work order assignments, such as the Remediation Contract, requires a sound understanding of project management techniques and the application of a variety of management tools. Our Program Manager, **Robert Rowley, CIH, CSP** has 24 years of proven program management experience related to large, open-end, and multiple assignment contracts. This experience includes providing oversight on the current Statewide Remedial Services contract being administered by the Pennsylvania DGS for the exclusive use of the PennDOT.

Mr. Rowley will serve as the primary contact for DGS and PennDOT regarding issues associated with the Remediation Contract. Mr. Rowley will remain in contact with DGS's Commodity Specialist (Maurice Kujat) and with personnel in PennDOT Central Office and district engineering offices for discussing the initiation of new work order assignments, the status of active tasks, and contractual issues.

Part of this communication is furnishing DGS, PennDOT Central Office, and applicable PennDOT staff in the district offices with a status report by the 15th calendar day after the end of each month for active work order assignments. The monthly status report that Skelly and Loy has been

furnishing electronically to DGS and PennDOT under the current and past contracts has included the following information.

- Purchase Order Number
- Skelly and Loy's project number
- County in which work is being performed
- Project Name including State Route and Section
- Project Type (Normal Response or Rapid Response)
- PennDOT District (see Appendix B – Regional District Map)
- COSF recipient individual(s) within PennDOT who should receive copies of COSFs
- Original Work Order Amount
- Total Amount Contracted
- Number of Invoices to Date
- Amount Invoiced to Date
- Percentage of Work Complete
- Bond Number (if applicable)
- Project Validity Start Date
- Project Validity End Date
- Comments which typically include scheduling issues, submission of reports, and outstanding COSF and Good Receipts (i.e., billing issues)

In addition, Skelly and Loy provides DGS, PennDOT Central Office, and PennDOT maintenance, right-of-way, design, and construction managers in the district offices with a separate report listing outstanding COSFs and outstanding Invoices (submitted to the Comptroller's office for payment)

The outstanding COSF and outstanding Invoice reports includes the following information:

- Purchase Order Number
- PennDOT Engineering District Number
- Name of the PennDOT Contract Manager
- Project Name including State Route and Section
- Type of Project (Normal Response or Rapid Response)
- COSF Number
- COSF Amount
- Date the COSF was submitted to PennDOT

- Days Outstanding
- Purchase Order Validity End Date

Examples of the monthly status report and outstanding COSF and outstanding invoice reports are furnished below.

STATUS REPORT FOR PERIOD ENDING February 1, 2022

Agency-Wide Remedial Services SRM Contract No. 4400015716 (Skelly and Loy Open-End No. R16-0001.000)

Closed	PO #	Skelly and Loy: Old Project Number	Skelly and Loy: New Project Number	Skelly and Loy: Project Manager	SR #	County	Project Name	Project Type	Response Type	District	COSF Recipient (on form)	Addressee for Status Report	Original Work Order Amount	Change Orders: #	Change Orders: $	Total Amount Contracted	COSFs / Invoices: #	COSFs / Invoices: $	Validity: Start	Validity: End	Comments
Active	4300580839	R16-0001.116	JN167001A	Rob Rowley	0322-102	Delaware	S.R. 0322, Section 102, Predemolition Abatement and Hazardous Materials Removal	Asbestos Studies, and UST Removals	Rapid	6-0	Barb DiCianno	Barb DiCianno; Dave Fischer; Mark Radatti; Glenn Harden; Jeff Darcas	$1,078,744.39			$1,078,744.39	21	$1,078,744.39	3/23/2018	6/30/2022	The only remaining work within this project area that we are aware of is the inspection and subsequent abatement of Master Foods, Hub Cap Jacks, Evolution Performance, and Mike's Garage/Hams Upholstery. Likely the oly properties that will be acquired in time for S&L to inspect and abate before 6-30-22 will be Hub Cap Jacks and Master Foods. The VED of this PO has been extended to 6-30-22 to allow work to occur through this date.
Active	4300635659	R16-0001.211	JN167001D	Rob Rowley	0001-RC2	Bucks	S.R. 0001, Section RC2, Pre-Demolition Lead-Based Paint and Asbestos Inspections and Phase II and III ESAs Investigations	Bridge and Site Assessments	Rapid	6-0	Sibty Hasan	Sibty Hasan; Dave Fischer; Mark Radatti; Glenn Harden; Jeff Darcas	$161,157.55			$161,157.55	8	$161,157.55	8/29/2019	6/30/2022	The Validity End Date of this PO has been extended to 6/60/22 in the event additional needed services are identified by PennDOT such as the discussions we participated in regarding PCB soil contamination.
Active	4300650832	R16-0001.224	JN167001F	Jon English	I-81	Cumberland	Roadside Rest Area #46 System Evaluation	Environmental Management	Normal	N/A	John Kieffer	John Kieffer; David Stillions; Mike Geissinger;Ronette Harris-Spriggs	$29,807.56	3	$201,040.27	$230,847.83	16	$134,718.69	2/6/2020	6/30/2022	Approved PO received 2/6/2020. Change PO for CO 1 received 3/24/2020. Change PO for CO 2 received 7/6/2020. No cost change order 3 submitted on 2/25/2021. Site meeting held on 3/18/2021. Follow-up site meeting held on 5/13/21. No-cost change submitted on 12/30/2021 for new FY funding to continue site pumping through 6/30/22. Pumping schedule has been modified to go two weeks to the tanks and one week to the septic fields as a cost savings.
Active	4300673977	R16-0001.239	JN167001S	Jon English	Not Applicable	Westmoreland	New Kensington DMV Septic Tank Installation	UST Assessments	Normal	12-0	Fred Hechler	N/A; Fred Hechler	$42,117.38	4		$42,117.38	5-revised	$26,480.32	10/12/2020	6/30/2022	PO received 10/12/2020. Invoice #1 submitted on 11/25/2020 and Invoice #2 submitted on 12/21/2020. Both are paid. Invoice #3 submitted on 2/4/2021 and payment is still pending. Site kick-off meeting held on 5/14//2021. No cost change order approved on 6/18 to allow for site work to proceed. Site inspection passed on 6/24/21. Tank determined to be leaking at the seam and repaired in early September 2021. Future line repairs discussed. COSF/Invoices # 5-10 Voided and replaced by Revised #5
Active	4.301E+09	N/A	JN207476	Rob Rowley	1005	Chester	Paoli Chester SR 1005 predemo ACM & Hazmat inspections	Hazardous Materials Assessments	Rapid	6-0	Barbara DiCianno	Barabara DiCianno;Keith Brennan; Glenn Harden	$59,350.56			$59,350.56	2	$18,685.00	2/17/2021	12/31/2021	Parcels 5 and 22 have been inpsected and reported under this PO. This PO has expired and the remaining ispections have been proposed under PJN227001 on 1-6-22.
Active	4300679708	N/A	JN207558	Rob Rowley	0083-079 GAP	Dauphin	S.R. 0083, Section 079 GAP Pre-Demolition Asbestos and Hazardous / Environmentally Regulated Materials Inspection	Asbestos Inspection	Normal	8-0	John Bachman	John Bachman, Dan Tufano, Dustin Palmer	$255,028.30			$255,028.30	8	$133,853.71	12/14/2020	6/30/2022	Approved PO received 12/14/2020. PO VED now 6-30-22. Reports for recently inspected parcels 34, 61, 132, and billboard are pending. COSF8 for costs incurred through 12-31-21 submitted with request for remaining funding to be converted over into new quantities of existing PO items at new rates.
Active	4.301E+09	N/A	JN207578	Rob Rowley	0001-RC1	Bucks	U.S. Route 1, Section RC1 Asbestos-Containing Materials Caulking Abatement	Asbestos Abatement	Normal	6-0	Dave Fischer	Dave Fischer				$23,260.57	4	$23,599.11	1/11/2021	12/31/2021	Approved PO received 1/11/2021. All known PennDOT-owned ACM removed from the bridge structures. This PO expired on 12-31-21.
Active	4300680809	N/A	JN207625	Mark Ioos	0001-RC1	Bucks	UST Removal, Bristol Road Bridge Over U.S. Route 1, Section RC1	Removal of Orphan UST, collection of soil samples, and reporting.	Rapid	6-0	Ed Burns	Ed Burns; Dave Fischer; Harold Windisch				$89,954.65	7	$89,954.65	12/10/2020	6/30/2022	On June 28, 2021, PennDOT Engineering District 6-0 elected to extend the validity end date for PO#4300680809 to December 31, 2021. All reporting for activities under this Work Order assignment have been completed. Currently, there is no planned work scheduled under this Work Order assignment.
Active	4300672168	N/A	JN207473	Rob Rowley	0095-BS1	Philadelphia	S.R. 0095, Section BS1, Pre-Demolition ACM and Paint Bridge Inspection and Abatement	Asbestos & LBP Inspection and Abatement of Bridge	Rapid	6-0	Dan Gleason	Dan Gleason; Glenn Harden; Mark Radatti; Dave Fischer; Jeff Darcas; Elizabeth Berkich				$11,115.00	6	$11,115.00	9/8/2020	6/30/2022	Rapid response PO received 9/8/2020. I95 northbound from Vankirk Street to Comley Street includng I 95 bridges over these two streets inspected 9/28/20 wit no ACM found on either bridge or along the NORTHbound/eastern parapet. AIR created by S&L on 10/2/20 and provided to Dan Gleason who signed the AIR on10/6/20. S&L forwarded the signed AIR to H&K on 10/20/20. It is believed that the southbound/western parapet also needs inspected so this PO has been kept open until the Southbound lanes and western parapet become available to inspect. The VED of this PO was extended to 6/30/22.

OUTSTANDING COSFs Report Derived from Skelly & Loy tab below

Purchase Order Number	District	PennDOT Contact/ Project Manager	Project Name	Rapid or Normal?	COSF Number	COSF Amount	Date Submitted	Days Outstanding	PO Validity End Date
4300697266	6-0	Ron Notar/Owen Wilcox	I95 at Packer Ave., Guiderail Pedestal ACM Abatement	Rapid	1	$ 1,670.28	12/20/2021	56	6/30/2022
4300683705	6-0	Dave Fischer	U.S. Route 1, Section RC1 Asbestos-Containing Materials Caulking Abatement	Rapid	4-Final	$ 338.54	1/11/2022	34	12/31/2021
4300697269	6-0	Owen Wilcox	I-476 Northbound Spill Response	Rapid	3	$ 713.86	1/12/2022	33	6/30/2022
4300701257	8-0	Mike Reeder	SR181, 017 Used Oil UST Closure	Rapid	7	$ 275.83	1/21/2022	24	12/31/2021
4300712256	8-0	Grant Rarig	SR 230 River House UST	Rapid	4	$ 948.15	1/21/2022	24	12/31/2021
Outstanding COSFs Total						**$ 3,946.66**			

OUTSTANDING INVOICES (submitted to comptrollers)

Purchase Order Number	District	PennDOT Contact/ Project Manager	Project Name	Rapid or Normal?	Invoice Number	Invoice Amount	Date Submitted	Days Outstanding	PO Validity End Date
4300712256	8	Grant Rarig	SR 230 River House UST	Rapid	1	$ 4,229.52	11/2/2021	104	6/30/2022
4300705926	8	Adam Wright	Predemolition ACM & Hazmat Inspections	Normal	1	$ 8,873.06	1/6/2022	39	12/31/2021
4300712256	8	Grant Rarig	SR 230 River House UST	Rapid	3	$ 2,630.92	1/10/2022	35	6/30/2022
4300680809	6	Ed Burns	UST Removal, Bristol Road Bridge Over U.S. Route 1, Section RC1	Rapid	2	$ 4,626.42	1/10/2022	35	6/30/2022
4300705348	6	Owen Wilcox	SR 202 Rapid Response Milk Spill	Rapid	2	$ 21,978.17	1/10/2022	35	6/30/2022
4300666370	6	Daniel Gleason	S.R. 0095, Sections GR1 through GR4 Biohazard Cleanup and Disposal	Rapid	20	$ 31,254.10	1/10/2022	35	6/30/2021
4300635659	6	Sibty Hasan	S.R. 0001, Section RC2, Pre-Demolition Lead-Based Paint and Asbestos Inspections and Phase II and III ESAs Investigations	Rapid	8	$ 348.81	1/10/2022	35	6/30/2022
4300701257	8	Mike Reeder	SR181, 017 Used Oil UST Closure	Rapid	6	$ 1,301.76	1/11/2022	34	6/30/2022
4300708786	8	Dave Valko	SR 1006-005 RR UST Removal, Scotland, Franklin County	Rapid	4	$ 162.24	1/11/2022	34	11/30/2021
4300706633	4	Shane Toolan	Dupont, Luzerne Co., Radioactive Waste Management, SR 0315	Rapid	2	$ 3,573.42	1/13/2022	32	12/31/2021
4300711916	6	Justin Galbreath	Biohazard Cleanup SR 0202 & County Line Road	Rapid	3	$ 973.44	1/19/2022	26	6/30/2022
4300718052	6	Barb DiCianno	225 Brandywine Ave Downingtown ACM & Hazmat Abatement, bldgs 1-3	Rapid	1	$ 1,853.08	1/19/2022	26	6/30/2022
4300672168	6	Daniel Gleason	S.R. 0095, Section BS1, Pre-Demolition ACM and Paint Bridge Inspection and Abatement	Rapid	6	$ 162.24	1/19/2022	26	6/30/2021
4300711074	6	Steve Lantz	US 322 Tar Spill	Normal	1	$ 5,969.45	1/19/2022	26	6/30/2022
4300679708	8	John Bachman	S.R. 0083, Section 079 GAP Pre-Demolition Asbestos and Hazardous / Environmentally Regulated Materials Inspection	Normal	8	$ 15,611.49	1/20/2022	25	12/31/2021
4300705460	8	Steven Gouse	Dispenser Pan-Piping Replacement	Normal	4	$ 677.09	1/21/2022	24	6/30/2022
4300650832	N/A	John Kieffer	Roadside Rest Area #46 System Evaluation	Normal	15	$ 2,572.74	1/21/2022	24	6/30/2021
4300661620	12	Marci Kirchner	Environmental Contamination for New Waynesburg Maintenance Facility	Rapid	11	$ 214,181.39	1/21/2022	24	12/31/2021
4300695660	6	Harold Windisch	I95-GPB Box Girder Inspection, Sampling, Pumping, and Cleanout	Rapid	8	$ 30,179.54	1/28/2022	17	12/31/2021
Outstanding Invoices Total						**$ 351,158.88**			

I-8. Objections and Additions to Standard Contract Terms and Conditions. The Offeror will identify which, if any, of the terms and conditions contained in the **Buyer Attachments** section that it would like to negotiate and what additional terms and conditions the Offeror would like to add to the standard contract terms and conditions. The Offeror's failure to make a submission under this paragraph will result in its waiving its right to do so later, but the Issuing Office may consider late objections and requests for additions if to do so, in the Issuing Office's sole discretion, would be in the best interest of the Commonwealth. The Issuing Office may, in its sole discretion, accept or reject any requested changes to the standard contract terms and conditions. The Offeror shall not request changes to the other provisions of the RFP, nor shall the Offeror request to completely substitute its own terms and conditions for this RFP. All terms and conditions must appear in one integrated contract. The Issuing Office will not accept references to the Offeror's, or any other, online guides or online terms and conditions contained in any proposal.

Regardless of any objections set out in its proposal, the Offeror must submit its proposal, including the cost proposal, on the basis of the terms and conditions set out in the **Terms and Conditions** contained in the **Buyer Attachment** section. The Issuing Office will reject any proposal that is conditioned on the negotiation of the terms and conditions set out in the **Terms and Conditions** contained in the **Buyer Attachment** section or to other provisions of the RFP.

Offeror Response

I-8 Objections and Additions to Standard Contract Terms and Conditions

Skelly and Loy, Inc., *A Terracon Company*, has reviewed the proposed Standard Contract Terms and Conditions for the Remediation Contract that will provide environmental and remediation services to the DGS and PennDOT (collectively the "Commonwealth") and respectfully requests the following modifications:

1. **Part V.11 CONTRACT-008.1a Warranty (Oct 2006):**

    a. Please replace "free and clear of any defects in workmanship or materials" with "in accordance with the applicable industry standards, customs, and practice (a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale)."

As a professional services provider, Terracon is not able to provide blanket guarantees on its work in the way certain trade contractors are able to. Such guarantees are not covered by Terracon's professional liability insurance. The proposed revision provides the Commonwealth assurance that Terracon will be held to the applicable industry standard of care and does not create uninsurable obligations. We believe this is beneficial to both parties.

2. **Part V.26 CONTRACT-019.1 Hold Harmless Provision (Nov 30 2006):**

    a. In the second line, please insert “negligently” after “activities”

As a professional services firm, Terracon’s professional liability policy only covers claims that result from any negligent acts, errors or omissions committed by our professionals. This policy only insures us to a specific standard of care (a level of care and skill which is ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale). If Terracon breaches this standard of care, then Terracon would be liable. Requiring an indemnification which is not limited to negligence or breach of industry standard is beyond what is covered by Terracon’s professional liability insurance and would expose Terracon to the potential of uninsurable claims. By making the requested changes, Terracon ensures that its professional liability insurance will be available in the unlikely event of a claim, which benefits both the Commonwealth and Terracon.

Terracon has no other concerns with or objections to the agreement to perform the services requested and is not contingent upon the Commonwealth’s acceptance of each requested modification. Terracon is willing to enter into good faith negotiations regarding these terms and conditions. If you have any questions or concerns regarding these requested changes, please do not hesitate to contact Anish Patel in the Legal Department at anish.patel@terracon.com or by phone at (913) 202-7558.

Acronym	Definition
ACM	Asbestos-Containing Material
AHERA	Asbestos Hazard Emergency Response Act
AIHA	American Industrial Hygiene Association
AIR	Asbestos Inspection Report
AMD	Acid Mine Drainage
AMMX	Aboveground Manufactured Metallic Storage Tank Installation and Modification
AMNX	Aboveground Non-Metallic Storage Tank Installation and Modification
AMR	Aboveground Manufactured Storage Tank Removal
ANSI	American National Standards Institute
API	American Petroleum Institute
APR	Aerial Photo Reconnaissance
ARD	Acid Rock Drainage
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
BAT	Best Available Technology
BMP	Best Management Practice
CAA	Clean Air Act
CDC	Centers for Disease Control
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CGI	Combustible Gas Indicator
COC	Chain of Custody
COSF	Confirmation of Services Form
CPR	Cardiopulmonary Resuscitation
CSM	Conceptual Site Model
CWA	Clean Water Act
DGS	Pennsylvania Department of General Services
DMR	Discharge Monitoring Report
EDB	1,2-Dibromoethane
EDC	1,2-Dichloroethane
EMR	Experience Modification Ratio
ENR	Engineering News Record
FAAS	Flame Atomic Absorption Spectrophotometry
F&C	Flammable & Combustible

Acronym	Definition
HA	Homogeneous Area
HASP	Health and Safety Plan
HAZWOPER	Hazardous Waste Operations and Emergency Response
HRA	Harrisburg Redevelopment Authority
HVAC	Heating, Ventilation, and Air Conditioning
IAQ	Indoor Air Quality
iATL	International Asbestos Testing Laboratories
IIF™	Incident and Injury-Free
L&I	Pennsylvania Department of Labor and Industry
LBP	Lead-Based Paint
LEL	Lower Explosive Level
MIP	Membrane Interface Probe
MSA	Master Subcontract Agreement
MTBE	Methyl tert-butyl ether
NELAP	National Environmental Laboratory Accreditation Program
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NIST	National Institute of Standards and Technology
NOB	Nonfriable, Organically Bound
NPDES	National Pollutant Discharge Elimination System
NVLAP	National Voluntary Laboratory Accreditation Program
O&M	Operations and Maintenance
OSHA	Occupational Safety and Health Administration
P3	Public-Private Partnership
PA DEP	Pennsylvania Department of Environmental Protection
PCB	Polychlorinated Biphenyls
PCM	Phase Contrast Microscopy
PCPG	Pennsylvania Council of Professional Geologists
PEI	Petroleum Equipment Institute
PennDOT	Pennsylvania Department of Transportation
PFAS	Polyfluoroalkyl Substances
PID	Photoionization detector
PLM	Polarized Light Microscopy

Acronym	Definition
PPE	Personal Protective Equipment
PTC	Pennsylvania Turnpike Commission
QA/QC	Quality Assurance/Quality Control
RACM	Regulated Asbestos-Containing Material
RCRA	Resource Conservation and Recovery Act
RFP	Request for Proposal
RND	Random Number
RP	Recommended Practice
SCM	Stormwater Counter Measures Plan
SDB	Small Diverse Business
SHA	Maryland State Highway Administration
SHS	Statewide Health Standard
SOP	Standard Operating Procedure
SPLP	Synthetic Precipitation Leaching Procedure
SRS	Systematic Random Sampling
SSO	Site Safety Officer
SVE	Soil Vapor Extraction
SVOC	Semi-Volatile Organic Compounds
TEM	Transmission Electron Microscopy
TSI	Thermal System Insulation
U.S. EPA	United States Environmental Protection Agency
UAV	Unmanned Aerial Vehicle
UMR	Underground Manufactured Storage Tank Removal
UMX	Underground Storage Tank Installation and Modification
UST	Underground Storage Tank
USTIF	UST Indemnification Fund
VBE	Veteran Business Enterprises
VOC	Volatile Organic Compound
WHO	World Health Organization
XRF	X-Ray Fluorescence

Kujat, Maurice

From: Rowley, Rob D <rrowley@skellyloy.com>
Sent: Friday, July 29, 2022 11:31 AM
To: Kujat, Maurice
Cc: Patel, Anish A; Restagno, Victor; Erdman, Jessica
Subject: FW: [External] FW: 6100052061 Environmental Remediation Services Negotiation Notice of Selection for Contract Skelly and Loy
Attachments: TC Environmental Remediation Services - redline 7.27.22 (jne 7.27.22).docx

Importance: High

Hello Maurice: Skelly and Loy, Inc., A Terracon Company, has decided to accept the contract terms and conditions with**out** any exceptions or objections. This being said, kindly let us know that you have received this email with our acceptance of the contract Ts & Cs and please let us know what our next step is in order to see that the contract becomes fully executed.

We are looking forward to continuing our work for and relationship with PennDOT under this new contract.

