

**Request for Bid**

**Fixed-Price Bid to Result**

**To Complete Remediation Project and Closure Activities**

**Solicitor**

**Shenango Township**

**Shenango Township Municipal Building**

**3439 Hubbard-West Middlesex Road  
West Middlesex, PA 16159-2547**

**PADEP Facility ID #: 43-04177 PAUSTIF Claim #: 2016-0008(W)**

**Date of Issuance**

**August 23, 2019**

## Table of Contents

Calendar of Events .....	1
Contact Information.....	2
Requirements.....	3
Mandatory Pre-Bid Site Meeting .....	3
Submission of Bids.....	3
Bid Requirements.....	4
Bid Review and Evaluation.....	8
General Site Background and Description.....	10
Scope of Work.....	13
Objective .....	13
Constituents of Concern.....	13
General SOW Requirements.....	13
Site-Specific Guidelines.....	15
Site-Specific Milestones .....	18
Additional Information .....	38
List of Attachments .....	39

The Pennsylvania Underground Storage Tank Indemnification Fund (PAUSTIF), on behalf of the claimant who hereafter is referred to as the Client or Solicitor, is providing this Request for Bid (RFB) to prepare and submit a bid to complete the Scope of Work (SOW) for the referenced Site. The Solicitor is the current owner and operator of the Site. PAUSTIF has determined that the claim reported by the Solicitor is eligible for coverage from the PAUSTIF subject to the applicable statutes and regulations. Reimbursement of Solicitor approved reasonable and necessary costs, not to exceed the claim aggregate limit, for the corrective action work described in this RFB will be provided by PAUSTIF. The Solicitor is responsible to pay any applicable deductible and/or proration. The deductible has been met and no proration is applicable on this claim.

Each bid response will be considered individually and consistent with the evaluation process described in the PAUSTIF Competitive Bidding Fact Sheet which can be downloaded from the PAUSTIF website <https://ustif.pa.gov>.

## Calendar of Events

Activity	Date and Time
Notification of Intent to Attend Site Visit	September 4, 2019 by 5 p.m.
Mandatory Pre-Bid Site Visit	September 6, 2019 at 10 a.m.
Deadline to Submit Questions	September 19, 2019 by 5 p.m.
Bid Due Date and Time	October 10, 2019 by 3 p.m.

## Contact Information

Technical Contact
<p>Mr. Tim Pilcher, P.E. B&amp;B Diversified Enterprises, Inc. PO Box 70 Barto, PA 19504 Phone – 570-369-5410 Fax – 610-845