Thanks and have a great day and upcoming weekend, Rob Rowley

Robert Rowley, CIH, CSP
Senior Industrial Hygienist I Industrial Hygiene and Safety

Skelly and Loy, Inc., A Terracon Company
449 Eisenhower Blvd., Suite 300 | Harrisburg, Pennsylvania 17111
D (717) 510 7786 | M (717) 574 0242
rrowley@skellyloy.com | skellyloy.com | terracon.com

SKELLY AND LOY
A Terracon Company

From: Kujat, Maurice <mkujat@pa.gov>
Sent: Wednesday, July 27, 2022 4:47 PM
To: Rowley, Rob D <rrowley@skellyloy.com>
Cc: Patel, Anish A <Anish.Patel@terracon.com>; Restagno, Victor <vrestagno@pa.gov>; Erdman, Jessica <jeerdman@pa.gov>
Subject: RE: [External] FW: 6100052061 Environmental Remediation Services Negotiation Notice of Selection for Contract Skelly and Loy

Good afternoon, Rob,

Attached you will find the Terms and Conditions redlined response with the review by our legal department. Please provide your acceptance of these revisions/comments at your earliest convenience.

Have A Great Day,

Maurice Kujat | Commodity Specialist

Dept. of General Services, Bureau of Procurement
555 Walnut St, 6th Floor, Forum Place | Harrisburg, PA 17101
Phone: 717-346-2671 | Fax: 717-783-6241
www.dgs.pa.gov

At DGS, our mission is to help government operate more efficiently, effectively, and safely – delivering exceptional value for all Pennsylvanians.

From: Rowley, Rob D <rrowley@skellyloy.com>
Sent: Wednesday, July 27, 2022 11:22 AM
To: Kujat, Maurice <mkujat@pa.gov>
Cc: Patel, Anish A <Anish.Patel@terracon.com>; Restagno, Victor <vrestagno@pa.gov>; Erdman, Jessica <jeerdman@pa.gov>
Subject: [External] FW: 6100052061 Environmental Remediation Services Negotiation Notice of Selection for Contract Skelly and Loy
Importance: High

ATTENTION: *This email message is from an external sender. Do not open links or attachments from unknown senders. To report suspicious email, use the Report Phishing button in Outlook.*

Hello Maurice and thank you so much for the good news you shared with us below. We certainly and sincerely appreciate being selected for contract negotiations.

As requested, please find attached the CONTRACT TERMS and CONDITIONS to which we have made two changes with associated comments and redlining, that are tracked for your ease of review ("-redline 7.27.22" version). These changes are the same changes that we identified in our exceptions memo that was part of our proposal submission on 3/7/2022 and which are reiterated in the attached July 25, 2022 NOTICE OF SELECTION FOR CONTRACT NEGOTIATIONS letter. If you could kindly reply letting me know you have received this email with attachments, it would be greatly appreciated.

Thank you again for this notice and we look forward to further discussions with the Department of General Services, Bureau of Procurement regarding RFP # 6100052061.

Best Regards, Rob Rowley

Robert Rowley, CIH, CSP
Senior Industrial Hygienist I Industrial Hygiene and Safety

Skelly and Loy, Inc., A Terracon Company
449 Eisenhower Blvd., Suite 300 | Harrisburg, Pennsylvania 17111
D (717) 510 7786 | M (717) 574 0242
rrowley@skellyloy.com | skellyloy.com | terracon.com

SKELLY AND LOY
A Terracon Company

From: Kujat, Maurice <mkujat@pa.gov>
Sent: Monday, July 25, 2022 10:10 AM
To: Rowley, Rob D <rrowley@skellyloy.com>
Cc: Restagno, Victor <vrestagno@pa.gov>; Erdman, Jessica <jeerdman@pa.gov>
Subject: 6100052061 Environmental Remediation Services Negotiation Notice of Selection for Contract Skelly and Loy

Good morning, Rob,

The Commonwealth has evaluated the proposal that your company submitted in response to Department of General Services Environmental Remediation Services RFP # 6100052061 along with the other submitted proposals. It is my pleasure to inform you that Skelly and Loy, Inc., A Terracon Company, has been selected for contract negotiations. Please review and respond to the attached documents by the close of business 07.28.2022.

Have A Great Day,

Maurice Kujat | Commodity Specialist
Dept. of General Services, Bureau of Procurement
555 Walnut St, 6th Floor, Forum Place | Harrisburg, PA 17101
Phone: 717-346-2671 | Fax: 717-783-6241
www.dgs.pa.gov

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EXHIBIT A

Environmental Remediation Services 6100052061

STANDARD CONTRACT TERMS AND CONDITIONS

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PART V - CONTRACT TERMS and CONDITIONS

V.1 CONTRACT-001.1a Contract Terms and Conditions (Nov 30 2006)

The Contract with the selected offeror (who shall become the "Contractor") shall include the following terms and conditions:

V.2 CONTRACT-002.1d Term of Contract – Contract (May 2012)

The initial term of the Contract shall be 03 year(s) and 00 month(s).

The term of the Contract shall commence on the Effective Date (as defined below) and shall end on the Expiration Date identified in the Contract, subject to the other provisions of the Contract.

The Effective Date shall be: a) the Effective Date printed on the Contract after the Contract has been fully executed by the Contractor and the Commonwealth (signed and approved as required by Commonwealth contracting procedures) or b) the "Valid from" date printed on the Contract, whichever is later.

V.3 CONTRACT-002.2d Renewal of Contract Term; Adjusted Prices - Fixed Percentage (Oct 2013)

The Contract may be renewed for a maximum of 2 additional 1 year term(s), so long as Commonwealth provides written notice to Contractor of its intention to extend the Contract by letter prior to the expiration of the term of the agreement, or any extension thereof. The Commonwealth may exercise the renewal as individual year or multiple year term(s). Any renewal will be under the same terms, covenants and conditions, provided, however, that the rates under the contract may be increased up to 4.00% during each renewal term. No further document is required to be executed to renew the term of the contract.

V.4 CONTRACT-002.3 Extension of Contract Term (Nov 30 2006)

The Commonwealth reserves the right, upon notice to the Contractor, to extend any single term of the Contract for up to three (3) months upon the same terms and conditions.

V.5 CONTRACT-003.1b Signatures – Contract (July 2015)

The Contract shall not be a legally binding contract until the fully-executed Contract has been sent to the Contractor. No Commonwealth employee has the authority to verbally direct the commencement of any work or delivery of any supply under this Contract prior to the Effective Date. The Contractor hereby waives any claim or cause of action for any service or work performed prior to the Effective Date.

The Contract may be signed in counterparts. The Contractor shall sign the Contract and return it to the Commonwealth. After the Contract is signed by the Contractor and returned to the Commonwealth, it will be processed for Commonwealth signatures and approvals. When the Contract has been signed and approved by the Commonwealth as required by Commonwealth contracting procedures, the Commonwealth shall create a Contract output form which shall: 1) clearly indicate "Fully executed" at the top of the form; 2) include a printed Effective Date and 3) include the printed name of the Purchasing Agent indicating that the document has been electronically signed and approved by the Commonwealth. Until the Contractor receives the Contract output form with this information on the Contract output form, there is no legally binding contract between the parties.

The fully-executed Contract may be sent to the Contractor electronically or through facsimile equipment. The electronic transmission of the Contract shall require acknowledgement of receipt of the transmission by the Contractor. Receipt of the electronic or facsimile transmission of the Contract shall constitute receipt of the fully-executed Contract.

The Commonwealth and the Contractor specifically agree as follows:

a. No handwritten signature shall be required in order for the Contract to be legally enforceable.

b. The parties agree that no writing shall be required in order to make the Contract legally binding, notwithstanding contrary requirements in any law. The parties hereby agree not to contest the validity or enforceability of a genuine Contract or acknowledgement issued electronically under the provisions of a statute of frauds or any other applicable law relating to whether certain agreements be in writing and signed by the party bound thereby. Any genuine Contract or acknowledgement issued electronically, if introduced as evidence on paper in any judicial, arbitration, mediation, or administrative proceedings, will be admissible as between the parties to the same extent and under the same conditions as other business records originated and maintained in documentary form. Neither party shall contest the admissibility of copies of a genuine Contract or acknowledgements under either the business records exception to the hearsay rule or the best evidence rule on the basis that the Contract or acknowledgement were not in writing or signed by the parties. A Contract or acknowledgment shall be deemed to be genuine for all purposes if it is transmitted to the location designated for such documents.

c. Each party will immediately take steps to verify any document that appears to be obviously garbled in transmission or improperly formatted to include re-transmission of any such document if necessary.

V.6 CONTRACT-004.1a Definitions (Oct 2013)

As used in this Contract, these words shall have the following meanings:

a. Agency: The department, board, commission or other agency of the Commonwealth of Pennsylvania listed as the Purchasing Agency. If a COSTARS entity or external procurement activity has issued an order against this contract, that entity shall also be identified as "Agency".

b. Contracting Officer: The person authorized to administer this Contract for the Commonwealth and to make written determinations with respect to the Contract.

c. Days: Unless specifically indicated otherwise, days mean calendar days.

d. Developed Works or Developed Materials: All documents, sketches, drawings, designs, works, papers, files, reports, computer programs, computer documentation, data, records, software, samples or any other tangible material without limitation authored or prepared by Contractor as the work product covered in the scope of work for the Project.

e. Documentation: All materials required to support and convey information about the services required by this Contract. It includes, but is not necessarily restricted to, written reports and analyses, diagrams, maps, logical and physical designs, system designs, computer programs, flow charts, disks, and/or other machine-readable storage media.

f. Services: All Contractor activity necessary to satisfy the Contract.

V.7 CONTRACT-005.1d Purchase Orders (July 2015)

Commonwealth agencies may issue Purchase Orders against the Contract. These orders constitute the Contractor's authority to make delivery. All Purchase Orders received by the Contractor up to and including the expiration date of the Contract are acceptable and must be performed in accordance with the Contract. Each Purchase Order will be deemed to incorporate the terms and conditions set forth in the Contract.

Purchase Orders may be electronically signed by the Agency. The electronically-printed name of the purchaser represents the signature of that individual who has the authority, on behalf of the Commonwealth, to authorize the Contractor to proceed.

Purchase Orders may be issued electronically or through facsimile equipment. The electronic transmission of a purchase order shall require acknowledgement of receipt of the transmission by the Contractor. Receipt of the electronic or facsimile transmission of the Purchase Order shall constitute receipt of an order. Orders received by the Contractor after 4:00 p.m. will be considered received the following business day.

a. No handwritten signature shall be required in order for the Contract or Purchase Order to be legally enforceable.

b. The parties agree that no writing shall be required in order to make the Purchase Order legally binding. The parties hereby agree not to contest the validity or enforceability of a Purchase Order or acknowledgement issued electronically under the provisions of a statute of frauds or any other applicable law relating to whether certain agreements be in writing and signed by the party bound thereby. Any Purchase Order or acknowledgement issued electronically, if introduced as evidence on paper in any judicial, arbitration, mediation, or administrative proceedings, will be admissible as between the parties to the same extent and under the same conditions as other business records originated and maintained in documentary form. Neither party shall contest the admissibility of copies of Purchase Orders or acknowledgements under either the business records exception to the hearsay rule or the best evidence rule on the basis that the Purchase Order or acknowledgement were not in writing or signed by the parties. A Purchase Order or acknowledgment shall be deemed to be genuine for all purposes if it is transmitted to the location designated for such documents.

c. Each party will immediately take steps to verify any document that appears to be obviously garbled in transmission or improperly formatted to include re-transmission of any such document if necessary.

Purchase Orders under ten thousand dollars ($10,000) in total amount may also be made in person or by telephone using a Commonwealth Purchasing Card. When an order is placed by telephone, the Commonwealth agency shall provide the agency name, employee name, credit card number, and expiration date of the card. Contractors agree to accept payment through the use of the Commonwealth Purchasing Card.

V.8 CONTRACT-006.1 Independent Prime Contractor (Oct 2006)

In performing its obligations under the Contract, the Contractor will act as an independent contractor and not as an employee or agent of the Commonwealth. The Contractor will be responsible for all services in this Contract whether or not Contractor provides them directly. Further, the Contractor is the sole point of contact with regard to all contractual matters, including payment of any and all charges resulting from the Contract.

V.9 CONTRACT-007.01b Delivery of Services (Nov 30 2006)

The Contractor shall proceed with all due diligence in the performance of the services with qualified personnel, in accordance with the completion criteria set forth in the Contract.

V.10 CONTRACT-007.02 Estimated Quantities (Nov 30 2006)

It shall be understood and agreed that any quantities listed in the Contract are estimated only and may be increased or decreased in accordance with the actual requirements of the Commonwealth and that the Commonwealth in accepting any bid or portion thereof, contracts only and agrees to purchase only the materials and services in such quantities as represent the actual requirements of the Commonwealth. The Commonwealth reserves the right to purchase materials and services covered under the Contract through a separate competitive procurement procedure, whenever Commonwealth deems it to be in its best interest.

V.11 CONTRACT-008.1a Warranty (Oct 2006)

The Contractor warrants that all items furnished and all services performed by the Contractor, its agents and subcontractors shall be free and clear of any defects in workmanship or materials. Unless otherwise stated in the Contract, all items are warranted for a period of one year following delivery by the Contractor and acceptance by the Commonwealth. The Contractor shall repair, replace or otherwise correct any problem with the delivered item. When an item is replaced, it shall be replaced with an item of equivalent or superior quality without any additional cost to the Commonwealth.

V.12 CONTRACT-009.1c Patent, Copyright, and Trademark Indemnity (Oct 2013)

The Contractor warrants that it is the sole owner or author of, or has entered into a suitable legal agreement concerning either: a) the design of any product or process provided or used in the performance of the Contract which is covered by a patent, copyright, or trademark registration or other right duly authorized by state or federal law or

b) any copyrighted matter in any report, document or other material provided to the Commonwealth under the contract.

The Contractor shall defend any suit or proceeding brought against the Commonwealth on account of any alleged patent, copyright or trademark infringement in the United States of any of the products provided or used in the performance of the Contract.

This is upon condition that the Commonwealth shall provide prompt notification in writing of such suit or proceeding; full right, authorization and opportunity to conduct the defense thereof; and full information and all reasonable cooperation for the defense of same.

As principles of governmental or public law are involved, the Commonwealth may participate in or choose to conduct, in its sole discretion, the defense of any such action.

If information and assistance are furnished by the Commonwealth at the Contractor's written request, it shall be at the Contractor's expense, but the responsibility for such expense shall be only that within the Contractor's written authorization.

The Contractor shall indemnify and hold the Commonwealth harmless from all damages, costs, and expenses, including attorney's fees that the Contractor or the Commonwealth may pay or incur by reason of any infringement or violation of the rights occurring to any holder of copyright, trademark, or patent interests and rights in any products provided or used in the performance of the Contract.

If any of the products provided by the Contractor in such suit or proceeding are held to constitute infringement and the use is enjoined, the Contractor shall, at its own expense and at its option, either procure the right to continue use of such infringement products, replace them with non-infringement equal performance products or modify them so that they are no longer infringing.

If the Contractor is unable to do any of the preceding, the Contractor agrees to remove all the equipment or software which are obtained contemporaneously with the infringing product, or, at the option of the Commonwealth, only those items of equipment or software which are held to be infringing, and to pay the Commonwealth: 1) any amounts paid by the Commonwealth towards the purchase of the product, less straight line depreciation; 2) any license fee paid by the Commonwealth for the use of any software, less an amount for the period of usage; and 3) the pro rata portion of any maintenance fee representing the time remaining in any period of maintenance paid for. The obligations of the

Contractor under this paragraph continue without time limit. No costs or expenses shall be incurred for the account of the Contractor without its written consent.

V.13 CONTRACT-009.1d Ownership Rights (Oct 2006)

The Commonwealth shall have unrestricted authority to reproduce, distribute, and use any submitted report, data, or material, and any software or modifications and any associated documentation that is designed or developed and delivered to the Commonwealth as part of the performance of the Contract.

V.14 CONTRACT-010.1a Acceptance (Oct 2006)

No item(s) received by the Commonwealth shall be deemed accepted until the Commonwealth has had a reasonable opportunity to inspect the item(s). Any item(s) which is discovered to be defective or fails to conform to the specifications may be rejected upon initial inspection or at any later time if the defects contained in the item(s) or the noncompliance with the specifications were not reasonably ascertainable upon the initial inspection. It shall thereupon become the duty of the Contractor to remove rejected item(s) from the premises without expense to the Commonwealth within fifteen (15) days after notification. Rejected item(s) left longer than fifteen (15) days will be regarded as abandoned, and the Commonwealth shall have the right to dispose of them as its own property and shall retain that portion of the proceeds of any sale which represents the Commonwealth's costs and expenses in regard to the storage and sale of the item(s). Upon notice of rejection, the Contractor shall immediately replace all such rejected item(s) with others conforming to the specifications and which are not defective. If the Contractor fails, neglects or refuses to do so, the Commonwealth shall then have the right to procure a corresponding quantity of such item(s), and deduct from any monies due or that may thereafter become due to the Contractor, the difference between the price stated in the Contract and the cost thereof to the Commonwealth.

V.15 CONTRACT-011.1a Compliance With Law (Oct 2006)

The Contractor shall comply with all applicable federal and state laws and regulations and local ordinances in the performance of the Contract.

V.16 CONTRACT-013.1 Environmental Provisions (Oct 2006)

In the performance of the Contract, the Contractor shall minimize pollution and shall strictly comply with all applicable environmental laws and regulations, including, but not limited to: the Clean Streams Law Act of June 22, 1937 (P.L. 1987, No. 394), as amended 35 P.S. Section 691.601 et seq.; the Pennsylvania Solid Waste

Management Act, Act of July 7, 1980 (P.L. 380, No. 97), as amended, 35 P.S. Section 6018.101 et seq.; and the Dam Safety and Encroachment Act, Act of November 26, 1978 (P.L. 1375, No. 325), as amended, 32 P.S. Section 693.1.

V.17 CONTRACT-014.1 Post-Consumer Recycled Content (June 2016)

Except as specifically waived by the Department of General Services in writing, any products which are provided to the Commonwealth as a part of the performance of the Contract must meet the minimum percentage levels for total recycled content as specified by the Environmental Protection Agency in its Comprehensive Procurement Guidelines, which can be found at https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program.

V.18 CONTRACT-014.3 Recycled Content Enforcement (Feb 2009)

The Contractor may be required, after delivery of the Contract item(s), to provide the Commonwealth with documentary evidence that the item(s) was in fact produced with the required minimum percentage of post-consumer and recovered material content.

V.19 CONTRACT-015.1A Compensation/Expenses (May 2008)

The Contractor shall be required to perform the specified services at the price(s) quoted in the Contract. All services shall be performed within the time period(s) specified in the Contract. The Contractor shall be compensated only for work performed to the satisfaction of the Commonwealth. The Contractor shall not be allowed or paid travel or per diem expenses except as specifically set forth in the Contract.

V.20 CONTRACT-015.2 Billing Requirements (February 2012)

Unless the Contractor has been authorized by the Commonwealth for Evaluated Receipt Settlement or Vendor Self-Invoicing , the Contractor shall include in all of its invoices the following minimum information:

- Vendor name and "Remit to" address, including SAP Vendor number;
- Bank routing information, if ACH;
- SAP Purchase Order number;
- Delivery Address, including name of Commonwealth agency;
- Description of the supplies/services delivered in accordance with SAP Purchase Order (include purchase order line number if possible);
- Quantity provided;
- Unit price;
- Price extension;
- Total price; and
- Delivery date of supplies or services.

If an invoice does not contain the minimum information set forth in this paragraph, the Commonwealth may return the invoice as improper. If the Commonwealth returns an invoice as improper, the time for processing a payment will be suspended until the Commonwealth receives a correct invoice. The Contractor may not receive payment until the Commonwealth has received a correct invoice.

Contractors are required to establish separate billing accounts with each using agency and invoice them directly. Each invoice shall be itemized with adequate detail and match the line item on the Purchase Order. In no instance shall any payment be made for services to the Contractor that are not in accordance with the prices on the Purchase Order, the Contract, updated price lists or any discounts negotiated by the purchasing agency.

V.21 CONTRACT-015.5 Price Adjustment - Maximum Percentage (Nov 30 2006)

The Contractor may increase the rates to be paid by the Commonwealth under the contract by no more than 4.00 % on a/an AT RENEWAL basis. The Contractor shall give at least 000 days prior notice of a price increase.

V.22 CONTRACT-016.1 Payment (Oct 2006)

a. The Commonwealth shall put forth reasonable efforts to make payment by the required payment date. The required payment date is: (a) the date on which payment is due under the terms of the Contract; (b) thirty (30) days after a proper invoice actually is received at the "Bill To" address if a date on which payment is due is not specified in the Contract (a "proper" invoice is not received until the Commonwealth accepts the service as satisfactorily performed); or (c) the payment date specified on the invoice if later than the dates established by (a) and (b) above. Payment may be delayed if the payment amount on an invoice is not based upon the price(s) as stated in the Contract. If any payment is not made within fifteen (15) days after the required payment date, the Commonwealth may pay interest as determined by the Secretary of Budget in accordance with Act No. 266 of 1982 and regulations promulgated pursuant thereto. Payment should not be construed by the Contractor as acceptance of the service performed by the Contractor. The Commonwealth reserves the right to conduct further testing and inspection after payment, but within a reasonable time after performance, and to reject the service if such post payment testing or inspection discloses a defect or a failure to meet specifications. The Contractor agrees that the Commonwealth may set off the amount of any state tax liability or other obligation of the Contractor or its subsidiaries to the Commonwealth against any payments due the Contractor under any contract with the Commonwealth.

b. The Commonwealth shall have the option of using the Commonwealth purchasing card to make purchases under the Contract or Purchase Order. The Commonwealth's purchasing card is similar to a credit card in that there will be a small fee which the Contractor will be required to pay and the Contractor will receive payment directly from the card issuer rather than the Commonwealth. Any and all fees related to this type of payment are the responsibility of the Contractor. In no case will the Commonwealth allow increases in prices to offset credit card fees paid by the Contractor or any other charges incurred by the Contractor, unless specifically stated in the terms of the Contract or Purchase Order.

V.23 CONTRACT-016.2 Payment – Electronic Funds Transfer (February 2014)

a. The Commonwealth will make contract payments through the Automated Clearing House (ACH). Within 10days of award of the contract or purchase order, the contractor must submit or must have already submitted their ACH information within their user profile in the Commonwealth's procurement system (SRM).

b. The contractor must submit a unique invoice number with each invoice submitted. The unique invoice number will be listed on the Commonwealth of Pennsylvania's ACH remittance advice to enable the contractor to properly apply the state agency's payment to the invoice submitted.

c. It is the responsibility of the contractor to ensure that the ACH information contained in SRM is accurate and complete. Failure to maintain accurate and complete information may result in delays in payments.

V.24 CONTRACT-017.1 Taxes (Dec 5 2006)

The Commonwealth is exempt from all excise taxes imposed by the Internal Revenue Service and has accordingly registered with the Internal Revenue Service to make tax free purchases under Registration No. 23-23740001-K.

With the exception of purchases of the following items, no exemption certificates are required and none will be issued: undyed diesel fuel, tires, trucks, gas guzzler emergency vehicles, and sports fishing equipment. The Commonwealth is also exempt from Pennsylvania state sales tax, local sales tax, public transportation assistance taxes and fees and vehicle rental tax. The Department of Revenue regulations provide that exemption certificates are not required for sales made to governmental entities and none will be issued. Nothing in this paragraph is meant to exempt a construction contractor from the payment of any of these taxes or fees which are required to be paid with respect to the purchase, use, rental, or lease of tangible personal property or taxable services used or transferred in connection with the performance of a construction contract.

V.25 CONTRACT-018.1 Assignment of Antitrust Claims (Oct 2006)

The Contractor and the Commonwealth recognize that in actual economic practice, overcharges by the Contractor's suppliers resulting from violations of state or federal antitrust laws are in fact borne by the Commonwealth. As part of the consideration for the award of the Contract, and intending to be legally bound, the Contractor assigns to the Commonwealth all right, title and interest in and to any claims the Contractor now has, or may acquire, under state or federal antitrust laws relating to the products and services which are the subject of this Contract.

V.26 CONTRACT-019.1 Hold Harmless Provision (Nov 30 2006)

a. The Contractor shall hold the Commonwealth harmless from and indemnify the Commonwealth against any and all third party claims, demands and actions based upon or arising out of any activities performed by the Contractor and its employees and agents under this Contract, provided the Commonwealth gives Contractor prompt notice of any such claim of which it learns. Pursuant to the Commonwealth Attorneys Act (71 P.S. Section 732-101, et seq.), the Office of Attorney General (OAG) has the sole authority to represent the Commonwealth in actions brought against the Commonwealth. The OAG may, however, in its sole discretion and under such terms as it deems appropriate, delegate its right of defense. If OAG delegates the defense to the Contractor, the Commonwealth will cooperate with all reasonable requests of Contractor made in the defense of such suits.

b. Notwithstanding the above, neither party shall enter into any settlement without the other party's written consent, which shall not be unreasonably withheld. The Commonwealth may, in its sole discretion, allow the Contractor to control the defense and any related settlement negotiations.

V.27 CONTRACT-020.1 Audit Provisions (Oct 2006)

The Commonwealth shall have the right, at reasonable times and at a site designated by the Commonwealth, to audit the books, documents and records of the Contractor to the extent that the books, documents and records relate to costs or pricing data for the Contract. The Contractor agrees to maintain records which will support the prices charged and costs incurred for the Contract. The Contract shall preserve books, documents and records that relate to costs or pricing data for the Contract for a period of three (3) years from the date of final payment. The Contractor shall give full and free access to all records to the Commonwealth and/or their authorized representatives.

V.28 CONTRACT-021.1 Default (Oct 2013)

a. The Commonwealth may, subject to the Force Majeure provisions of this Contract, and in addition to its other rights under the Contract, declare the Contractor in default by written notice thereof to the Contractor, and terminate (as provided in the Termination Provisions of this Contract) the whole or any part of this Contract or any Purchase Order for any of the following reasons:

1) Failure to begin work within the time specified in the Contract or Purchase Order or as otherwise specified;

2) Failure to perform the work with sufficient labor, equipment, or material to ensure the completion of the specified work in accordance with the Contract or Purchase Order terms;

3) Unsatisfactory performance of the work;

4) Failure to deliver the awarded item(s) within the time specified in the Contract or Purchase Order or as otherwise specified;

5) Improper delivery;

6) Failure to provide an item(s) which is in conformance with the specifications referenced in the Contract or Purchase Order;

7) Delivery of a defective item;

8) Failure or refusal to remove material, or remove and replace any work rejected as defective or unsatisfactory;

9) Discontinuance of work without approval;

10) Failure to resume work, which has been discontinued, within a reasonable time after notice to do so;

11) Insolvency or bankruptcy;

12) Assignment made for the benefit of creditors;

13) Failure or refusal within 10 days after written notice by the Contracting Officer, to make payment or show cause why payment should not be made, of any amounts due for materials furnished, labor supplied or performed, for equipment rentals, or for utility services rendered;

14) Failure to protect, to repair, or to make good any damage or injury to property;

15) Breach of any provision of the Contract;

16) Failure to comply with representations made in the Contractor's bid/proposal; or

17) Failure to comply with applicable industry standards, customs, and practice.

b. In the event that the Commonwealth terminates this Contract or any Purchase Order in whole or in part as provided in Subparagraph a. above, the Commonwealth may procure, upon such terms and in such manner as it determines, items similar or identical to those so terminated, and the Contractor shall be liable to the Commonwealth for any reasonable excess costs for such similar or identical items included within the terminated part of the Contract or Purchase Order.

c. If the Contract or a Purchase Order is terminated as provided in Subparagraph a. above, the Commonwealth, in addition to any other rights provided in this paragraph, may require the Contractor to transfer title and deliver immediately to the Commonwealth in the manner and to the extent directed by the Contracting Officer, such partially completed items, including, where applicable, reports, working papers and other documentation, as the Contractor has specifically produced or specifically acquired for the performance of such part of the Contract or Purchase Order as has been terminated. Except as provided below, payment for completed work accepted by the Commonwealth shall be

at the Contract price. Except as provided below, payment for partially completed items including, where applicable, reports and working papers, delivered to and accepted by the Commonwealth shall be in an amount agreed upon by the Contractor and Contracting Officer. The Commonwealth may withhold from amounts otherwise due the Contractor for such completed or partially completed works, such sum as the Contracting Officer determines to be necessary to protect the Commonwealth against loss.

d. The rights and remedies of the Commonwealth provided in this paragraph shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Contract.

e. The Commonwealth's failure to exercise any rights or remedies provided in this paragraph shall not be construed to be a waiver by the Commonwealth of its rights and remedies in regard to the event of default or any succeeding event of default.

f. Following exhaustion of the Contractor's administrative remedies as set forth in the Contract Controversies Provision of the Contract, the Contractor's exclusive remedy shall be to seek damages in the Board of Claims.

V.29 CONTRACT-022.1 Force Majeure (Oct 2006)

Neither party will incur any liability to the other if its performance of any obligation under this Contract is prevented or delayed by causes beyond its control and without the fault or negligence of either party. Causes beyond a party's control may include, but aren't limited to, acts of God or war, changes in controlling law, regulations, orders or the requirements of any governmental entity, severe weather conditions, civil disorders, natural disasters, fire, epidemics and quarantines, general strikes throughout the trade, and freight embargoes.

The Contractor shall notify the Commonwealth orally within five (5) days and in writing within ten (10) days of the date on which the Contractor becomes aware, or should have reasonably become aware, that such cause would prevent or delay its performance. Such notification shall (i) describe fully such cause(s) and its effect on performance, (ii) state whether performance under the contract is prevented or delayed and (iii) if performance is delayed, state a reasonable estimate of the duration of the delay. The Contractor shall have the burden of proving that such cause(s) delayed or prevented its performance despite its diligent efforts to perform and shall produce such supporting documentation as the Commonwealth may reasonably request. After receipt of such notification, the Commonwealth may elect to cancel the Contract, cancel the Purchase Order, or to extend the time for performance as reasonably necessary to compensate for the Contractor's delay.

In the event of a declared emergency by competent governmental authorities, the Commonwealth by notice to the Contractor, may suspend all or a portion of the Contract or Purchase Order.

V.30 CONTRACT-023.1a Termination Provisions (Oct 2013)

The Commonwealth has the right to terminate this Contract or any Purchase Order for any of the following reasons. Termination shall be effective upon written notice to the Contractor.

a. **TERMINATION FOR CONVENIENCE**: The Commonwealth shall have the right to terminate the Contract or a Purchase Order for its convenience if the Commonwealth determines termination to be in its best interest. The Contractor shall be paid for work satisfactorily completed prior to the effective date of the termination, but in no event shall the Contractor be entitled to recover loss of profits.

b. **NON-APPROPRIATION**: The Commonwealth's obligation to make payments during any Commonwealth fiscal year succeeding the current fiscal year shall be subject to availability and appropriation of funds. When funds (state and/or federal) are not appropriated or otherwise made available to support continuation of performance in a subsequent fiscal year period, the Commonwealth shall have the right to terminate the Contract or a Purchase Order. The Contractor shall be reimbursed for the reasonable value of any nonrecurring costs incurred but not amortized in the price of the supplies or services delivered under the Contract. Such reimbursement shall not include loss of profit, loss of use of money, or administrative or overhead costs. The reimbursement amount may be paid from any appropriations available for that purpose.

c. **TERMINATION FOR CAUSE**: The Commonwealth shall have the right to terminate the Contract or a Purchase Order for Contractor default under the Default Clause upon written notice to the Contractor. The Commonwealth shall

also have the right, upon written notice to the Contractor, to terminate the Contract or a Purchase Order for other cause as specified in the Contract or by law. If it is later determined that the Commonwealth erred in terminating the Contract or a Purchase Order for cause, then, at the Commonwealth's discretion, the Contract or Purchase Order shall be deemed to have been terminated for convenience under the Subparagraph a.

V.31 CONTRACT-024.1 Contract Controversies (Oct 2011)

a. In the event of a controversy or claim arising from the Contract, the Contractor must, within six months afterthe cause of action accrues, file a written claim with the contracting officer for a determination. The claim shall state all grounds upon which the Contractor asserts a controversy exists. If the Contractor fails to file a claim or files an untimely claim, the Contractor is deemed to have waived its right to assert a claim in any forum. At the time the claim is filed, or within sixty (60) days thereafter, either party may request mediation through the Commonwealth Office of General Counsel Dispute Resolution Program.

b. If the Contractor or the contracting officer requests mediation and the other party agrees, the contracting officer shall promptly make arrangements for mediation. Mediation shall be scheduled so as to not delay the issuance of the final determination beyond the required 120 days after receipt of the claim if mediation is unsuccessful. If mediation is not agreed to or if resolution is not reached through mediation, the contracting officer shall review timely-filed claims and issue a final determination, in writing, regarding the claim. The final determination shall be issued within 120 days of the receipt of the claim, unless extended by consent of the contracting officer and the Contractor. The contracting officer shall send his/her written determination to the Contractor. If the contracting officer fails to issue a final determination within the 120 days (unless extended by consent of the parties), the claim shall be deemed denied. The contracting officer's determination shall be the final order of the purchasing agency.

c. Within fifteen (15) days of the mailing date of the determination denying a claim or within 135 days of filing a claim if, no extension is agreed to by the parties, whichever occurs first, the Contractor may file a statement of claim with the Commonwealth Board of Claims. Pending a final judicial resolution of a controversy or claim, the Contractor shall proceed diligently with the performance of the Contract in a manner consistent with the determination of the contracting officer and the Commonwealth shall compensate the Contractor pursuant to the terms of the Contract.

V.32 CONTRACT-025.1 Assignability and Subcontracting (Oct 2013)

a. Subject to the terms and conditions of this paragraph, this Contract shall be binding upon the parties and their respective successors and assigns.

b. The Contractor shall not subcontract with any person or entity to perform all or any part of the work to be performed under this Contract without the prior written consent of the Contracting Officer, which consent may be withheld at the sole and absolute discretion of the Contracting Officer.

c. The Contractor may not assign, in whole or in part, this Contract or its rights, duties, obligations, or responsibilities hereunder without the prior written consent of the Contracting Officer, which consent may be withheld at the sole and absolute discretion of the Contracting Officer.

d. Notwithstanding the foregoing, the Contractor may, without the consent of the Contracting Officer, assign its rights to payment to be received under the Contract, provided that the Contractor provides written notice of such assignment to the Contracting Officer together with a written acknowledgement from the assignee that any such payments are subject to all of the terms and conditions of this Contract.

e. For the purposes of this Contract, the term "assign" shall include, but shall not be limited to, the sale, gift, assignment, pledge, or other transfer of any ownership interest in the Contractor provided, however, that the term shall not apply to the sale or other transfer of stock of a publicly traded company.

f . Any assignment consented to by the Contracting Officer shall be evidenced by a written assignment agreement executed by the Contractor and its assignee in which the assignee agrees to be legally bound by all of the terms and conditions of the Contract and to assume the duties, obligations, and responsibilities being assigned.

g. A change of name by the Contractor, following which the Contractor's federal identification number remains unchanged, shall not be considered to be an assignment hereunder. The Contractor shall give the Contracting Officer written notice of any such change of name.

V.33 CONTRACT-026.1 Other Contractors (Oct 2006)

The Commonwealth may undertake or award other contracts for additional or related work, and the Contractor shall fully cooperate with other contractors and Commonwealth employees, and coordinate its work with such additional work as may be required. The Contractor shall not commit or permit any act that will interfere with the performance of work by any other contractor or by Commonwealth employees. This paragraph shall be included in the Contracts of all contractors with which this Contractor will be required to cooperate. The Commonwealth shall equitably enforce this paragraph as to all contractors to prevent the imposition of unreasonable burdens on any contractor.

V.34 CONTRACT-027.1 Nondiscrimination/Sexual Harassment Clause (August 2018)

The Contractor agrees:

1. In the hiring of any employee(s) for the manufacture of supplies, performance of work, or any other activity required under the contract or any subcontract, the Contractor, each subcontractor, or any person acting on behalf of the Contractor or subcontractor shall not discriminate by reason of race, gender, creed, color, sexual orientation, gender identity or expression, or in violation of the *Pennsylvania Human Relations Act* (PHRA) and applicable federal laws, against any citizen of this Commonwealth who is qualified and available to perform the work to which the employment relates.

2. Neither the Contractor nor any subcontractor nor any person on their behalf shall in any manner discriminate by reason of race, gender, creed, color, sexual orientation, gender identity or expression, or in violation of the PHRA and applicable federal laws, against or intimidate any employee involved in the manufacture of supplies, the performance of work, or any other activity required under the contract.

3. Neither the Contractor nor any subcontractor nor any person on their behalf shall in any manner discriminate by reason of race, gender, creed, color, sexual orientation, gender identity or expression, or in violation of the PHRA and applicable federal laws, in the provision of services under the contract.

4. Neither the Contractor nor any subcontractor nor any person on their behalf shall in any manner discriminate against employees by reason of participation in or decision to refrain from participating in labor activities protected under the *Public Employee Relations Act*, *Pennsylvania Labor Relations Act* or *National Labor Relations Act*, as applicable and to the extent determined by entities charged with such Acts' enforcement, and shall comply with any provision of law establishing organizations as employees' exclusive representatives.

5. The Contractor and each subcontractor shall establish and maintain a written nondiscrimination and sexual harassment policy and shall inform their employees in writing of the policy. The policy must contain a provision that sexual harassment will not be tolerated and employees who practice it will be disciplined. Posting this Nondiscrimination/Sexual Harassment Clause conspicuously in easily-accessible and well-lighted places customarily frequented by employees and at or near where the contracted services are performed shall satisfy this requirement for employees with an established work site.

6. The Contractor and each subcontractor shall not discriminate by reason of race, gender, creed, color, sexual orientation, gender identity or expression, or in violation of PHRA and applicable federal laws, against any subcontractor or supplier who is qualified to perform the work to which the contract relates.

7. The Contractor and each subcontractor represents that it is presently in compliance with and will maintain compliance with all applicable federal, state, and local laws, regulations and policies relating to nondiscrimination and sexual harassment. The Contractor and each subcontractor further represents that it has filed a Standard Form 100 Employer Information Report ("EEO-1") with the U.S. Equal Employment Opportunity Commission ("EEOC") and shall file an annual EEO-1 report with the EEOC as required for employers' subject to *Title VII* of the *Civil Rights Act of 1964*, as amended, that have 100 or more employees and employers that have federal government contracts or first-tier subcontracts and have 50 or more employees. The Contractor and each subcontractor shall, upon request and within the time periods requested by the Commonwealth, furnish all necessary employment documents and records, including EEO-1 reports, and permit access to their books, records, and accounts by the contracting agency and the Bureau of

Diversity, Inclusion and Small Business Opportunities for purpose of ascertaining compliance with provisions of this Nondiscrimination/Sexual Harassment Clause.

8. The Contractor shall include the provisions of this Nondiscrimination/Sexual Harassment Clause in every subcontract so that those provisions applicable to subcontractors will be binding upon each subcontractor.

9. The Contractor's and each subcontractor's obligations pursuant to these provisions are ongoing from and after the effective date of the contract through the termination date thereof. Accordingly, the Contractor and each subcontractor shall have an obligation to inform the Commonwealth if, at any time during the term of the contract, it becomes aware of any actions or occurrences that would result in violation of these provisions.

10. The Commonwealth may cancel or terminate the contract and all money due or to become due under the contract may be forfeited for a violation of the terms and conditions of this Nondiscrimination/Sexual Harassment Clause. In addition, the agency may proceed with debarment or suspension and may place the Contractor in the Contractor Responsibility File.

V.35 CONTRACT-028.1 Contractor Integrity Provisions (Jan 2015)

It is essential that those who seek to contract with the Commonwealth of Pennsylvania ("Commonwealth") observe high standards of honesty and integrity. They must conduct themselves in a manner that fosters public confidence in the integrity of the Commonwealth contracting and procurement process.

1. DEFINITIONS. For purposes of these Contractor Integrity Provisions, the following terms shall have the meanings found in this Section:

a. "Affiliate" means two or more entities where (a) a parent entity owns more than fifty percent of the voting stock of each of the entities; or (b) a common shareholder or group of shareholders owns more than fifty percent of the voting stock of each of the entities; or (c) the entities have a common proprietor or general partner.

b. "Consent" means written permission signed by a duly authorized officer or employee of the Commonwealth, provided that where the material facts have been disclosed, in writing, by prequalification, bid, proposal, or contractual terms, the Commonwealth shall be deemed to have consented by virtue of the execution of this contract.

c. "Contractor" means the individual or entity, that has entered into this contract with the Commonwealth.

d. "Contractor Related Parties" means any affliates of the Contractor and the Contractor's executive officers, Pennsylvania officers and directors, or owners of 5 percent or more interest in the Contractor.

e. "Financial Interest" means either:

(1) Ownership of more than a five percent interest in any business; or

(2) Holding a position as an officer, director, trustee, partner, employee, or holding any position of management.

f. "Gratuity" means tendering, giving, or providing anything of more than nominal monetary value including, but not limited to, cash, travel, entertainment, gifts, meals, lodging, loans, subscriptions, advances, deposits of money, services, employment, or contracts of any kind. The exceptions set forth in the *Governor's Code of Conduct, Executive Order 1980-18*, the *4 Pa. Code §7.153(b)*, shall apply.

g. "Non-bid Basis" means a contract awarded or executed by the Commonwealth with Contractor without seeking bids or proposals from any other potential bidder or offeror.

2. In furtherance of this policy, Contractor agrees to the following:

a. Contractor shall maintain the highest standards of honesty and integrity during the performance of this contract and shall take no action in violation of state or federal laws or regulations or any other applicable laws or regulations, or other requirements applicable to Contractor or that govern contracting or procurement with the Commonwealth.

b. Contractor shall establish and implement a written business integrity policy, which includes, at a minimum, the requirements of these provisions as they relate to the Contractor activity with the Commonwealth and Commonwealth employees and which is made known to all Contractor employees. Posting these Contractor Integrity Provisions conspicuously in easily-accessible and well-lighted places customarily frequented by employees and at or near where the contract services are performed shall satisfy this requirement.

c. Contractor, its affiliates, agents, employees and anyone in privity with Contractor shall not accept, agree to give, offer, confer or agree to confer or promise to confer, directly or indirectly, any gratuity or pecuniary benefit to any person, or to influence or attempt to influence any person in violation of any federal or state law, regulation, executive order of the Governor of Pennsylvania, statement of policy, management directive or any other published standard of the Commonwealth in connection with performance of work under this contract, except as provided in this contract.

d. Contractor shall not have a financial interest in any other contractor, subcontractor, or supplier providing services, labor or material under this contract, unless the financial interest is disclosed to the Commonwealth in writing and the Commonwealth consents to Contractor's financial interest prior to Commonwealth execution of the contract. Contractor shall disclose the financial interest to the Commonwealth at the time of bid or proposal submission, or if no bids or proposals are solicited, no later than the Contractor's submission of the contract signed by Contractor.

e. Contractor certifies to the best of its knowledge and belief that within the last five (5) years Contractor or Contractor Related Parties have not:

(1) been indicted or convicted of a crime involving moral turpitude or business honesty or integrity in any jurisdiction;

(2) been suspended, debarred or otherwise disqualified from entering into any contract with any governmental agency;

(3) had any business license or professional license suspended or revoked;

(4) had any sanction or finding of fact imposed as a result of a judicial or administrative proceeding related to fraud, extortion, bribery, bid rigging, embezzlement, misrepresentation or anti-trust; and

(5) been, and is not currently, the subject of a criminal investigation by any federal, state or local prosecuting or investigative agency and/or civil anti-trust investigation by any federal, state or local prosecuting or investigative agency.

If Contractor cannot so certify to the above, then it must submit along with its bid, proposal or contract a written explanation of why such certification cannot be made and the Commonwealth will determine whether a contract may be entered into with the Contractor. The Contractor's obligation pursuant to this certification is ongoing from and after the effective date of the contract through the termination date thereof. Accordingly, the Contractor shall have an obligation to immediately notify the Commonwealth in writing if at any time during the term of the contract it becomes aware of any event which would cause the Contractor's certification or explanation to change. Contractor acknowledges that the Commonwealth may, in its sole discretion, terminate the contract for cause if it learns that any of the certifications made herein are currently false due to intervening factual circumstances or were false or should have been known to be false when entering into the contract.

f. Contractor shall comply with the requirements of the *Lobbying Disclosure Act (65 Pa.C.S. §13A01 et seq.)* regardless of the method of award. If this contract was awarded on a Non-bid Basis, Contractor must also comply with the requirements of the *Section 1641 of the Pennsylvania Election Code (25 P.S. §3260a).*

g. When contractor has reason to believe that any breach of ethical standards as set forth in law, the Governor's Code of Conduct, or these Contractor Integrity Provisions has occurred or may occur, including but not limited to contact by a Commonwealth officer or employee which, if acted upon, would violate such ethical standards, Contractor shall immediately notify the Commonwealth contracting officer or the Office of the State Inspector General in writing.

h. Contractor, by submission of its bid or proposal and/or execution of this contract and by the submission of any bills, invoices or requests for payment pursuant to the contract, certifies and represents that is has not violated any of these Contractor Integrity Provisions in connection with the submission of the bid or proposal, during any contract negotiations or during the term of the contract, to include any extensions thereof. Contractor shall immediately notify the Commonwealth in writing of any actions for occurrences that would result in a violation of these Contractor

Integrity Provisions. Contractor agrees to reimburse the Commonwealth for the reasonable costs of investigation incurred by the Office of the State Inspector General for investigations of the Contractor's compliance with the terms of this or any other agreement between the Contractor and the Commonwealth that results in the suspension or debarment of the Contractor. Contractor shall not be responsible for investigative costs for investigations that do not result in the Contractor's suspension or debarment.

i. Contractor shall cooperate with the Office of the State Inspector General in its investigation of any alleged Commonwealth agency or employee breach of ethical standards and any alleged Contractor non-compliance with these Contractor Integrity Provisions. Contractor agrees to make identified Contractor employees available for interviews at reasonable times and places. Contractor, upon the inquiry or request of an Inspector General, shall provide, or if appropriate, make promptly available for inspection or copying, any information of any type or form deemed relevant by the Office of the State Inspector General to Contractor's integrity and compliance with these provisions. Such information may include, but shall not be limited to, Contractor's business or financial records, documents or files of any type or form that refer to or concern this contract. Contractor shall incorporate this paragraph in any agreement, contract or subcontract it enters into in the course of the performance of this contract/agreement solely for the purpose of obtaining subcontractor compliance with this provision. The incorporation of this provision in a subcontract shall not create privity of contract between the Commonwealth and any such subcontractor, and no third party beneficiaries shall be created thereby.

j. For violation of any of these Contractor Integrity Provisions, the Commonwealth may terminate this and any other contract with Contractor, claim liquidated damages in an amount equal to the value of anything received in breach of these Provisions, claim damages for all additional costs and expenses incurred in obtaining another contractor to complete performance under this contract, and debar and suspend Contractor from doing business with the Commonwealth. These rights and remedies are cumulative, and the use or non-use of any one shall not preclude the use of all or any other. These rights and remedies are in addition to those the Commonwealth may have under law, statute, regulation or otherwise.

V.36 CONTRACT-029.1 Contractor Responsibility Provisions (Nov 2010)

For the purpose of these provisions, the term contractor is defined as any person, including, but not limited to, a bidder, offeror, loan recipient, grantee or lessor, who has furnished or performed or seeks to furnish or perform, goods, supplies, services, leased space, construction or other activity, under a contract, grant, lease, purchase order or reimbursement agreement with the Commonwealth of Pennsylvania (Commonwealth). The term contractor includes a permittee, licensee, or any agency, political subdivision, instrumentality, public authority, or other public entity in the Commonwealth.

1. The Contractor certifies, in writing, for itself and its subcontractors required to be disclosed or approved by the Commonwealth, that as of the date of its execution of this Bid/Contract, that neither the Contractor, nor any such subcontractors, are under suspension or debarment by the Commonwealth or any governmental entity, instrumentality, or authority and, if the Contractor cannot so certify, then it agrees to submit, along with its Bid/Contract, a written explanation of why such certification cannot be made.

2. The Contractor also certifies, in writing, that as of the date of its execution of this Bid/Contract it has no tax liabilities or other Commonwealth obligations, or has filed a timely administrative or judicial appeal if such liabilities or obligations exist, or is subject to a duly approved deferred payment plan if such liabilities exist.

3. The Contractor's obligations pursuant to these provisions are ongoing from and after the effective date of the Contract through the termination date thereof. Accordingly, the Contractor shall have an obligation to inform the Commonwealth if, at any time during the term of the Contract, it becomes delinquent in the payment of taxes, or other Commonwealth obligations, or if it or, to the best knowledge of the Contractor, any of its subcontractors are suspended or debarred by the Commonwealth, the federal government, or any other state or governmental entity. Such notification shall be made within 15 days of the date of suspension or debarment.

4. The failure of the Contractor to notify the Commonwealth of its suspension or debarment by the Commonwealth, any other state, or the federal government shall constitute an event of default of the Contract with the Commonwealth.

5. The Contractor agrees to reimburse the Commonwealth for the reasonable costs of investigation incurred by the Office of State Inspector General for investigations of the Contractor's compliance with the terms of this or any other

agreement between the Contractor and the Commonwealth that results in the suspension or debarment of the contractor. Such costs shall include, but shall not be limited to, salaries of investigators, including overtime; travel and lodging expenses; and expert witness and documentary fees. The Contractor shall not be responsible for investigative costs for investigations that do not result in the Contractor's suspension or debarment.

6. The Contractor may obtain a current list of suspended and debarred Commonwealth contractors by either searching the Internet at **http://www.dgs.state.pa.us/** or contacting the:

Department of General Services
Office of Chief Counsel
603 North Office Building
Harrisburg, PA 17125
Telephone No: (717) 783-6472
FAX No: (717) 787-9138

V.37 CONTRACT-030.1 Americans with Disabilities Act (April 1, 2010)

a. Pursuant to federal regulations promulgated under the authority of The Americans With Disabilities Act, 28C.F.R. Section 35.101 et seq., the Contractor understands and agrees that it shall not cause any individual with a disability to be excluded from participation in this Contract or from activities provided for under this Contract on the basis of the disability. As a condition of accepting this contract, the Contractor agrees to comply with the "General Prohibitions Against Discrimination," 28 C.F.R. Section 35.130, and all other regulations promulgated under Title II of The Americans With Disabilities Act which are applicable to all benefits, services, programs, and activities provided by the Commonwealth of Pennsylvania through contracts with outside contractors.

b. The Contractor shall be responsible for and agrees to indemnify and hold harmless the Commonwealth of Pennsylvania from all losses, damages, expenses, claims, demands, suits, and actions brought by any party against the Commonwealth of Pennsylvania as a result of the Contractor’s failure to comply with the provisions of Subparagraph a above.

V.38 CONTRACT-032.1 Covenant Against Contingent Fees (Oct 2006)

The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure the Contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, except bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty, the Commonwealth shall have the right to terminate the Contract without liability or in its discretion to deduct from the Contract price or consideration, or otherwise recover the full amount of such commission, percentage, brokerage, or contingent fee.

V.39 CONTRACT-033.1 Applicable Law (Oct 2006)

This Contract shall be governed by and interpreted and enforced in accordance with the laws of the Commonwealth of Pennsylvania (without regard to any conflict of laws provisions) and the decisions of the Pennsylvania courts. The Contractor consents to the jurisdiction of any court of the Commonwealth of Pennsylvania and any federal courts in Pennsylvania, waiving any claim or defense that such forum is not convenient or proper. The Contractor agrees that any such court shall have in personam jurisdiction over it, and consents to service of process in any manner authorized by Pennsylvania law.

V.40 CONTRACT-034.1a Integration – RFP (Dec 12 2006)

This Contract, including the Request for Proposals, Contractor's Proposal, Contractor's Best and Final Offer, if any, all referenced documents, and any Purchase Order constitutes the entire agreement between the parties. No agent, representative, employee or officer of either the Commonwealth or the Contractor has authority to make, or has made, any statement, agreement or representation, oral or written, in connection with the Contract, which in any way can be deemed to modify, add to or detract from, or otherwise change or alter its terms and conditions. No negotiations between the parties, nor any custom or usage, shall be permitted to modify or contradict any of the terms and conditions of the Contract. No modifications, alterations, changes, or waiver to the Contract or any of its terms shall be valid or binding unless accomplished by a written amendment signed by both parties.

V.41 CONTRACT-034.2a Order of Precedence - RFP (Dec 12 2006)

In the event there is a conflict among the documents comprising this Contract, the Commonwealth and the Contractor agree on the following order of precedence: the Contract; the RFP, the Best and Final Offer, if any; the Contractor's Proposal in Response to the RFP.

V.42 CONTRACT-034.3 Controlling Terms and Conditions (Aug 2011)

The terms and conditions of this Contract shall be the exclusive terms of agreement between the Contractor and the Commonwealth. All quotations requested and received from the Contractor are for obtaining firm pricing only. Other terms and conditions or additional terms and conditions included or referenced in the Contractor's quotations, invoices, business forms, or other documentation shall not become part of the parties' agreement and shall be disregarded by the parties, unenforceable by the Contractor and not binding on the Commonwealth.

V.43 CONTRACT-035.1a Changes (Oct 2006)

The Commonwealth reserves the right to make changes at any time during the term of the Contract or any renewals or extensions thereof: 1) to increase or decrease the quantities resulting from variations between any estimated quantities in the Contract and actual quantities; 2) to make changes to the services within the scope of the Contract; 3) to notify the Contractor that the Commonwealth is exercising any Contract renewal or extension option; or 4) to modify the time of performance that does not alter the scope of the Contract to extend the completion date beyond the Expiration Date of the Contract or any renewals or extensions thereof. Any such change shall be made by the Contracting Officer by notifying the Contractor in writing. The change shall be effective as of the date of the change, unless the notification of change specifies a later effective date. Such increases, decreases, changes, or modifications will not invalidate the Contract, nor, if performance security is being furnished in conjunction with the Contract, release the security obligation. The Contractor agrees to provide the service in accordance with the change order. Any dispute by the Contractor in regard to the performance required by any notification of change shall be handled through Contract Controversies Provision.

V.44 CONTRACT-036.1 Background Checks (February 2016)

a. The Contractor must, at its expense, arrange for a background check for each of its employees, as well as the employees of any of its subcontractors, who will have access to Commonwealth facilities, either through on-site access or through remote access. Background checks are to be conducted via the Request for Criminal Record Check form and procedure found at http://www.psp.state.pa.us/psp/lib/psp/sp4-164.pdf . The background check must be conducted prior to initial access and on an annual basis thereafter.

b. Before the Commonwealth will permit access to the Contractor, the Contractor must provide written confirmation that the background checks have been conducted. If, at any time, it is discovered that a Contractor employee has a criminal record that includes a felony or misdemeanor involving terroristic behavior, violence, use of a lethal weapon, or breach of trust/fiduciary responsibility or which raises concerns about building, system or personal security or is otherwise job-related, the Contractor shall not assign that employee to any Commonwealth facilities, shall remove any access privileges already given to the employee and shall not permit that employee remote access unless the Commonwealth consents to the access, in writing, prior to the access. The Commonwealth may withhold its consent in its sole discretion. Failure of the Contractor to comply with the terms of this Section on more than one occasion or Contractor's failure to appropriately address any single failure to the satisfaction of the Commonwealth may result in the Contractor being deemed in default of its Contract.

c. The Commonwealth specifically reserves the right of the Commonwealth to conduct background checks over and above that described herein.

d. Access to certain Capitol Complex buildings and other state office buildings is controlled by means of card readers and secured visitors' entrances. Commonwealth contracted personnel who have regular and routine business in Commonwealth worksites may be issued a photo identification or access badge subject to the requirements of the contracting agency and DGS set forth in Enclosure 3 of Commonwealth Management Directive 625.10 (Amended)

Card Reader and Emergency Response Access to Certain Capitol Complex Buildings and Other State Office Buildings. The requirements, policy and procedures include a processing fee payable by the Contractor for contracted personnel photo identification or access badges.

V.45 CONTRACT-037.1a Confidentiality (Oct 2013)

a) The Contractor agrees to protect the confidentiality of the Commonwealth's confidential information. The Commonwealth agrees to protect the confidentiality of Contractor's confidential information. In order for information to be deemed confidential, the party claiming confidentiality must designate the information as "confidential" in such a way as to give notice to the other party (notice may be communicated by describing the information, and the specifications around its use or disclosure, in the SOW).Neither party may assert that information owned by the other party is such party's confidential information. The parties agree that such confidential information shall not be copied, in whole or in part, or used or disclosed except when essential for authorized activities under this Contract and, in the case of disclosure, where the recipient of the confidential information has agreed to be bound by confidentiality requirements no less restrictive than those set forth herein. Each copy of such confidential information shall be marked by the party making the copy with any notices appearing in the original. Upon termination or cancellation of this Contract or any license granted hereunder, the receiving party will return to the disclosing party all copies of the confidential information in the receiving party's possession, other than one copy, which may be maintained for archival purposes only, and which will remain subject to this Contract's security, privacy, data retention/destruction and confidentiality provisions (all of which shall survive the expiration of this Contract). Both parties agree that a material breach of these requirements may, after failure to cure within the time frame specified in this Contract, and at the discretion of the non-breaching party, result in termination for default pursuant to the DEFAULT provision of this Contract, in addition to other remedies available to the non-breaching party.

(b) Insofar as information is not otherwise protected by law or regulation, the obligations stated in this Section do not apply to information:

(1) already known to the recipient at the time of disclosure other than through the contractual relationship;

(2) independently generated by the recipient and not derived by the information supplied by the disclosing party.

(3) known or available to the public , except where such knowledge or availability is the result of unauthorized disclosure by the recipient of the proprietary information;

(4) disclosed to the recipient without a similar restriction by a third party who has the right to make such disclosure; or

(5) required to be disclosed by law , regulation, court order, or other legal process.

There shall be no restriction with respect to the use or disclosure of any ideas, concepts, know-how, or data processing techniques developed alone or jointly with the Commonwealth in connection with services provided to the Commonwealth under this Contract.

(c) The Contractor shall use the following process when submitting information to the Commonwealth it believes to be confidential and/or proprietary information or trade secrets:

(1) Prepare an un-redacted version of the appropriate document, and

(2) Prepare a redacted version of the document that redacts the information that is asserted to be confidential or proprietary information or a trade secret, and

(3) Prepare a signed written statement that states:

(i) the attached document contains confidential or proprietary information or trade secrets;

(ii) the Contractor is submitting the document in both redacted and un-redacted format in accordance with 65 P.S. § 67.707(b); and

(iii) the Contractor is requesting that the document be considered exempt under 65 P.S. § 67.708(b)(11) from public records requests.

(4) Submit the two documents along with the signed written statement to the Commonwealth.

V.46 CONTRACT-041.1 Contract Requirements-Small Diverse Business and Small Business Participation (July 2016)

The provisions contained in the RFP concerning Contract Requirements - Small Diverse Business and Small Business Participation are incorporated by reference herein.

V.47 CONTRACT-045.1 Insurance - General (Dec 12 2006)

The Contractor is required to have in place during the term of the Contract and any renewals or extensions thereof , the following types of insurance, issued by companies acceptable to the Commonwealth and authorized to conduct such business under the laws of the Commonwealth of Pennsylvania:

A. **Worker's Compensation Insurance** for all of the Contractor's employees and those of any subcontractor, engaged in work at the site of the project as required by law.

B. **Public Liability and Property Damage Insurance** to protect the Commonwealth, the Contractor, and any and all subcontractors from claims for damages for personal injury (including bodily injury), sickness or disease, accidental death and damage to property including the loss of use resulting from any property damage, which may arise from the activities performed under the Contract or the failure to perform under the Contract, whether such performance or non-performance be by the Contractor, by any subcontractor, or by anyone directly or indirectly employed by either. The minimum amounts of coverage shall be $250,000 per person and $1,000,000 per occurrence for bodily injury, including death, and $250,000 per person and $1,000,000 per occurrence for property damage. Such policies shall be occurrence rather than claims-made policies and shall not contain any endorsements or any other form designated to limit and restrict any action by the Commonwealth, as an additional insured, against the insurance coverage in regard to work performed for the Commonwealth.

Prior to commencement of the work under the Contract and at each insurance renewal date during the term of the Contract, the Contractor shall provide the Commonwealth with current certificates of insurance. These certificates or policies shall name the Commonwealth as an additional insured and shall contain a provision that the coverage's afforded under the policies will not be cancelled or changed until at least thirty (30) days written notice has been given to the Commonwealth.

The Commonwealth shall be under no obligation to obtain such certificates from the Contractor(s). Failure by the Commonwealth to obtain the certificates shall not be deemed a waiver of the Contractor's obligation to obtain and furnish certificates. The Commonwealth shall have the right to inspect the original insurance policies.

V.48 CONTRACT-051.1 Notice (Dec 2006)

Any written notice to any party under this Contract shall be deemed sufficient if delivered personally, or by facsimile, telecopy, electronic or digital transmission (provided such delivery is confirmed), or by a recognized overnight courier service (e.g., DHL, Federal Express, etc.) with confirmed receipt, or by certified or registered United States mail, postage prepaid, return receipt requested, and sent to following:

a. If to the Contractor: the Contractor's address as recorded in the Commonwealth's Supplier Registration system.

b. If to the Commonwealth: the address of the Issuing Office as set forth on the Contract.

V.49 CONTRACT-052.1 Right to Know Law (Feb 2010)

a. The Pennsylvania Right-to-Know Law, 65 P.S. §§ 67.101-3104, (“RTKL”) applies to this Contract. For the purpose of these provisions, the term “the Commonwealth” shall refer to the contracting Commonwealth agency.

b. If the Commonwealth needs the Contractor's assistance in any matter arising out of the RTKL related to this Contract, it shall notify the Contractor using the legal contact information provided in this Contract. The Contractor, at any time, may designate a different contact for such purpose upon reasonable prior written notice to the Commonwealth.

c. Upon written notification from the Commonwealth that it requires the Contractor's assistance in responding to a request under the RTKL for information related to this Contract that may be in the Contractor's possession, constituting, or alleged to constitute, a public record in accordance with the RTKL ("Requested Information"), the Contractor shall:

1. Provide the Commonwealth, within ten (10) calendar days after receipt of written notification, access to, and copies of, any document or information in the Contractor's possession arising out of this Contract that the Commonwealth reasonably believes is Requested Information and may be a public record under the RTKL; and 2. Provide such other assistance as the Commonwealth may reasonably request, in order to comply with the RTKL with respect to this Contract.

d. If the Contractor considers the Requested Information to include a request for a Trade Secret or Confidential Proprietary Information, as those terms are defined by the RTKL, or other information that the Contractor considers exempt from production under the RTKL, the Contractor must notify the Commonwealth and provide, within seven (7) calendar days of receiving the written notification, a written statement signed by a representative of the Contractor explaining why the requested material is exempt from public disclosure under the RTKL.

e. The Commonwealth will rely upon the written statement from the Contractor in denying a RTKL request for the Requested Information unless the Commonwealth determines that the Requested Information is clearly not protected from disclosure under the RTKL. Should the Commonwealth determine that the Requested Information is clearly not exempt from disclosure, the Contractor shall provide the Requested Information within five (5) business days of receipt of written notification of the Commonwealth's determination.

f. If the Contractor fails to provide the Requested Information within the time period required by these provisions, the Contractor shall indemnify and hold the Commonwealth harmless for any damages, penalties, costs, detriment or harm that the Commonwealth may incur as a result of the Contractor's failure, including any statutory damages assessed against the Commonwealth.

g. The Commonwealth will reimburse the Contractor for any costs associated with complying with these provisions only to the extent allowed under the fee schedule established by the Office of Open Records or as otherwise provided by the RTKL if the fee schedule is inapplicable.

h. The Contractor may file a legal challenge to any Commonwealth decision to release a record to the public with the Office of Open Records, or in the Pennsylvania Courts, however, the Contractor shall indemnify the Commonwealth for any legal expenses incurred by the Commonwealth as a result of such a challenge and shall hold the Commonwealth harmless for any damages, penalties, costs, detriment or harm that the Commonwealth may incur as a result of the Contractor's failure, including any statutory damages assessed against the Commonwealth, regardless of the outcome of such legal challenge. As between the parties, the Contractor agrees to waive all rights or remedies that may be available to it as a result of the Commonwealth's disclosure of Requested Information pursuant to the RTKL.

i. The Contractor's duties relating to the RTKL are continuing duties that survive the expiration of this Contract and shall continue as long as the Contractor has Requested Information in its possession.

V.50 CONTRACT-053.1 Enhanced Minimum Wage Provisions (July 2018)

1. **Enhanced Minimum Wage.** Contractor/Lessor agrees to pay no less than $12.00 per hour to its employees for all hours worked directly performing the services called for in this Contract/Lease, and for an employee's hours performing ancillary services necessary for the performance of the contracted services or lease when such employee spends at least twenty per cent (20%) of their time performing ancillary services in a given work week.

2. **Adjustment.** Beginning July1, 2019, and annually thereafter, the minimum wage rate shall be increased by $0.50 until July 1, 2024, when the minimum wage reaches $15.00. Thereafter, the minimum wage rate would be increased by an annual cost-of-living adjustment using the percentage change in the Consumer Price Index for All Urban Consumers

(CPI-U) for Pennsylvania, New Jersey, Delaware, and Maryland. The applicable adjusted amount shall be published in the Pennsylvania Bulletin by March 1 of each year to be effective the following July 1.

3. **Exceptions.** These Enhanced Minimum Wage Provisions shall not apply to employees:

a. exempt from the minimum wage under the Minimum Wage Act of 1968;

b. covered by a collective bargaining agreement;

c. required to be paid a higher wage under another state or federal law governing the services, including the

Prevailing Wage Act and Davis-Bacon Act; or

d. required to be paid a higher wage under any state or local policy or ordinance.

4. **Notice.** Contractor/Lessor shall post these Enhanced Minimum Wage Provisions for the entire period of the contract conspicuously in easily-accessible and well-lighted places customarily frequented by employees at or near where the contracted services are performed.

5. **Records.** Contractor/Lessor must maintain and, upon request and within the time periods requested by the Commonwealth, furnish all employment and wage records necessary to document compliance with these Enhanced Minimum Wage Provisions.

6. **Sanctions.** Failure to comply with these Enhanced Minimum Wage Provisions may result in the imposition of sanctions, which may include, but shall not be limited to, termination of the contract or lease, nonpayment, debarment or referral to the Office of General Counsel for appropriate civil or criminal referral.

7. **Subcontractors.** Contractor/Lessor shall include the provisions of these Enhanced Minimum Wage Provisions in every subcontract so that these provisions will be binding upon each subcontractor.

EXHIBIT B

Environmental Remediation Services 6100052061

BAFO Cost Submittal

BAFO APPENDIX A
COST SUBMITTAL Revised 02.15.2022

OFFEROR NAME:	Skelly and Loy, Inc., A Terracon Company	**OFFEROR SUPPLIER NUMBER:**	152776
ADDRESS:	449 Eisenhower Boulevard, Suite #300	**EMAIL ADDRESS:**	rrowley@skellyloy.com
ADDRESS:	Harrisburg, PA 17111		
CONTACT NAME:	Robert D. Rowley, CSP, CIH		
TELEPHONE:	717-232-0593		
24 HOUR EMERGENCY CONTACT:	Robert D. Rowley, CSP, CIH	**24 HOUR EMERGENCY PHONE:**	717-574-0242 (Cell Phone)

Enter the unit price (highlighted in yellow) for each line item. Pricing must be entered for ALL line items or the submission may be rejected. Pricing must include all taxes, fringe benefits, overhead and profit. **If the Offeror wishes to provide a line item at no cost, "0.00" must be entered for the line item.** A blank line item may be cause for rejection.

"Estimated Quantity" represents the estimated quantity of each service that may be required **each year**. The spreadsheet will automatically calculate the extended price.

All quantities indicate an estimated average for each line item based upon previous contract performance. Line items with the quantity of one "1" represent an item previously not on contract, or a line item previously not paid. The offeror is to use their professional experience to determine what dollar value or percentage to enter in the appropriate cell.

Prevailing Wage Rates. Because Prevailing Wage rates and applicability cannot be determined at the time of submission, Offerors should not include Prevailing Wage rates as part of Appendix A - Cost Submittal.

Recognizing there may be an increase to the awarded Supplier when Prevailing Wage rates do apply, these additional costs should be included in the Technical & Cost Proposal and those additional costs will be reflected on any resulting Purchase Orders as Non-Offered Item(s).

There are five (5) Cost No Mark-Up Items covered under this Contract (Travel, Subsistence, Lodging, Mileage and Miscellaneous Services/Equipment/Tools). Supplier will be reimbursed as per Commonwealth Management Directive 230.10, with the exception of Miscellaneous Services/Equipment/Tools, which shall be invoiced at cost (no mark-up). These items are not included in Appendix A - Cost Submittal.

LABOR (STANDARD RATE) - SENIOR STAFF PROFESSIONALS Note: Emergency Labor Rate(s) under the Contract are not applicable for Senior Staff Professional classifications, except for the Project Manager (Line Item 25) when required to be on site. For Senior Staff required to be on site in emergencies, the Supplier will be compensated at the applicable Regular Senior Staff Labor Rates.

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
1	Contract Administrator	20	Hour	$50.00	$1,000.00
2	Project Manager	2,094	Hour	$230.00	$481,620.00
3	Sr. Geologist/Hydrogeologist	1,088	Hour	$210.00	$228,480.00
4	Sr. Civil/Geotechnical Engineer	1	Hour	$198.00	$198.00
5	Sr. Environmental/Sanitary Engineers	12	Hour	$205.00	$2,460.00

6	Sr. Chemist/Environmental Chemist	1	Hour	$50.00	$50.00

LABOR (STANDARD RATE) - PROJECT STAFF PROFESSIONALS

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
7	Site Health & Safety Officer	1	Hour	$150.00	$150.00
8	Geologist/Hydrogeologist	2	Hour	$150.00	$300.00
9	Technician, Hazardous Materials	540	Hour	$50.00	$27,000.00
10	Civil/Geotechnical Engineers	1	Hour	$50.00	$50.00
11	Environmental/Sanitary Engineers	115	Hour	$50.00	$5,750.00
12	Chemist/Environmental Chemist	1	Hour	$50.00	$50.00
13	Certified Industrial Hygienist/Health Professional	1	Hour	$230.00	$230.00
14	Environmental Scientist	523	Hour	$115.00	$60,145.00

LABOR (STANDARD RATE) - ASSISTANT STAFF PROFESSIONALS

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
15	Clerical/Secretarial Personnel	297	Hour	$90.00	$26,730.00
16	Draftsperson/CADD Operator	65	Hour	$105.00	$6,825.00
17	Survey Crew: Includes PA Certified Surveyor	7	Hour	$300.00	$2,100.00
18	Geologist/Hydrogeologist	1	Hour	$50.00	$50.00
19	Civil/Geotechnical Engineers	1	Hour	$50.00	$50.00
20	Environmental/Sanitary Engineers	1	Hour	$50.00	$50.00
21	Chemist/Environmental Chemist	1	Hour	$50.00	$50.00
22	Environmental Scientist	635	Hour	$75.00	$47,625.00
23	Technician, Hazardous Materials	1	Hour	$120.00	$120.00
24	Lead-Based Paint Inspector-Technician	3	Hour	$130.00	$390.00

LABOR (EMERGENCY RATE) - PROJECT STAFF PROFESSIONALS

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
25	Project Manager	1	Hour	$230.00	$230.00
26	Field Supervisor/Supervisor	1	Hour	$50.00	$50.00
27	Industrial Hygienist/Health Professional	1	Hour	$50.00	$50.00
28	Health & Safety Officer	1	Hour	$50.00	$50.00
29	Technician, Hazardous Materials	1	Hour	$110.00	$110.00
30	Geologist/Hydrogeologist	1	Hour	$50.00	$50.00
31	Civil/Geotechnical Engineers	1	Hour	$50.00	$50.00
32	Environmental/Sanitary Engineers	1	Hour	$50.00	$50.00
33	Chemist/Environmental Chemist	1	Hour	$50.00	$50.00
34	Environmental Scientist	894	Hour	$115.00	$102,810.00

LABOR (EMERGENCY RATE) - ASSISTANT STAFF PROFESSIONALS

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
35	Geologist/Hydrogeologist	1	Hour	$50.00	$50.00
36	Civil/Geotechnical Engineers	1	Hour	$50.00	$50.00
37	Environmental/Sanitary Engineers	1	Hour	$50.00	$50.00
38	Chemist/Environmental Chemist	1	Hour	$50.00	$50.00
39	Lead-Based Paint Inspector-Technician	3	Hour	$130.00	$390.00
40	Environmental Scientist	1,372	Hour	$75.00	$102,900.00
41	Technician, Hazardous Materials	1	Hour	$150.00	$150.00

LABORATORY ANALYSIS - PA DEP SHORT LIST - SOIL/SEDIMENT/DEBRIS: Laboratory line item prices shall be for a Level 1 data package. Level 1 package shall consist of sample analysis results, including method detection limits, appropriate QA/QC results, and chain-of custody forms. Laboratory line item prices shall include disposal fee for all unused portions of sample. All laboratory analyses shall be in accordance with the PA DEP/US EPA methodology accepted at the time of work.

Line items will include any future additions by DEP to the VOC Short List, provided that analysis for the additional short list items may be performed at no additional cost by the laboratory. Soil/sediment/debris sample containers, preservatives, and field filtration equipment, for the purposes of this contract, are considered to be included in the line item prices for laboratory services. Sample analysis costs shall include sample collection labor, sample collection equipment (e.g. sample containers, SUMMA canisters and appurtenances, coolers, filters, ice and chemical preservatives, chain-of-custody forms, etc.), and the laboratory analysis costs.

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
42	PA DEP SHORT LIST - VOLATILE ORGANIC COMPOUNDS (VOC) - SOIL - Turnaround Time: Normal Time	46	Test	$54.00	$2,484.00
43	PA DEP SHORT LIST - VOLATILE ORGANIC COMPOUNDS (VOC) - SOIL - Turnaround Time: 1 Week	26	Test	$59.40	$1,544.40
44	PA DEP SHORT LIST - VOLATILE ORGANIC COMPOUNDS (VOC) - SOIL - Turnaround Time: 24-48 Hours	11	Test	$81.00	$891.00
45	PA DEP SHORT LIST - SEMI VOLATILE ORGANIC COMPOUNDS (SVOC) - SOIL - Turnaround Time: Normal Time	13	Test	$82.80	$1,076.40
46	PA DEP SHORT LIST - SEMI VOLATILE ORGANIC COMPOUNDS (SVOC) - SOIL - Turnaround Time: 1 Week	6	Test	$91.20	$547.20
47	PA DEP SHORT LIST - SEMI VOLATILE ORGANIC COMPOUNDS (SVOC) - SOIL - Turnaround Time: 24-48 Hours	4	Test	$124.20	$496.80
48	Benzene, Toluene, Ethyl Benzene, Xylenes (BTEX) - Soil Test, Normal Time	1	Test	$42.00	$42.00
49	Benzene, Toluene, Ethyl Benzene, Xylenes (BTEX) - Soil Test, 1 Week	1	Test	$46.20	$46.20
50	Benzene, Toluene, Ethyl Benzene, Xylenes (BTEX) - Soil Test, 24-48 Hours	1	Test	$63.00	$63.00
51	Target Compound Volatile Organics - Soil Test, Normal Time	21	Test	$66.70	$1,400.70
52	Target Compound Volatile Organics - Soil Test, 1 Week	3	Test	$73.60	$220.80
53	Target Compound Volatile Organics - Soil Test, 24-48 Hours	1	Test	$87.00	$87.00
54	Target Compound Semi Volatile Organics - Soil Test, Normal Time	19	Test	$133.40	$2,534.60
55	Target Compound Semi Volatile Organics - Soil Test, 1 Week	3	Test	$156.40	$469.20
56	Target Compound Semi Volatile Organics - Soil Test, 24-48 Hours	1	Test	$164.00	$164.00
57	Priority Pollutant Metals (Inorganics) - Soil Test, Normal Time	5	Test	$80.50	$402.50
58	Priority Pollutant Metals (Inorganics) - Soil Test, 1 Week	1	Test	$88.55	$88.55

59	Priority Pollutant Metals (Inorganics) - Soil Test, 24-48 Hours	1	Test	$105.00	$105.00
60	Target Analyte List (Inorganics/Metals) - Soil Test, Normal Time	1	Test	$102.35	$102.35
61	Target Analyte List (Inorganics/Metals) - Soil Test, 1 Week	1	Test	$112.70	$112.70
62	Target Analyte List (Inorganics/Metals) - Soil Test, 24-48 Hours	1	Test	$133.00	$133.00
63	Total Lead - Soil Test, Normal Time	22	Test	$19.20	$422.40
64	Total Lead - Soil Test, 1 Week	17	Test	$21.12	$359.04
65	Total Lead - Soil Test, 24-48 Hours	10	Test	$28.80	$288.00
66	Pesticides/Herbicides - Soil Test, Normal Time	6	Test	$224.25	$1,345.50
67	Pesticides/Herbicides - Soil Test, 1 Week	1	Test	$254.15	$254.15
68	Pesticides/Herbicides - Soil Test, 24-48 Hours	1	Test	$301.00	$301.00
69	PCB Bulk Sample - Soil Test, Normal Time	10	Test	$51.75	$517.50
70	PCB Bulk Sample - Soil Test, 1 Week	2	Test	$56.93	$113.85
71	PCB Bulk Sample - Soil Test, 24-48 Hours	1	Test	$64.00	$64.00
72	Polynuclear Aromatic Hydrocarbons - Soil Test, Normal Time	1	Test	$69.00	$69.00
73	Polynuclear Aromatic Hydrocarbons - Soil Test, 1 Week	1	Test	$76.00	$76.00
74	Polynuclear Aromatic Hydrocarbons - Soil Test, 24-48 Hours	1	Test	$103.50	$103.50
75	Hazardous Characteristics/Ignitability - Soil Test, Normal Time	6	Test	$18.40	$110.40
76	Hazardous Characteristics/Ignitability - Soil Test, 1 Week	1	Test	$20.70	$20.70
77	Hazardous Characteristics/Ignitability - Soil Test, 24-48 Hours	1	Test	$27.60	$27.60
78	Hazardous Characteristics/Reactivity - Soil Test, Normal Time	7	Test	$36.80	$257.60
79	Hazardous Characteristics/Reactivity - Soil Test, 1 Week	2	Test	$40.25	$80.50
80	Hazardous Characteristics/Reactivity - Soil Test, 24-48 Hours	1	Test	$46.00	$46.00
81	Hazardous Characteristics/Corrosivity - Soil Test, Normal Time	4	Test	$10.35	$41.40
82	Hazardous Characteristics/Corrosivity - Soil Test, 1 Week	1	Test	$11.50	$11.50
83	Hazardous Characteristics/Corrosivity - Soil Test, 24-48 Hours	1	Test	$14.95	$14.95
84	TCLP/Metals - Soil Test, Normal Time	3	Test	$85.10	$255.30
85	TCLP/Metals - Soil Test, 1 Week	2	Test	$94.30	$188.60
86	TCLP/Volatiles - Soil Test, Normal Time	4	Test	$92.00	$368.00
87	TCLP/Volatiles - Soil Test, 1 Week	1	Test	$101.20	$101.20
88	TCLP/Semi Volatiles - Soil Test, Normal Time	2	Test	$142.60	$285.20
89	TCLP/Semi Volatiles - Soil Test, 1 Week	1	Test	$156.86	$156.86
90	Full TCLP - Soil Test, Normal Time	6	Test	$494.50	$2,967.00
91	Full TCLP - Soil Test, 1 Week	1	Test	$549.70	$549.70
92	Synthetic Precipitation Leaching Procedure/Method 1312 - Soil Test, Normal Time	1	Test	$31.05	$31.05
93	Synthetic Precipitation Leaching Procedure/Method 1312 - Soil Test, 1 Week	1	Test	$34.50	$34.50
94	ASTM Leaching Procedure - Soil Test, Normal Time	1	Test	$31.05	$31.05
95	ASTM Leaching Procedure - Soil Test, 1 Week	1	Test	$34.50	$34.50
96	Full Priority Pollutant List - Soil Test, Normal Time	1	Test	$408.00	$408.00
97	Full Priority Pollutant List - Soil Test, 1 Week	1	Test	$449.00	$449.00
98	Full Priority Pollutant List - Soil Test, 24-48 Hours	1	Test	$612.00	$612.00
99	Total Organic Halogens (TOX) - Soil Test, Normal Time	1	Test	$109.25	$109.25
100	Total Organic Halogens (TOX) - Soil Test, 1 Week	1	Test	$120.18	$120.18
101	Total Organic Halogens (TOX) - Soil Test, 24-48 Hours	75	Test	$171.12	$12,834.00
102	Bulk Asbestos by PLM - ~~Soil~~ Solids Test, Normal Time	1	Test	$13.20	$13.20
103	Bulk Asbestos by PLM - ~~Soil~~ Solids Test, 1 Week	1305	Test	$7.62	$9,944.10
104	Bulk Asbestos by PLM - ~~Soil~~ Solids Test, 24-48 Hours	154	Test	$10.92	$1,681.68

105	Total Petroleum Hydrocarbons/Gasoline Range Organics (TPH/GRO) - Soil Test, Normal Time	6	Test	$36.80	$220.80
106	Total Petroleum Hydrocarbons/Gasoline Range Organics (TPH/GRO) - Soil Test, 1 Week	1	Test	$40.60	$40.60
107	Total Petroleum Hydrocarbons/Gasoline Range Organics (TPH/GRO) - Soil Test, 24-48 Hours	1	Test	$55.20	$55.20
108	Total Petroleum Hydrocarbons/Diesel Range Organics (TPH/DRO) - Soil Test, Normal Time	4	Test	$43.70	$174.80
109	Total Petroleum Hydrocarbons/Diesel Range Organics (TPH/DRO) - Soil Test, 1 Week	1	Test	$48.07	$48.07
110	Total Petroleum Hydrocarbons/Diesel Range Organics (TPH/DRO) - Soil Test, 24-48 Hours	3	Test	$65.55	$196.65
111	Total Oil and Grease for Petroleum Hydrocarbons - Soil Test, Normal Time	2	Test	$39.10	$78.20
112	Total Oil and Grease for Petroleum Hydrocarbons - Soil Test, 1 Week	1	Test	$42.55	$42.55
113	Total Oil and Grease for Petroleum Hydrocarbons - Soil Test, 24-48 Hours	1	Test	$58.65	$58.65
114	Road Salt Constituents/Chloride Sodium Magnesium Calcium - Soil Test, Normal Time	1	Test	$36.00	$36.00
115	Road Salt Constituents/Chloride Sodium Magnesium Calcium - Soil Test, 1 Week	1	Test	$39.60	$39.60
116	Road Salt Constituents/Chloride Sodium Magnesium Calcium - Soil Test, 24-48 Hours	1	Test	$54.00	$54.00
117	Total Solids - Soil Test, Normal Time	84	Test	$7.20	$604.80
118	Total Solids - Soil Test, 1 Week	27	Test	$8.40	$226.80
119	Total Solids - Soil Test, 24-48 Hours	8	Test	$9.60	$76.80
120	pH - Soil Test, Normal Time	1	Test	$9.20	$9.20
121	pH - Soil Test, 1 Week	1	Test	$10.12	$10.12
122	pH - Soil Test, Soil Test, 24-48 Hours	1	Test	$13.80	$13.80

LABORATORY ANALYSIS - PA DEP SHORT LIST - LIQUIDS: Laboratory line item prices shall be for a Level 1 data package. Level 1 package shall consist of sample analysis results, including method detection limits, appropriate QA/QC results, and chain-of custody forms. Laboratory line item prices shall include disposal fee for all unused portions of sample. All laboratory analyses shall be in accordance with the PA DEP/US EPA methodology accepted at the time of work.

Line items will include any future additions by DEP to the VOC Short List, provided that analysis for the additional short list items may be performed at no additional cost by the laboratory. Liquid sample containers, preservatives, and field filtration equipment, for the purposes of this contract, are considered to be included in the line item prices for laboratory services. Sample analysis costs shall include sample collection labor, sample collection equipment (e.g. sample containers, SUMMA canisters and appurtenances, coolers, filters, ice and chemical preservatives, chain-of-custody forms, etc.), and the laboratory analysis costs.

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
123	PA DEP SHORT LIST - VOLATILE ORGANIC COMPOUNDS (VOC)- LIQUIDS - Turnaround Time: Normal Time	29	Test	$51.75	$1,500.75
124	PA DEP SHORT LIST - VOLATILE ORGANIC COMPOUNDS (VOC)- LIQUIDS - Turnaround Time: 1 Week	25	Test	$59.40	$1,485.00
125	PA DEP SHORT LIST - VOLATILE ORGANIC COMPOUNDS (VOC)- LIQUIDS - Turnaround Time: 24-48 Hours	3	Test	$81.00	$243.00
126	PA DEP SHORT LIST - SEMI VOLATILE ORGANIC COMPOUNDS (SVOC)- LIQUIDS - Turnaround Time: Normal Time	9.2	Test	$82.80	$761.76
127	PA DEP SHORT LIST - SEMI VOLATILE ORGANIC COMPOUNDS (SVOC) - LIQUIDS - Turnaround Time: 1 Week	1	Test	$75.90	$75.90
128	PA DEP SHORT LIST - SEMI VOLATILE ORGANIC COMPOUNDS (SVOC)- LIQUIDS - Turnaround Time: 24-48 Hours	1	Test	$103.50	$103.50
129	PA DEP SHORT LIST - DIBROMOETHANE, 1,2 - (EDB) - LIQUIDS - Turnaround Time: Normal Time	19	Test	$38.40	$729.60
130	PA DEP SHORT LIST - DIBROMOETHANE, 1,2 - (EDB) - LIQUIDS - Turnaround Time: 1 Week	3	Test	$44.40	$133.20
131	PA DEP SHORT LIST - DIBROMOETHANE, 1,2 - (EDB) - LIQUIDS - Turnaround Time: 24-48 Hours	1	Test	$57.60	$57.60

132	Dissolved Lead - Liquid Test, Normal Time	18	Test	$19.20	$345.60
133	Dissolved Lead - Liquid Test, 1 Week	3	Test	$20.24	$60.72
134	Dissolved Lead - Liquid Test, 24-48 Hours	13	Test	$27.60	$358.80
135	Pesticides/Herbicides - Liquid Test, Normal Time	1	Test	$195.00	$195.00
136	Pesticides/Herbicides - Liquid Test, 1 Week	1	Test	$221.00	$221.00
137	Pesticides/Herbicides - Liquid Test, 24-48 Hours	1	Test	$301.00	$301.00
138	Polychlorinated Biphenyls (PCBs) - Liquid Test, Normal Time	1	Test	$55.20	$55.20
139	Polychlorinated Biphenyls (PCBs) - Liquid Test, 1 Week	1	Test	$59.80	$59.80
140	Polychlorinated Biphenyls (PCBs) - Liquid Test, 24-48 Hours	1	Test	$72.00	$72.00
141	Polynuclear Aromatic Hydrocarbons - Liquid Test, Normal Time	1	Test	$69.00	$69.00
142	Polynuclear Aromatic Hydrocarbons - Liquid Test, 1 Week	1	Test	$76.00	$76.00
143	Polynuclear Aromatic Hydrocarbons - Liquid Test, 24-48 Hours	1	Test	$103.50	$103.50
144	Hazardous Characteristics/Ignitability - Liquid Test, Normal Time	1	Test	$16.00	$16.00
145	Hazardous Characteristics/Ignitability - Liquid Test, 1 Week	1	Test	$18.00	$18.00
146	Hazardous Characteristics/Ignitability - Liquid Test, 24-48 Hours	1	Test	$24.00	$24.00
147	Hazardous Characteristics/Reactivity - Liquid Test, Normal Time	1	Test	$32.00	$32.00
148	Hazardous Characteristics/Reactivity - Liquid Test, 1 Week	1	Test	$35.00	$35.00
149	Hazardous Characteristics/Reactivity - Liquid Test, 24-48 Hours	1	Test	$48.00	$48.00
150	Hazardous Characteristics/Corrosivity - Liquid Test, Normal Time	1	Test	$9.00	$9.00
151	Hazardous Characteristics/Corrosivity - Liquid Test, 1 Week	1	Test	$10.00	$10.00
152	Hazardous Characteristics/Corrosivity - Liquid Test, 24-48 Hours	1	Test	$13.00	$13.00
153	Total Organic Halogens (TOX) - Liquid Test, Normal Time	1	Test	$95.00	$95.00
154	Total Organic Halogens (TOX) - Liquid Test, 1 Week	1	Test	$104.50	$104.50
155	Total Organic Halogens (TOX) - Liquid Test, 24-48 Hours	1	Test	$148.50	$148.50
156	Total Petroleum Hydrocarbons/Gasoline Range Organics (TPH-GRO) - Liquid Test, Normal Time	1	Test	$30.00	$30.00
157	Total Petroleum Hydrocarbons/Gasoline Range Organics (TPH-GRO) - Liquid Test, 1 Week	1	Test	$33.00	$33.00
158	Total Petroleum Hydrocarbons/Gasoline Range Organics (TPH-GRO) - Liquid Test, 24-48 Hours	1	Test	$45.00	$45.00
159	Total Petroleum Hydrocarbons/Diesel Range Organics (TPH-DRO) - Liquid Test, Normal Time	1	Test	$38.00	$38.00
160	Total Petroleum Hydrocarbons/Diesel Range Organics (TPH-DRO) - Liquid Test, 1 Week	1	Test	$41.80	$41.80
161	Total Petroleum Hydrocarbons/Diesel Range Organics (TPH-DRO) - Liquid Test, 24-48 Hours	1	Test	$57.00	$57.00
162	Total Oil and Grease for Petroleum Hydrocarbons - Liquid Test, Normal Time	2	Test	$39.10	$78.20
163	Total Oil and Grease for Petroleum Hydrocarbons - Liquid Test, 1 Week	1	Test	$42.55	$42.55
164	Total Oil and Grease for Petroleum Hydrocarbons - Liquid Test, 24-48 Hours	1	Test	$58.65	$58.65
165	Road Salt Constituents/Chloride Sodium Magnesium Calcium - Liquid Test, Normal Time	1	Test	$41.40	$41.40
166	Road Salt Constituents/Chloride Sodium Magnesium Calcium - Liquid Test, 1 Week	1	Test	$39.60	$39.60
167	Road Salt Constituents/Chloride Sodium Magnesium Calcium - Liquid Test, 24-48 Hours	1	Test	$54.00	$54.00
168	pH - Liquid Test, Normal Time	3	Test	$9.20	$27.60
169	pH - Liquid Test, 1 Week	1	Test	$10.12	$10.12
170	pH - Liquid Test, 24-48 Hours	1	Test	$13.80	$13.80

LAB ANALYSIS - Air: Laboratory line item prices shall be for a Level 1 data package. Level 1 package shall consist of sample analysis results, including method detection limits, appropriate QA/QC results, and chain-of custody forms. Laboratory line item prices shall include disposal fee for all unused portions of sample. All laboratory analyses shall be in accordance with the PA DEP/US EPA methodology accepted at the time of work.

Line items will include any future additions by DEP to the VOC Short List, provided that analysis for the additional short list items may be performed at no additional cost by the laboratory. Air sample containers, preservatives, and field filtration equipment, for the purposes of this contract, are considered to be included in the line item prices for laboratory services. Sample analysis costs shall include sample collection labor, sample collection equipment (e.g. sample containers, SUMMA canisters and appurtenances, coolers, filters, ice and chemical preservatives, chain-of-custody forms, etc.), and the laboratory analysis costs.

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
171	Volatile Organic Compounds (TO/15) - Air Test, Normal Time	1	Test	$158.70	$158.70
172	Volatile Organic Compounds (TO/15) - Air Test, 1 Week	1	Test	$177.10	$177.10
173	Volatile Organic Compounds (TO/15) - Air Test, 24-48 Hours	1	Test	$212.00	$212.00
174	Semi/Volatile Organic Compounds (TO/13A) - Air Test, Normal Time	1	Test	$159.00	$159.00
175	Semi/Volatile Organic Compounds (TO/13A) - Air Test, 1 Week	1	Test	$181.00	$181.00
176	Semi/Volatile Organic Compounds (TO/13A) - Air Test, 24-48 Hours	1	Test	$278.00	$278.00
177	Airborne Asbestos by TEM - Air Test, Normal Time	2	Test	$46.00	$92.00
178	Airborne Asbestos by TEM - Air Test, 1 Week	1	Test	$46.00	$46.00
179	Airborne Asbestos by TEM - Air Test, 24-48 Hours	7	Test	$51.75	$362.25
180	Airborne Asbestos by PCM (NIOSH/Method 7400) - Air Test, Normal Time	5	Test	$6.10	$30.48
181	Airborne Asbestos by PCM (NIOSH/Method 7400) - Air Test, 1 Week	1	Test	$6.10	$6.10
182	Airborne Asbestos by PCM (NIOSH/Method 7400) - Air Test, 24-48 Hours	298	Test	$7.25	$2,159.01

HEALTH AND SAFETY EQUIPMENT:
All personnel shall adhere to OSHA Standard 1910.120, App B, General Description and Discussion of the Levels of Protection and Protective Equipment.
The Supplier will not be reimbursed for any personal protective clothing and equipment required for performing work under this Contract.

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
183	Additional Labor Premium for Level B Work This shall include all necessary PPE (i.e. chemical resistant clothing/Tyvek pressure demand SCBA or airline respirator communications device personal contaminant monitoring devices etc.	1	Hour	$63.25	$63.25
184	Additional Labor Premium for Level C Work This shall include all necessary PPE (i.e. chemical resistant clothing/Tyvek respirator & cartridges communication device personal contaminant monitoring devices)	5	Hour	$28.75	$143.75

GENERAL EQUIPMENT: Hand tools and small power tools, for purposes of this contract, are considered to be included in the line item prices for labor classifications. **8 hr. are included in a "day".** Soil/sediment/debris and liquid sample containers, preservatives, and field filtration equipment, for the purposes of this contract, are considered to be included in the line item prices for laboratory services.
Note: Ice for sample storage and transport is considered a preservative, and is not billable under this Contract.

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
185	Explosion Proof Lighting	53	Day	$11.50	$609.50
186	Photo ionization Detector (PID)	3	Day	$132.25	$396.75
187	Flame Ionization Detector (FID)	1	Day	$149.00	$149.00

188	Combustible Gas Indicator/Oxygen Meter (Multi Gas Meter)	3	Day	$115.00	$345.00
189	Specific Conductance Meter/pH Meter	1	Day	$57.50	$57.50
190	Water level Meter (Interface Probe)	2	Day	$74.75	$149.50
191	Multi Parameter Water Quality Meter to support low flow groundwater sampling	3	Day	$143.75	$431.25
192	Steam Pressure Washer	1	Day	$172.50	$172.50
193	Data Logger (including Field Computer)	1	Day	$0.01	$0.01
194	Digital Camera	1	Day	$0.01	$0.01
195	Decon Trailer	1	Day	$30.00	$30.00
196	Water Storage Pool with 30 mil thick liner (1000-5000 gallon capacity)	1	Day	$97.75	$97.75
197	85 gallon overpack (DOT 17H)	1	Each	$0.01	$0.01
198	110 gallon overpack (DOT 17H)	1	Each	$0.01	$0.01
199	Generator < 48kW	22	Day	$115.00	$2,530.00
200	Generator 48 - 100kW	1	Day	$115.00	$115.00
201	Generator 100 - 240kW	1	Day	$115.00	$115.00
202	Generator > 240kW	1	Day	$115.00	$115.00
203	Soil Core drilling & sampling equipment Geoprobe or equivalent with all necessary tools supplies and labor Truck Mounted Rig (Track mounted rig is Line Item 208)	1	Day	$1,725.00	$1,725.00
204	Soil Core drilling & sampling equipment SonicDrillCorp or equivalent with all necessary tools supplies and labor Truck Mounted Rig (Track mounted rig is Line Item 209)	1	Day	$0.01	$0.01
205	Soil Core drilling & sampling equipment VTR or equivalent with all necessary tools supplies and labor Truck Mounted Rig (Track mounted rig is Line Item 255)	1	Day	$0.01	$0.01
206	Soil Core drilling & sampling equipment Simco, or equivalent with all necessary tools supplies and labor Truck Mounted Rig (Track mounted rig is Line Item 256)	1	Day	$0.01	$0.01
207	Soil Core drilling & sampling equipment AMS, or equivalent with all necessary tools supplies and labor Truck Mounted Rig (Track mounted rig is Line Item 257)	1	Day	$1,725.00	$1,725.00
208	Soil Core drilling & sampling equipment Geoprobe or equivalent with all necessary tools supplies and labor Track Mounted Rig	1	Day	$1,897.50	$1,897.50
209	Soil Core drilling & sampling equipment SonicDrillCorp or equivalent with all necessary tools supplies and labor Track Mounted Rig	1	Day	$0.01	$0.01
210	GPR & Magnetometer Survey to include all equipment materials labor and documentation Contractor shall assume survey area to be 40000 sq ft	1	Day	$1,955.00	$1,955.00
211	Buried Pipe/Metal Detector	1	Day	$1,955.00	$1,955.00
212	Well Sampling Field Consumables	25	Each	$46.00	$1,150.00
213	Diaphragm Pump (4 inch min 6000 gal/hr.)	1	Day	$115.00	$115.00
214	Submersible Pump (<20 gals/minute)	4	Day	$161.00	$644.00
215	Submersible Pump (>20 gals/minute)	1	Day	$316.25	$316.25
216	Bladder Pump (max 20 gals/min)	1	Day	$161.00	$161.00
217	Oil/Water Separator (<50 gpm)	1	Day	$85.00	$85.00
218	Oil/Water Separator (>50 gpm)	1	Day	$85.00	$85.00
219	Vacuum Straight Truck 500 - 1,500 gal. (includes Driver/Operator)	1	Day	$0.01	$0.01
220	Vacuum Straight Truck 1,501 - 2,999 gal. (includes Driver/Operator)	1	Day	$0.01	$0.01
221	Vacuum Straight Truck 3,000 - 3,999 gal. (includes Driver/Operator)	1	Day	$0.01	$0.01
222	Vactors/Cusco/Supersuckers (does not include vacuum excavators) (includes Driver/Operator)	1	Day	$0.01	$0.01
223	Soft Excavation Hydro Excavation Vacuum Equipment (includes Driver/Operator)	1	Day	$0.01	$0.01
224	Soft Excavation Air (dry) Excavation Vacuum Equipment (includes Driver/Operator)	1	Day	$2,070.00	$2,070.00
225	Skid Loader < 2,500 lb	1	Day	$575.00	$575.00
226	Skid Loader > 2,500 lb	1	Day	$805.00	$805.00

227	Wheel Loader Articulating <2.5 cu. yd.	1	Day	$1,052.25	$1,052.25
228	Wheel Loader Articulating <4 cu. yd.	1	Day	$0.01	$0.01
229	Wheel Loader Articulating >4 cu. yd.	1	Day	$0.01	$0.01
230	Bull Dozer <100 hp	1	Day	$0.01	$0.01
231	Bull Dozer 100 - 149 hp	1	Day	$1,250.00	$1,250.00
232	Bull Dozer >149 hp	1	Day	$0.01	$0.01
233	Mini Excavator <6 ton	1	Day	$868.25	$868.25
234	Excavator 6-10 ton	1	Day	$1,207.50	$1,207.50
235	Excavator 10-45 ton	1	Day	$0.01	$0.01
236	Excavator > 45 ton	1	Day	$0.01	$0.01
237	Backhoe Loader Mini Backhoe/ Terramite type	1	Day	$517.50	$517.50
238	Backhoe Loader Standard type/ 310 John Deere/580 Case	1	Day	$753.25	$753.25
239	Backhoe Loader Large type/ 410 John Deere/ 590 Case	1	Day	$0.01	$0.01
240	Skip Loader/ Landscape Tractor < 39 hp with attachments	1	Day	$862.50	$862.50
241	Skip Loader/ Landscape Tractor 40 - 49 hp with attachments	1	Day	$0.01	$0.01
242	Skip Loader/ Landscape Tractor 65 - 75 hp with attachments	1	Day	$0.01	$0.01
243	Skip Loader/ Landscape Tractor >75 hp with attachments	1	Day	$1,725.00	$1,725.00
244	Trencher Walk-Behind	1	Day	$460.00	$460.00
245	Ride-On Trencher 30-39 hp	1	Day	$0.01	$0.01
246	Ride-On Trencher 90-99 hp	1	Day	$1,100.00	$1,100.00
247	Ride-On Trencher 120-130 hp	1	Day	$0.01	$0.01
248	Frac Tank rental up to 21,000 gal. (treatment, testing, processing and transportation of tank to and from site are non-invoiced items and are passed through at cost)	1	Day	$97.75	$97.75
249	Refrigerant Gasses Recovery	1	Pound	$345.00	$345.00
254	AST/UST Pipe Cleaning (petroleum related)	1	Linear Feet	$23.00	$23.00
255	Soil Core drilling & sampling equipment VTR or equivalent with all necessary tools supplies and labor Track Mounted Rig	1	Day	$3,277.50	$3,277.50
256	Soil Core drilling & sampling equipment Simco, or equivalent with all necessary tools supplies and labor Track Mounted Rig	1	Day	$2,587.50	$2,587.50
257	Soil Core drilling & sampling equipment AMS, or equivalent with all necessary tools supplies and labor Track Mounted Rig	1	Day	$2,587.50	$2,587.50

ASBESTOS INSPECTION SERVICES: Asbestos Facility Inspections shall include all necessary equipment, labor, materials, incidentals, documentation, and certification fees for inspection reports, necessary for sample collection and determination of ACM within the structure. All asbestos inspectors and Supervisors must have current PA Department of Labor & Industry (L&I) Certification. All friable and non-friable suspected ACM shall be sampled, analyzed, and reported in order to verify the presence, or absence of asbestos. Sampling protocols and reporting format shall be consistent with 40 CFR 763, Subpart E (AHERA) for building inspections. In addition, all reports shall include copies of sample analysis. Report preparation may be performed and invoiced under labor classification line items; not asbestos inspection line items.

For asbestos survey work assignments that involve up to 25 structures: mobilization charges shall be determined by inspector's actual travel time, based on the shortest distance to the project site, times the hourly rate (line Item ~~210~~ 258). The awarded supplier(s) shall be allowed or paid per diem expenses for asbestos survey work assignments that involve less than 25 structures (Line Item ~~210~~ 258).

For work assignments involving greater than 25 structures: mobilization charges and per diem expenses shall be in accordance with Cost No Mark-Up Items (Subsistence, Lodging, Travel, Mileage and Non-Invoice services and equipment).

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
258	Asbestos Facility Inspection	652	Hour	$105.00	$68,460.00

ASBESTOS ABATEMENT SERVICES: Asbestos abatement services shall include all necessary equipment, labor, materials, incidentals, notifications, documentation, and certification fees for the abatement of ACM/PACM within the structure. All asbestos abatement will be in accordance with all applicable federal, state and local laws and regulations. The cost to have ~~inspectors~~ Supervisors receive and maintain any contractor safety and/or training necessary to access rail lines, etc. shall be incidental to the Contract and borne by the Supplier at no cost to PennDOT. At least one L&I certified Supervisor shall be on-site and act as the OSHA competent person at all times. Asbestos abatement shall be performed so as not to cause asbestos contamination in adjacent areas. PCM clearance air testing shall be performed in work areas. PCM clearance criteria is <0.01 f/cc (fibers/cubic centimeter). **Asbestos clearance sampling and analyses cost should not be included in the unit price. All individuals performing asbestos abatement services must have current PA Department of Labor & Industry (L&I) Certification.**

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
259	Class I Asbestos Abatement	1,421	Linear Feet	$32.00	$45,472.00
260	Class I Asbestos Abatement	6,552	Square Feet	$25.00	$163,800.00
261	Class II Asbestos Abatement	6,539	Linear Feet	$10.00	$65,390.00
262	Class II Asbestos Abatement	23,738	Square Feet	$4.25	$100,886.50

ABOVEGROUND STORAGE TANK SYSTEM REMOVAL: Price shall include all necessary equipment, tools materials, labor and permits for the removal of tank and appurtenances (i.e. pedestal, containment structure and footer, etc.), disposal of the tank and appurtenances, and completion of closure sampling, analysis, and documentation (including PA Department of Environmental Protection (DEP) notifications and reporting, if required). For the purposes of the offerors submission, this service does NOT include remediation or follow-up investigation.

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
263	<1000 Gallon Petroleum AST	5	Each	$2,875.00	$14,375.00
264	1000 - 6000 Gallon Petroleum AST	1	Each	$5,175.00	$5,175.00
265	Liquid Chloride Solution AST	1	Each	$0.01	$0.01

UNDERGROUND STORAGE TANK SYSTEM REMOVAL: Price shall include all necessary equipment, tools, materials, labor, and permits for the excavation and removal of the tank system, disposal of the tank and appurtenances, and completion of the PA DEP Underground Storage Tank closure sampling, analysis, and documentation (i.e. PA DEP, PA L&I notifications and reporting).

Closure reporting shall follow the PA DEP Storage Tank and Spill Prevention Act, Corrective Action Regulations format for site characterization. Contractor shall follow the American Petroleum Institute (API) Recommended Practice 1604: Removal and disposal of used underground storage tanks.

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED QUANTITY	UNIT OF MEASURE	UNIT PRICE	EXTENDED PRICE
266	<2500 Gallon UST	10	Each	$5,175.00	$51,750.00
267	2500 - 5500 Gallon UST Fiberglass or Single Walled Steel	4	Each	$5,750.00	$23,000.00
268	2500 - 5500 Gallon UST Double Walled Steel	1	Each	$5,750.00	$5,750.00
269	5500 - 11000 Gallon UST Fiberglass or Single Walled Steel	2	Each	$7,475.00	$14,950.00
270	5500 - 11000 Gallon UST Double Walled Steel	1	Each	$7,475.00	$7,475.00

WASTE DISPOSAL SERVICES: Price shall include temporary (on-site) storage, staging, containers, loading, transportation, preparation of waste disposal documents, and waste disposal fee. Services may include waste identification (characterization), excavation, containment and selective placement (in accordance with PennDOT Publication 408, current edition) of contaminated media on-site, such that the effected work area is returned to a Level D health and safety condition.

NOTE: Offerors shall enter the percentage mark-up they will be charging in addition to the actual cost. The COST ESTIMATE COLUMN is the estimated cost and only being used for cost evaluation purposes for this RFP.
All items must have a percentage; an entry of 0.00% shall indicate Offeror will provide service at cost with no mark-up. A blank line item(s) may be cause for rejection.

Because Asphalt Emulsion Waste may be semi-solid in warm weather, but solid in cold weather, the proper line item to use will depend upon the time of the year that an Aboveground Storage Tank will be removed. Therefore, line item 276, Asphalt Emulsion Waste (semisolids), should be used during warm weather while line item 272, Residual Waste, should be used during cold weather.

LINE ITEM	DESCRIPTION OF SERVICE	ESTIMATED COST	ESTIMATED QUANTITY	UNIT OF MEASURE	Cost + %	EXTENDED PRICE
271	Municipal Waste	$1.15	4,246	Ton	10.00%	$5,371.19
272	Residual Waste (other than Line Items 275, 276, 280)	$1.10	172,807	Ton	7.00%	$203,393.84
273	Universal Waste	$80.00	1	Ton	$0.10	$88.00
274	Hazardous Waste	$80.00	1	Ton	$0.10	$88.00
275	Petroleum Contaminated Media & Debris	$1.10	371,299	Ton	7.00%	$437,018.92
276	Asphalt Emulsion Waste (semisolids)	$1.10	238	Gallon	10.00%	$287.98
277	Asbestos Containing Waste	$1.10	17,268	Cubic Yard	7.00%	$20,324.44
278	Asbestos Containing Waste	$75.00	1	Ton	10.00%	$82.50
279	PCB Waste (PCB waste greater than 2 ppm but less than 50 ppm)	$50.00	1	Ton	10.00%	$55.00
280	Contaminated Liquids (Residual)	$1.10	22,492	Gallon	7.00%	$26,473.08
281	Petroleum Contaminated Liquids (Hazardous)	$1.10	16,129	Gallon	7.00%	$18,983.83
282	Septic waste water (Septic Tank Clean-Out)	$0.035	1	Gallon	10.00%	$0.04

TOTAL COST =	**$2,479,492.88**

EXHIBIT C

Environmental Remediation Services 6100052061

Small Diverse Business Participation Submittal

SDB-2
SDB PARTICIPATION SUBMITTAL

CHECK ONE, AND ONLY ONE, BOX. FAILURE TO COMPLY WILL RESULT IN REJECTION OF YOUR BID/PROPOSAL.
Click on bold titles to navigate to that specific page.

☒ **I agree to meet the SDB participation goal in full.**

I have completed and am submitting with my bid or proposal an **SDB Utilization Schedule (SDB-3)**, which is required in order to be considered for award.

☐ **I am requesting a partial waiver of the SDB participation goal.**

After making good faith outreach efforts as more fully described in the **Guidance for Documenting Good Faith Efforts to Meet the SDB Participation Goal**, I am unable to achieve the total SDB participation goal for this solicitation and am requesting a partial waiver of the SDB participation goal.

I have completed and am submitting with my bid or proposal both of the following, which are required in order to be considered for award:

1. an **SDB Utilization Schedule (SDB-3)** for that portion of the SDB participation goal that I will meet; AND

2. a **Good Faith Efforts Waiver Request** for the portion of the SDB participation goals that I am unable to meet.

☐ **I am requesting a full waiver of the SDB participation goal**

After making good faith outreach efforts as more fully described in the **Guidance for Documenting Good Faith Efforts to Meet the SDB Participation Goal**, I am unable to achieve any part of the SDB participation goal for this solicitation and am requesting a full waiver of the SDB participation goal.

I have completed and am submitting with my bid or proposal a **Good Faith Efforts Waiver Request** for the complete SDB participation goal, which is required in order to be considered for award.

NOTE: SDB primes who are submitting as bidders or offerors must complete an **SDB Utilization Schedule (SDB-3)** identifying any self-performance towards the SDB participation goal.

SDB-3
SDB UTILIZATION SCHEDULE

List in the chart below SDBs (including where applicable a prime bidder or offeror is self-performing a portion of the work) that will be used to meet the SDB participation goal (add additional pages if necessary). Submit a **Letter of Commitment (SDB-3-1)** for each SDB subcontractor (add additional Letters of Commitment as necessary).

SDB Name **SAP Vendor Number** **(6-digit number provided by SDB)** **SDB Verification Number** **(located on DGS SDB verification)**	**Type of SDB** **(check all that apply)**	**Description of Work to be Performed** **(Statement of Work/Specification reference)**	**% Commitment** **(or % of work to be self-performed by SDB bidder/offeror)**	**Associated Dollar Value of Commitment**
Name: ABC IT Solutions **SAP Vendor Number:** 123456 **SDB Verification Number:** 123456-2016-09-SB-M	MBE	IT staffing resources	%	$
Name: American Engineers Group, LLC **SAP Vendor Number:** 380582 **SDB Verification Number:** 380582202108-SDB-M	☑ MBE ☐ WBE ☐ LGBTBE ☐ DOBE ☐ SDVBE	Engineering and Surveying	.58 %	$ 45,000
Name: Batta Environmental Associates, Inc. **SAP Vendor Number:** 196269 **SDB Verification Number:** 196269-2020-05-SB	☑ MBE ☐ WBE ☐ LGBTBE ☐ DOBE ☐ SDVBE	Industrial Hygiene Sample Analysis including Asbestos	2.92 %	$ 225,000
Name: Ecoservices, LLC **SAP Vendor Number:** 345657 **SDB Verification Number:** 345657202201-SDB-W	☐ MBE ☑ WBE ☐ LGBTBE ☐ DOBE ☐ SDVBE	Asbestos Abatement and Hazmat Disposal	3.89 %	$ 300,000
Name: Rhea Engineers & Consultants, Inc. **SAP Vendor Number:** 187080 **SDB Verification Number:** 187080202111-SDB-W	☐ MBE ☑ WBE ☐ LGBTBE ☐ DOBE ☐ SDVBE	Geophysical Surveying, Release Investigation, General Environmental Scientist Services	.78 %	$ 60,000
Attach additional sheets if necessary			Total % SDB commitment: 8.17	Total $ amount: $ 630,000

SDB-3
SDB UTILIZATION SCHEDULE

List in the chart below SDBs (including where applicable a prime bidder or offeror is self-performing a portion of the work) that will be used to meet the SDB participation goal (add additional pages if necessary). Submit a **Letter of Commitment (SDB-3-1)** for each SDB subcontractor (add additional Letters of Commitment as necessary).

SDB Name **SAP Vendor Number** **(6-digit number provided by SDB)** **SDB Verification Number** **(located on DGS SDB verification)**	**Type of SDB** **(check all that apply)**	**Description of Work to be Performed** **(Statement of Work/Specification reference)**	**% Commitment** **(or % of work to be self-performed by SDB bidder/offeror)**	**Associated Dollar Value of Commitment**
Name: ABC IT Solutions **SAP Vendor Number:** 123456 **SDB Verification Number:** 123456-2016-09-SB-M	MBE	IT staffing resources	%	$
Name: SciTek Consultants, Inc. **SAP Vendor Number:** 156093 **SDB Verification Number:** 156093202008-SB-M	☑ MBE ☐ WBE ☐ LGBTBE ☐ DOBE ☐ SDVBE	Asbestos and Lead Based Paint Inspections, General Environmental Scientist Services	.78 %	$ 60,000
Name: Supreme Safety **SAP Vendor Number:** 319409 **SDB Verification Number:** 319409-2021-11-SB	☐ MBE ☑ WBE ☐ LGBTBE ☐ DOBE ☐ SDVBE	Safety Supplies and Personal Protective Equipment	.05 %	$ 3,750
Name: **SAP Vendor Number:** **SDB Verification Number:**	☐ MBE ☐ WBE ☐ LGBTBE ☐ DOBE ☐ SDVBE		%	
Name: **SAP Vendor Number:** **SDB Verification Number:**	☐ MBE ☐ WBE ☐ LGBTBE ☐ DOBE ☐ SDVBE		%	
Attach additional sheets if necessary			Total % SDB commitment: 0.83	Total $ amount: $ 63,750

Total % SDB Commitment from Page 1 & 2: 9%

Total $ amount from Page 1 & 2: $693,750

SDB-3-1
LETTER OF COMMITMENT

This Letter of Commitment serves as confirmation of the commitment by the prime Bidder or Offeror to utilize the Small Diverse Business (SDB) on the below-referenced Solicitation/Project.

Solicitation Number: 6100052061

Solicitation Name: Environmental Remediation Services

	Bidder/Offeror Information	SDB Information
Name	Skelly and Loy, Inc., A Terracon Company	American Engineers Group, LLC
Address	449 Eisenhower Blvd., Suite 300, Harrisburg, PA 17111	441 Friendship Road, Harrisburg, PA 17111
Point of Contact	Robert Rowley, CIH, CSP	Brent Basom, PE
Telephone number	(717) 510-7886	(717) 920-7040
Email address	rrowley@skellyloy.com	bbasom@aegroup-llc.com

Services/Supplies and Time Frame. If Bidder/Offeror is the successful vendor, the SDB shall perform or provide the following services or supplies during the initial term of the prime contract and during any extensions, options or renewal periods of the prime contract exercised by the Commonwealth, as more specifically set forth below:

Services or supplies the SDB will provide: Engineering and surveying

Specific Time Frame the SDB will provide the services or supplies: 07-01-2022 through 06-30-2025

Percentage Commitment. These services or supplies represent 0.58 % of the total cost of the Bidder/Offeror's cost submittal for the initial term of the contract. Depending on actual contract usage or volume, it is expected the SDB will receive $ 45,000 during the initial contract term.

SDB verified. By signing below, the SDB represents that it meets the SDB requirements set forth in the Solicitation and all required documentation has been provided to the Bidder/Offeror for its SDB submission.

Sincerely,

Robert Rowley, CIH, CSP
Printed name

Signature
Bidder/Offeror Point of Contact Name

Acknowledged

Brent J. Basom, P.E., Executive Vice President
Printed name

Signature
SDB Point of Contact Name

** For purposes of monitoring compliance with SDB and VBE commitments, the work performed by a firm that is both an SDB and a VBE will be counted by BDISBO towards fulfilling both the SDB and VBE commitments unless otherwise agreed to by the parties in writing and approved by BDISBO and the Issuing Office.*

SDB-3-1
LETTER OF COMMITMENT

This Letter of Commitment serves as confirmation of the commitment by the prime Bidder or Offeror to utilize the Small Diverse Business (SDB) on the below-referenced Solicitation/Project.

Solicitation Number: 6100052061

Solicitation Name: Environmental Remediation Services

	Bidder/Offeror Information	SDB Information
Name	Skelly and Loy, Inc., A Terracon Company	Batta Environmental Associates, Inc.
Address	449 Eisenhower Blvd., Suite 300, Harrisburg, PA 17111	6 Garfield Way, Newark, DE 19713
Point of Contact	Robert Rowley, CIH, CSP	Neeraj Batta, P.E.
Telephone number	(717) 510-7886	(302) 737-3376
Email address	rrowley@skellyloy.com	Neeraj@battaenv.com

Services/Supplies and Time Frame. If Bidder/Offeror is the successful vendor, the SDB shall perform or provide the following services or supplies during the initial term of the prime contract and during any extensions, options or renewal periods of the prime contract exercised by the Commonwealth, as more specifically set forth below:

Services or supplies the SDB will provide: Industrial hygiene sample analysis including asbestos

Specific Time Frame the SDB will provide the services or supplies: 07-01-2022 through 06-30-2025

Percentage Commitment. These services or supplies represent 2.92 % of the total cost of the Bidder/Offeror's cost submittal for the initial term of the contract. Depending on actual contract usage or volume, it is expected the SDB will receive $225,000 during the initial contract term.

SDB verified. By signing below, the SDB represents that it meets the SDB requirements set forth in the Solicitation and all required documentation has been provided to the Bidder/Offeror for its SDB submission.

Sincerely,

Robert Rowley, CIH, CSP
Printed name

Signature
Bidder/Offeror Point of Contact Name

Acknowledged

Neeraj Batta, Senior VP
Printed name

Signature
SDB Point of Contact Name

** For purposes of monitoring compliance with SDB and VBE commitments, the work performed by a firm that is both an SDB and a VBE will be counted by BDISBO towards fulfilling both the SDB and VBE commitments unless otherwise agreed to by the parties in writing and approved by BDISBO and the Issuing Office.*

SDB-3-1
LETTER OF COMMITMENT

This Letter of Commitment serves as confirmation of the commitment by the prime Bidder or Offeror to utilize the Small Diverse Business (SDB) on the below-referenced Solicitation/Project.

Solicitation Number: 6100052061

Solicitation Name: Environmental Remediation Services

	Bidder/Offeror Information	SDB Information
Name	Skelly and Loy, Inc., A Terracon Company	Ecoservices, LLC
Address	449 Eisenhower Blvd., Suite 300, Harrisburg, PA 17111	303 B National Road, Exton, PA 19341
Point of Contact	Robert Rowley, CIH, CSP	Linda DeNenno
Telephone number	(717) 510-7886	(484) 883-8840
Email address	rrowley@skellyloy.com	ldenenno@eco-pa.com

Services/Supplies and Time Frame. If Bidder/Offeror is the successful vendor, the SDB shall perform or provide the following services or supplies during the initial term of the prime contract and during any extensions, options or renewal periods of the prime contract exercised by the Commonwealth, as more specifically set forth below:

Services or supplies the SDB will provide: Asbestos abatement and hazmat disposal

Specific Time Frame the SDB will provide the services or supplies: 07-01-2022 through 06-30-2025

Percentage Commitment. These services or supplies represent 3.89 % of the total cost of the Bidder/Offeror's cost submittal for the initial term of the contract. Depending on actual contract usage or volume, it is expected the SDB will receive $ 300,000 during the initial contract term.

SDB verified. By signing below, the SDB represents that it meets the SDB requirements set forth in the Solicitation and all required documentation has been provided to the Bidder/Offeror for its SDB submission.

Sincerely,

Robert Rowley, CIH, CSP
Printed name

Signature
Bidder/Offeror Point of Contact Name

Acknowledged

Linda P DeNenno
Printed name

Linda C. DeNenno
Signature
SDB Point of Contact Name

** For purposes of monitoring compliance with SDB and VBE commitments, the work performed by a firm that is both an SDB and a VBE will be counted by BDISBO towards fulfilling both the SDB and VBE commitments unless otherwise agreed to by the parties in writing and approved by BDISBO and the Issuing Office.*

SDB-3-1
LETTER OF COMMITMENT

This Letter of Commitment serves as confirmation of the commitment by the prime Bidder or Offeror to utilize the Small Diverse Business (SDB) on the below-referenced Solicitation/Project.

Solicitation Number: 6100052061

Solicitation Name: Environmental Remediation Services

	Bidder/Offeror Information	SDB Information
Name	Skelly and Loy, Inc., A Terracon Company	Rhea Engineers & Consultants, Inc.
Address	449 Eisenhower Blvd., Suite 300, Harrisburg, PA 17111	333 Rouser Road, Suite 301, Moon Twp., PA 15108
Point of Contact	Robert Rowley, CIH, CSP	Marcella Johnson, PE
Telephone number	(717) 510-7886	(724) 443-4111
Email address	rrowley@skellyloy.com	marcy.johnson@rhea.us

Services/Supplies and Time Frame. If Bidder/Offeror is the successful vendor, the SDB shall perform or provide the following services or supplies during the initial term of the prime contract and during any extensions, options or renewal periods of the prime contract exercised by the Commonwealth, as more specifically set forth below:

Services or supplies the SDB will provide: Geophysical Surveying, Release Investigation, General Environmental Scientist Services

Specific Time Frame the SDB will provide the services or supplies: 07-01-2022 through 06-30-2025

Percentage Commitment. These services or supplies represent 0.78 % of the total cost of the Bidder/Offeror's cost submittal for the initial term of the contract. Depending on actual contract usage or volume, it is expected the SDB will receive $60,000 during the initial contract term.

SDB verified. By signing below, the SDB represents that it meets the SDB requirements set forth in the Solicitation and all required documentation has been provided to the Bidder/Offeror for its SDB submission.

Sincerely,

Robert Rowley, CIH, CSP
Printed name

Signature
Bidder/Offeror Point of Contact Name

Acknowledged

Marcella G Johnson, PE
Printed name

Signature
SDB Point of Contact Name

** For purposes of monitoring compliance with SDB and VBE commitments, the work performed by a firm that is both an SDB and a VBE will be counted by BDISBO towards fulfilling both the SDB and VBE commitments unless otherwise agreed to by the parties in writing and approved by BDISBO and the Issuing Office.*

SDB-3-1
LETTER OF COMMITMENT

This Letter of Commitment serves as confirmation of the commitment by the prime Bidder or Offeror to utilize the Small Diverse Business (SDB) on the below-referenced Solicitation/Project.

Solicitation Number: 6100052061

Solicitation Name: Environmental Remediation Services

	Bidder/Offeror Information	SDB Information
Name	Skelly and Loy, Inc., A Terracon Company	SciTek Consultants, Inc.
Address	449 Eisenhower Blvd., Suite 300, Harrisburg, PA 17111	655 Rodi Road, Suite 303, Pittsburgh, PA 15235
Point of Contact	Robert Rowley, CIH, CSP	Charles Toran
Telephone number	(717) 510-7886	(412) 371-4460
Email address	rrowley@skellyloy.com	ctoran@scitekanswers.com

Services/Supplies and Time Frame. If Bidder/Offeror is the successful vendor, the SDB shall perform or provide the following services or supplies during the initial term of the prime contract and during any extensions, options or renewal periods of the prime contract exercised by the Commonwealth, as more specifically set forth below:

Services or supplies the SDB will provide: Asbestos and Lead Based Paint Inspections, General Environmental Scientist Services

Specific Time Frame the SDB will provide the services or supplies: 07-01-2022 through 06-30-2025

Percentage Commitment. These services or supplies represent 0.78 % of the total cost of the Bidder/Offeror's cost submittal for the initial term of the contract. Depending on actual contract usage or volume, it is expected the SDB will receive $60,000 during the initial contract term.

SDB verified. By signing below, the SDB represents that it meets the SDB requirements set forth in the Solicitation and all required documentation has been provided to the Bidder/Offeror for its SDB submission.

Sincerely,

Robert Rowley, CIH, CSP
Printed name

Signature
Bidder/Offeror Point of Contact Name

Acknowledged

Charles R. Toran, Jr.
Printed name

Signature
SDB Point of Contact Name

** For purposes of monitoring compliance with SDB and VBE commitments, the work performed by a firm that is both an SDB and a VBE will be counted by BDISBO towards fulfilling both the SDB and VBE commitments unless otherwise agreed to by the parties in writing and approved by BDISBO and the Issuing Office.*

SDB-3-1
LETTER OF COMMITMENT

This Letter of Commitment serves as confirmation of the commitment by the prime Bidder or Offeror to utilize the Small Diverse Business (SDB) on the below-referenced Solicitation/Project.

Solicitation Number: 6100052061

Solicitation Name: Environmental Remediation Services

	Bidder/Offeror Information	SDB Information
Name	Skelly and Loy, Inc., A Terracon Company	Supreme Safety
Address	449 Eisenhower Blvd., Suite 300, Harrisburg, PA 17111	21 Richard Road, Warminster, PA 18974
Point of Contact	Robert Rowley, CIH, CSP	Amy Fiscus
Telephone number	(717) 510-7886	(215) 259-1400
Email address	rrowley@skellyloy.com	amy@supremesafetyinc.com

Services/Supplies and Time Frame. If Bidder/Offeror is the successful vendor, the SDB shall perform or provide the following services or supplies during the initial term of the prime contract and during any extensions, options or renewal periods of the prime contract exercised by the Commonwealth, as more specifically set forth below:

Services or supplies the SDB will provide: Safety Supplies and Personal Protective Equipment

Specific Time Frame the SDB will provide the services or supplies: 07-01-2022 through 06-30-2025

Percentage Commitment. These services or supplies represent 0.05 % of the total cost of the Bidder/Offeror's cost submittal for the initial term of the contract. Depending on actual contract usage or volume, it is expected the SDB will receive $3,750 during the initial contract term.

SDB verified. By signing below, the SDB represents that it meets the SDB requirements set forth in the Solicitation and all required documentation has been provided to the Bidder/Offeror for its SDB submission.

Sincerely,

Robert Rowley, CIH, CSP
Printed name

Signature
Bidder/Offeror Point of Contact Name

Acknowledged

Amy Fiscus
Printed name

Signature
SDB Point of Contact Name

** For purposes of monitoring compliance with SDB and VBE commitments, the work performed by a firm that is both an SDB and a VBE will be counted by BDISBO towards fulfilling both the SDB and VBE commitments unless otherwise agreed to by the parties in writing and approved by BDISBO and the Issuing Office.*

EXHIBIT D

Environmental Remediation Services 6100052061

Veteran Business Enterprise Participation Submittal,

VBE-2
VBE PARTICIPATION SUBMITTAL

CHECK ONE, AND ONLY ONE, BOX. FAILURE TO SUBMIT A COMPLETED VBE PARTICIPATION SUBMITTAL WILL RESULT IN REJECTION OF YOUR BID/PROPOSAL.

☒ **I agree to meet the VBE participation goal in full.**

I have completed and am submitting with my bid or proposal a **VBE Listing**, which is required in order to be considered for award.

☐ **I am requesting a partial waiver of the VBE participation goal.**

After making good faith outreach efforts as more fully described in the **Guidance for Documenting Good Faith Efforts to Meet the VBE Participation Goal**, I am unable to achieve the total VBE participation goal for this solicitation and am requesting a partial waiver of the VBE participation goal.

I have completed and am submitting with my bid or proposal both of the following, which are required in order to be considered for award:

1. a **VBE Listing** for that portion of the VBE participation goal for which I intend to meet; AND

2. a **Good Faith Efforts Waiver Request** for any portion of the VBE participation goals that I do not intend to meet.

☐ **I am requesting a full waiver of the VBE participation goal**

After making good faith outreach efforts as more fully described in the **Guidance for Documenting Good Faith Efforts to Meet the VBE Participation Goal**, I am unable to achieve any part of the VBE participation goal for this solicitation and am requesting a full waiver of the VBE participation goal.

I have completed and am submitting with my bid or proposal a **Good Faith Efforts Waiver Request** for the complete VBE participation goal, which is required in order to be considered for award.

NOTE: VBE primes who are submitting as bidders or offerors must complete a **VBE Listing** identifying any self-performance towards the VBE participation goal.

VBE-3
VBE LISTING

If the Prime Bidder/Offeror is a DGS-verified VBE, complete the following:

SAP Vendor Number (6-digit number): _____

VBE Verification Number (located on DGS SDB verification certificate): _____

Type of VBE: ☐ Veteran-Owned Small Business Enterprise

☐ Service-Disabled Veteran-Owned Small Business Enterprise

Description of Work to be Performed (Statement of Work/Specification reference): _____

% of work to be self-performed by VBE bidder/offeror: %_____

Associated dollar value of work to be self-performed by VBE bidder/offeror: $_____

VBE participation goal to be met through the use of VBE subcontractors, suppliers, or manufacturers: Bidders/offerors are not required to identify the specific VBE subcontractors, suppliers, or manufacturers within this VBE Listing. However, the selected bidder/offeror must submit Utilization Reports identifying the VBE subcontractors, suppliers, or manufacturers used to meet the portion of the VBE participation goal listed below. To receive credit toward meeting the VBE participation goal, the VBE subcontractor, manufacturer, or supplier must be a DGS-verified VBE as of the date the work to be performed by the VBE has commenced.

% of work to be performed by VBE subcontractors, suppliers, or manufacturers: %3_____

Associated dollar value of work to be performed by VBE subcontractors, suppliers, or manufacturers: $232,800_____

VBE-3
VBE UTILIZATION SCHEDULE

List in the chart below VBEs (including where applicable a prime bidder or offeror is self-performing a portion of the work) that will be used to meet the VBE participation goal (add additional pages if necessary). Submit a **Letter of Commitment (VBE-3-1)** for each VBE subcontractor (add additional Letters of Commitment as necessary).

VBE Name **SAP Vendor Number** **(6-digit number provided by VBE)** **VBE Verification Number** **(located on DGS VBE verification)**	**Type of VBE** **(check all that apply)**	**Description of Work to be Performed** **(Statement of Work/Specification reference)**	**% Commitment** **(or % of work to be self-performed by VBE bidder/offeror)**	**Associated Dollar Value of Commitment**
Name: ABC IT Solutions **SAP Vendor Number:** 123456 **VBE Verification Number:** 123456-2016-09-SB-M	MBE	IT staffing resources	%	$
Name: Gundy Excavating and Paving, Inc. **SAP Vendor Number:** 404567 **VBE Verification Number:** 404567202104VBEV	☑ VBE ☐ SDVBE	Earthmoving and Excavation	2.9 %	$ 225,000
Name: Urban Terrain, LLC **SAP Vendor Number:** 534193 **VBE Verification Number:** 534193202005SBWV	☑ VBE ☐ SDVBE	Site Surveying	.1 %	$ 7,800
Name: **SAP Vendor Number:** **VBE Verification Number:**	☐ VBE ☐ SDVBE		%	
Name: **SAP Vendor Number:** **VBE Verification Number:**	☐ VBE ☐ SDVBE		%	
Attach additional sheets if necessary			Total % VBE commitment: 3	Total $ amount: $ 232,800

VBE-3-1
LETTER OF COMMITMENT

This Letter of Commitment serves as confirmation of the commitment by the prime Bidder or Offeror to utilize the Small Diverse Business (VBE) on the below-referenced Solicitation/Project.

Solicitation Number: 6100052061

Solicitation Name: Environmental Remediation Services

	Bidder/Offeror Information	VBE Information
Name	Skelly and Loy, Inc., A Terracon Company	Gundy Excavating and Paving, Inc.
Address	449 Eisenhower Blvd., Suite 300, Harrisburg, PA 17111	681 Knight Rd, Harrisburg, PA 17111
Point of Contact	Robert Rowley, CIH, CSP,	Steve Gundy
Telephone number	(717) 510-7886	(717) 469-0449
Email address	rrowley@skellyloy.com	gundyexca@yahoo.com

Services/Supplies and Time Frame. If Bidder/Offeror is the successful vendor, the VBE shall perform or provide the following services or supplies during the initial term of the prime contract and during any extensions, options or renewal periods of the prime contract exercised by the Commonwealth, as more specifically set forth below:

Services or supplies the VBE will provide: Earthmoving and excavation

Specific Time Frame the VBE will provide the services or supplies: 07-01-2022 through 06-30-2025

Percentage Commitment. These services or supplies represent 2.9 % of the total cost of the Bidder/Offeror's cost submittal for the initial term of the contract. Depending on actual contract usage or volume, it is expected the VBE will receive $ 225,000 during the initial contract term.

VBE verified. By signing below, the VBE represents that it meets the VBE requirements set forth in the Solicitation and all required documentation has been provided to the Bidder/Offeror for its VBE submission.

Sincerely,

Robert Rowley, CIH, CSP
Printed name

Signature
Bidder/Offeror Point of Contact Name

Acknowledged

Steven E. Gundy, CEO
Printed name

Signature
VBE Point of Contact Name

** For purposes of monitoring compliance with SDB and VBE commitments, the work performed by a firm that is both an SDB and a VBE will be counted by BDISBO towards fulfilling both the SDB and VBE commitments unless otherwise agreed to by the parties in writing and approved by BDISBO and the Issuing Office.*

VBE-3-1
LETTER OF COMMITMENT

This Letter of Commitment serves as confirmation of the commitment by the prime Bidder or Offeror to utilize the Small Diverse Business (VBE) on the below-referenced Solicitation/Project.

Solicitation Number: 6100052061

Solicitation Name: Environmental Remediation Services

	Bidder/Offeror Information	VBE Information
Name	Skelly and Loy, Inc., A Terracon Company	Urban Terrain, LLC
Address	449 Eisenhower Blvd., Suite 300, Harrisburg, PA 17111	1616 McClure Road, Suite A, Monroeville, PA 15146
Point of Contact	Robert Rowley, CIH, CSP	Amy Hopkins, PLS
Telephone number	7175107886	4127444520
Email address	rrowley@skellyloy.com	ahopkins@urbanterrain.net

Services/Supplies and Time Frame. If Bidder/Offeror is the successful vendor, the VBE shall perform or provide the following services or supplies during the initial term of the prime contract and during any extensions, options or renewal periods of the prime contract exercised by the Commonwealth, as more specifically set forth below:

Services or supplies the VBE will provide: Site surveying

Specific Time Frame the VBE will provide the services or supplies: 07-01-2022 through 06-30-2025

Percentage Commitment. These services or supplies represent 0.1 % of the total cost of the Bidder/Offeror's cost submittal for the initial term of the contract. Depending on actual contract usage or volume, it is expected the VBE will receive $ 7800.00 during the initial contract term.

VBE verified. By signing below, the VBE represents that it meets the VBE requirements set forth in the Solicitation and all required documentation has been provided to the Bidder/Offeror for its VBE submission.

Sincerely,

Robert Rowley, CIH, CSP
Printed name

Signature
Bidder/Offeror Point of Contact Name

Acknowledged

Amy Hopkins, PLS
Printed name

Amy Hopkins Digitally signed by Amy Hopkins Date: 2022.03.04 09:39:23 -05'00'

Signature
VBE Point of Contact Name

** For purposes of monitoring compliance with SDB and VBE commitments, the work performed by a firm that is both an SDB and a VBE will be counted by BDISBO towards fulfilling both the SDB and VBE commitments unless otherwise agreed to by the parties in writing and approved by BDISBO and the Issuing Office.*

EXHIBIT G

Environmental Remediation Services 6100052061

Questions and Answers

Q&A Board

Subject = Publication 408

Q: There are multiple references to PennDOT Publication 408 for guidance on selective placement of contaminated media. Publication 408 does provide guidance on soil placement but appears silent on contamination. Is the reference to Publication 408 solely to direct the Contractor to place media in a controlled manner suitable for structural fill?

A: Publication 408 does not directly address soil contamination, but does so indirectly by requiring compliance with all applicable laws and regulations, and by deferring to guidance found in other PennDOT publications. PennDOT guidance concerning the management of contaminated soil is found in PennDOT Publications 281 and 611.

Bid Items 203-209

Q: Regarding Bid Items 203-209, many of these pieces of equipment are available with tires (i.e., truck-mounted) and can be driven to and from the site themselves, and operated on the site themselves. Many of these pieces of equipment are however also available with tracks (i.e., track-mounted) and can be driven and operated on the site themselves but need to be hauled to the site on a trailer pulled by an additional piece of equipment. So the cost to transport the equipment to and from the site obviously does differ depending on if it can be driven to the site or needs to be hauled via trailer to the site. Additionally, the rental cost for track-mounted rigs typically is greater than the rental cost for their truck-mounted equivalent. So for Bid Items 203-209, is a contractor to offer Bid Item costs truck-mounted or track-mounted drilling equipment?

A: Line Items 203-207 have been revised for "Truck mounted Rigs." Line Items 208,209, 255-257 have been revised for "Track Mounted Rigs;" the oringial line items for 255-257 have been removed and replaced with new line items. See new Cost Submittal.

RFP Amendment

Q: Some of the Q&A responses refer to an amendment. Will amendment RFP documents be posted? If so, when can we expect the amended documents?

A: The RFP will be amended to reflect the changes documented and explained in the Q & A. Prospective Offerors should receive an email once the amendment is complete.

PLM Analysis

Q: Is it the intent that the unit rate for PLM analysis be specifically for analysis of asbestos fibers in soil, or is PLM analysis for bulk samples of building materials, or is it intended for both?

A: PLM is nearly always performed on building materials rather than soil, both for PennDOT projects and in industry. For line items 102-104, the word “soil” will be replaced with “solids” to cover both soil and building materials. PLM analysis itself will be the same procedure for both soil and building materials, though there might need to be an extra prep step for certain types of building materials. [Specifically, samples with opaque binders, for which samples are ashed per “NOB” standard methods.]

Define Travel - Appendix A

Q: Please define “travel” as stated in Row 11 of Appendix A and which line item bids should exclude travel time/costs? Line 11 Excerpt: “There are five (5) Cost No Mark-Up Items covered under this Contract (Travel, Subsistence, Lodging, Mileage and Miscellaneous Services/Equipment/Tools). Supplier will be reimbursed as per Commonwealth Management Directive 230.10, with the exception of Miscellaneous Services/Equipment/Tools, which shall be invoiced at cost (no mark-up). These items are not included in Appendix A - Cost Submittal.”

A: Please see Commonwealth Management Directive 230.10.

Appendix A

Q: Is operator to be included in the Appendix A general equipment line items which do not specify that it is included?

A: For the General Equipment section, where there is no reference to an operator or labor none is to be included.

Bid Items 259-262

Q: Please clarify the site conditions on which the costs for performing asbestos abatement Bid Items 259-262 will be based (i.e., open floor plan with no obstructions or site preparation needed [clearing and disposal of furniture, carpet, cabinets, appliances, trash, removal and disposal of non-asbestos building materials, etc.). If obstructions and interferences preventing access to the site and to the ACMs are encountered at a site where asbestos abatement is needed, how will be the costs for site preparation work be billed?

A: Costs are all inclusive and bid item price includes all work needed to be done. However, line Items 259-262 are assumed to be accessible based on containment. Accessibility costs would be a no mark-up item for the supplier.

Bid Item 210

Q: Regarding Bid Item 210, please clarify the site conditions on which the costs for performing the GPR & Magnetometer Survey will be based (i.e., open site with no obstructions or potential interferences). If potential interferences and/or obstructions are encountered at a site where a GPR & Magnetometer Survey is needed, how will be the site preparation work be billed?

A: Line Item 210 is the GPR & Magnetometer Survey all equipment, materials, labor and documentation for a 40,000 s.f. area. Site preparation such as clearing and grubbing necessary for the equipment in line 210 to operate effectively would use the associated line items where applicable as approved by PennDOT prior to beginning work.

Laboratory Analysis Bid Item

Q: Regarding the description of Laboratory Analysis Bid Item services, there is considerable presentation of what is and is not included in each Bid Item cost, however nowhere is the cost of transporting the samples to the lab discussed. Is the cost of transporting any samples to a laboratory reimbursable to the Contractor outside of the Bid Item cost?

A: The transportation of samples for laboratory analysis is billable as labor.

Health and Safety Equipment

Q: Regarding the description of HEALTH AND SAFETY EQUIPMENT, Appendix A Cost Submittal states “The Supplier will not be reimbursed for any personal protective clothing and equipment required for performing work under this Contract.”, yet right below this statement there are two Bid Items for OSHA Level B and C PPE (Bid Items 183 and 184 respectively). Please clarify this discrepancy.

A: Bid Items 183 and 184 are for "Additional Labor Premium for "Level B work" and "Level C work," and supplier bid prices should take into account "all necessary PPE." Per the Health and Safety Equipment section of the Cost Submittal, "the Supplier will not be reimbursed for any personal protective clothing and equipment required for performing work under the Contract."

Bid items 199 through 202

Q: Regarding Bid items 199 through 202 (Generators of varying electrical output) when would one of these four bid items be used instead of Bid Item 255-Temporary Utilities (electric, water, gas), and when would Bid Item 255 be used instead of one of the Bid Item Nos. 199-202?

A: Line 255 will be removed from Appendix A Cost Submittal. Please see amended RFP.

Prevailing Wage Determination

Q: Will DGS or PennDOT supply the appropriate prevailing wage determination to the Supplier at the time the work request is made?

A: See Paragraph 18 Prime Contractor Responsibilities, Subparagraph C(10), of the Description regarding the Prevailing Wage Determination.

Explanation of labor rates

Q: Regarding the explanation of labor rates at the beginning of Appendix A Cost Submittal, it states “Because Prevailing Wage rates and applicability cannot be determined at the time of submission, Offerors should not included Prevailing Wage rates as par of Appendix A-Cost Submittal”. It further states “Recognizing there may be an increase to the awarded Supplier if Prevailing Wage rates do apply, these additional costs should be included in the Technical & Cost Proposal and those additional costs will be reflected on any resulting Purchase orders as Non-Offered Item(s).” Would this also be considered, proposed, and invoiced as one of the 5 Cost No Mark-Up items covered under this Contract (“Miscellaneous Services/Equipment/Tools)?

A: Yes, this would be considered one of the five (5) Cost No Mark-Up items.

In I-2 Qualifications, A Company Overview, 3 Certs

Q: In I-2 Qualifications, A Company Overview, 3 Certifications, c, It certainly appears that asbestos facility inspections will be required under this contract, but there is not a requirement to include asbestos inspector certifications in bidders submissions. We assume this is an oversight and that we should include such certifications with our submission. Please confirm.

A: Asbestos inspector certifications are required in the bidders submissions. Please see RFP Questions, Group 1.1: Technical Questions, in JAGGER.

In I-2 Qualifications, A Company Overview, 3 Certs

Q: In I-2 Qualifications, A Company Overview, 3 Certifications, c, it states that certifications for Asbestos Project Designers and Management Planners (in addition to Workers, Abatement Companies, and Supervisors) must be included with our submittal. We therefore assume that Project Designer and Management Planner work will be required under this contract. Under what labor classifications should Asbestos Project Designer and Management Planner work be proposed and/or billed?

A: Asbestos Project Designers and Management Planner work may occur under this contract. Per the Asbestos Abatement Services section of the Cost Submittal, "asbestos abatement services shall include all necessary equipment, labor, materials, incidentals, notifications, documentation, and certification fees."

Cost Item #256

Q: Could PennDOT provide any further details regarding what might be anticipated for Laboratory Analysis, not listed. Pricing of this item is almost impossible without further guidance.

A: Line Item 256 will be removed from Appendix A Cost Submittal. Please see amended RFP.

Appendix A

Q: What validity period should the Offer assume for the unit prices provided in the Cost Submittal / Appendix A?

A: See paragraph 22 of the Description. Additionally, please see the following sections of the terms and conditions: V.1 Contract-001.1a Contract Terms and Conditions, V.2 Contract-002.1d Term of Contract - Contract, V.3 Contract-002.2d Renewal of Contract Term; Adjusted Prices - Fixed Percentage, and V.4 Contract-002.3 Extension of Contract Term.

Asbestos Abatement Services as described on Append

Q: Regarding ASBSTOS ABATEMENT SERVICES as described on Appendix A Cost Submittal, it states that “The cost to have inspectors receive and maintain any contractor safety and/or training necessary to access rail lines, etc. shall be incidental to the Contract and borne by the Supplier at no cost to PennDOT”. Does this statement mean that an asbestos facility inspector must also be present at all asbestos abatement project sites? Or did DGS erroneously use “inspector” instead of “supervisor” in this description?

A: Yes, the reference to "inspector" in the Asbestos Facility Inspection AND Asbestos Facility Inspection sections of the Cost Submittal should be "supervisors."

Description of ASBESTOS INSPECTION SERVICES

Q: Regarding the description of ASBESTOS INSPECTION SERVICES in Appendix A Cost Submittal where mobilization charges are discussed, “mobilization” charges are described as the inspectors’ hourly rate times the travel time to the site. Does this mean that the Contractor cannot charge for the inspectors’ labor incurred during the return (“demobilization”) from the site back to their office?

A: The Contractor cannot charge for the inspectors’ labor incurred during the return (“demobilization”) from the site back to their office

Bid items 203-211, and 225-247

Q: Please confirm that the “day” costs for such equipment found under bid items 203-211, and 225-247 does NOT include operator labor.

A: The language of Bid Items 203 - 210 specifically include "labor." Bid Items 211, 225 - 247 do not include operator labor.

Bid Items 195, 196, 199-210, 217-247

Q: Assuming the cost for transporting a Frac Tank to and from the site is additionally reimbursable above and beyond the daily cost to rent the tank once onsite, wouldn’t the same hold true for delivery of equipment under Bid Items 195, 196, 199-210, 217-247 to and from the site?

A: Unless bid items specifically state that transportation is included, bid items do not include transportation. Where the equipment in line Item 195, 196, 199-210, 217-247 has a DOT registration for on the road; delivery charges will NOT apply.

Bid Item 248

Q: For Bid Item 248, please clarify that the transportation of the Frac Tank to and from the site is additionally reimbursable above and beyond the daily cost to rent the tank once onsite.

A: Bid Item 248 language states "treatment, testing, process and transportation of tank to and from site are non-invoiced items and are pass through at cost." The unit of measure is per day.

Bid items 240-243

Q: Regarding Bid items 240-243, can DGS please define what a “Skip” loader is?

A: Line Items 240-243, Skip Loader/ Landscape Tractor: is a small front end loader used to assist with landscaping, utility, and loading applications. It has a front-mounted bucket controlled by arms from behind the loader and typically a rear-mounted box scraper. Rear attachments such as snow blowers, mowers, brooms, and forks can be used.

Description of ASBESTOS INSPECTION SERVICES

Q: Regarding the description of ASBESTOS INSPECTION SERVICES in Appendix A Cost Submittal where mobilization charges are discussed, Bid Item 210 (Soil Core Drilling) is referenced as the hourly rate for Asbestos Facility Inspection labor. Shouldn’t this reference Bid Item 258 instead?

A: Yes, the reference in the description of the Asbestos Inspection Services section of the Cost Submittal should be "line item 258."

Regarding Bid Item 257-Traffic Control

Q: PennDOT Publications pertaining to traffic control have many different traffic control patterns they recognize which vary greatly in the amount of cones, signage, energy attenuating (“crash”) trucks, and manpower needed to set up, maintain, and take down and thus vary greatly in the amount of money this will cost. Additionally, some traffic control plans require development by a professional engineer, submission of a sealed plan to PennDOT for review and approval, and payment of application fees. Please clarify the type(s) of traffic plan(s) that DGS expects contractors to provide under Bid Item #257 “Traffic Control”.

A: PennDOT Publication 213, Temporary Traffic Control Guidelines, provides the requested information, and is available at: https://www.dot.state.pa.us/public/PubsForms/Publications/PUB%20213.pdf.

TECHNICAL SUBMITTAL section I-7 Monthly Status Rep

Q: Regarding TECHNICAL SUBMITTAL section I-7 Monthly Status Reports, please confirm that the labor costs incurred by the supplier to prepare and submit the Monthly Status Reports is billable under the Contract.

A: Monthly Status Reports are not billable under the contract. Supplier bid prices should take into account any reporting requirements in their bid.

Section I-6 A 1 - AST removal

Q: Section I-6 A 1 - AST removal, the definition is listed as “Removal of tank and appurtenances (i.e. pedestal, containment structure and footer, etc.)”. Can DGS clarify what all might be included in the etc. portion, as there are card reading systems, air compressors, fire suppression, lighting and numerous other items that could be considered as an appurtenance.

A: Every AST scenario is unique. The awarded supplier shall assume an appurtenance could be any or all of the items cited in the question.

Geophysical Survey

Q: Regarding the Geophysical Survey work to be completed under Bid Item 210, how is the supplier to be reimbursed for the extra time, equipment, and costs to clear a site of vegetation, discarded waste, and any other objects found on the site’s surface preventing performance of the geophysical survey. Also, can DGS define what constitutes “documentation” in this regard?

A: Bid Item 210 language states "to include all equipment materials labor and documentation." Costs are all inclusive and bid item price includes all work needed to be done.

Invoicing

Q: The RFP presents response times for both normal response and rapid response projects, but the RFP does not seem to include any direction or information on how invoicing under these two different types of work order responses differ. Is invoicing under each scenario identical to the other? If not, how do they differ? What is the process and realistic time frame for obtaining payment under each scenario?

A: See Section I-6, paragraph 11 of the Technical Submittal regarding both types of responses. Time frame of payment is dependent upon verification of the COSF and the support documentation submitted.

Bid item 254

Q: Regarding bid item 254 AST/UST Pipe Cleaning (petroleum related) by the linear foot, what sort of clearance criteria must be met for a pipe to be considered “cleaned”?

A: Pipes are normally disposed of as scrap metal. Accordingly, gross contamination such as sludge and actively dripping liquids should be removed. A thin film of petroleum is acceptable.

Performance of site work

Q: performance of site work requires that manned security (night times and weekends to prevent vandalism and stealing of equipment and materials), exclusion/protective fencing, cautionary signage, and other safety-related components be implemented, will these costs be able to be billed as a non-bid cost or would these costs be included in the costs of one of the bid item services being provided?

A: This cost would be a No Mark-up Item.

Rapid Response requests

Q: Rapid Response requests must be completed within 45 days, will the normal response follow-up work needed require that a formal proposal be developed and submitted, and normal response purchase order in place prior to the rapid response PO expiring?

A: Yes, the normal response follow-up needed will require that a formal proposal be developed and submitted and the normal response PO in place prior to the rapid response PO expiring.

Bid Item 255 Temporary Utilities

Q: Regarding Bid Item 255 Temporary Utilities (electric, water, gas) would these temporary utilities be considered portable (electrical generators, water tanks, propane tanks) or would they include nonpermanent non-portable utilities (actual water lines ran from a local water company piping, actual electric lines hooked up to the local power grid, natural gas lines ran from gas company distribution piping?

A: Line 255 will be removed from Appendix A Cost Submittal. Please see amended RFP.

Invoice submission

Q: date of actual invoice submission to the comptroller, what is the actual average number of days it has taken to pay the supplier under the current and past remediation contracts?

A: See Section V.22 Contract-016.1 of the terms and conditions regarding payment.

TECHNICAL SUBMITTAL section I-6, A, 11, ii, f. & g

Q: Regarding TECHNICAL SUBMITTAL section I-6, A, 11, ii, f. & g. for Rapid Responses, is there a maximum number of days that PennDOT has after receipt of Confirmation Of Services Forms issued by the Supplier to PennDOT to review the COSF, and create and issue a Purchase Order to the Supplier which the Supplier needs before the Supplier can create and issue the actual invoice to the Comptroller? If yes, what are the maximum number of days? If the maximum number of days allowed by PennDOT to perform this is not met, what recourse does the Supplier have for charging interest? If there is not a maximum number of days established from date of COSF submission by the Supplier to PennDOT until receipt of PO by the Supplier, what is the average number of days that the current contract holder has been waiting for receipt of rapid response POs?

A: No. The submitted Confirmation of Services Form (COSF) does not have a defined timeline for verification and is dependent upon the support documentation submitted.

Section V.8 CONTRACT-006.1

Q: Section V.8 CONTRACT-006.1 Independent Prime Contractor (Oct 2006) of the Contract Terms and Conditions states that the Contractor will act as an independent contractor and not as an employee or agent of the Commonwealth. Therefore, how is the Supplier to go about obtaining signatures from PennDOT for such things as waste profiles, waste disposal manifests, etc. since the Contractor cannot sign such paperwork as “An agent for PennDOT”?

A: In practice the Supplier usually prepares the forms and sends them electronically for PennDOT signature, in the case of municipal and residual waste. Please be advised, however, that both PennDOT and the supplier must sign hazardous waste manifest.

Subcontractor mobilization/demobilization

Q: Are the subcontractor mobilization/demobilization costs for many of the services that a Supplier will likely subcontract such as (but not limited to) Bid Items 259-262 (asbestos abatement), 263-270, and (AST and UST tank system removals) separately reimbursable under the contract or must all mobilization/demobilization costs incurred by a subcontractor need to be accounted for within the bid item pricing offered by the Supplier? If such subcontractor mobilization/demobilization costs are separately reimbursable above and beyond the bid item rates, how are they to be billed (mark up allowable or a pass through at no markup)?

A: See Appendix D Technical Acronyms/Definitions and Appendix A Cost Submittal which identifies Cost No Mark-Up Items.

Bid Items such as Nos. 195, 196, 199-210, 217-255,

Q: Are the costs for Bid Items such as Nos. 195, 196, 199-210, 217-255, and 257 to include the costs for either the supplier or one of their subcontractors to mobilize their labor and equipment to and from the site? Or can the supplier and/or their subcontractors bill a separate mobilization/demobilization fee? If the supplier and/or subcontractor is allowed to bill a separate mobilization/demobilization fee, is there a mark up allowed (and if so, how much?) or are these costs considered pass through costs at no mark up?

A: See Appendix D Technical Acronyms/Definitions and Appendix A Cost Submittal which identifies Cost No Mark-Up Items.

Section 25-Debriefing Conference

Q: In accordance with section 25-Debriefing Conference- of the RFP Summary, “Upon notification of award, Offerors whose proposals were not selected will be given the opportunity to be debriefed. The Issuing Office will schedule the debriefing at a mutually agreeable time. The debriefing will not compare the Offeror with other Offerors, other than the position of the Offeror’s proposal in relation to all other Offeror proposals. An Offeror’s exercise of the opportunity to be debriefed does not constitute nor toll the time for filing a protest.” During the debriefing conference, will the Offeror be provided details on the rating of their own submittal?

A: Offeror will be provided high level details regarding the evaluation of its own submittal.

Section 18 Prime Contractor’s Responsibility, B. B

Q: Regarding Section 18 Prime Contractor's Responsibility, B. Bond Requirements of the RFP Summary, Performance and Payment Bonds are required for all work in excess of $100,000.00. which are to be furnished with in ten days after awarded a Purchase Order, at 100% of the purchase order amount. Are the costs incurred by the Supplier in obtaining such bonding reimbursable under the Contract and of so, how are we to propose and/or invoice for such costs?

A: Bonding and any associated costs are not billable or reimbursable.

Bid Item 210 GPR & Magnetometer Survey

Q: Regarding Bid Item 210 GPR & Magnetometer Survey", Appendix A Cost Submittal indicates we should assume a survey area of 40,000 sq ft. How do we charge for the extra cost incurred for a survey site larger than 40,000 sq ft? Would we simply propose/bill for an extra Day(s) that would be needed to survey the area in excess of 40,000 sq ft?

A: This Cost Submittal item is a basis of cost for 40,000 S.F. area survey and not a mechanism to determine invoicing.

GENERAL EQUIPMENT

Q: Most of the GENERAL EQUIPMENT Bid Items list "Day" as the UNIT OF MEASURE. For the purposes of bid item cost estimate, how many hours are included in a "Day"?

A: 8 hr. are included in a "day."

Bid Item 256-Laboratory Analysis Not List

Q: Regarding Bid Item 256-Laboratory Analysis Not Listed-There are literally hundreds if not thousands of additional analyses not listed, some with a cost to the Contractor as low as $5.00 and some with a cost to the Contractor as high as $2,000.00 or even higher. Please clarify the type(s) of analyses that DGS expects contractors to provide under Bid Item #256 "Laboratory Analysis Not Listed".

A: Lines 255, 256 & 257 will be removed from Appendix A Cost Submittal. Please see amended RFP.

Incumbent Contractor

Q: What is the name of the contractor(s) who hold the current Environmental Remediation Services Contract?

A: Skelly And Loy Inc.

Number of Rapid Response Tasks

Q: During a typical contract year, approximately how many tasks are requested as "rapid response" requests (i.e., requiring a response within a 2 hour timeframe)?

A: In recent years rapid responses have been as many as 20 incidences. In many of these cases the incumbent was instructed to mobilize the next day or later, rather than within two (2) hours

Annual Dollar Volume

Q: What has been the annual dollar volume of the current contract?

A: Annual spend is approximately $3,000,000

Rapid Response

Q: Section ii.a., P. X states”“Mobilize to the work site within two (2) hours” means the Supplier must be en route to the site with personnel, materials, and/or equipment necessary to conduct any adequate response determined by the PennDOT designated representative.” Is the expectation that any/all appropriate equipment specified in this bid must be on-site within this time frame in some/all cases?

A: Within 2 hours, or as directed by the PennDOT representative, the Supplier must mobilize any personnel, materials and/or equipment necessary to begin conducting the rapid response action. Additional personnel, materials and/or equipment that will not be needed until later can be mobilized later, as appropriate. Also, all necessary personnel, materials and/or equipment must arrive onsite in 5 hours or as directed by the PennDOT representative, not within 2 hours as mentioned in the Offerer’s question. At PennDOT’s discretion the Supplier may be directed to arrive onsite more than 5 hours later, for example at the start of the next workday.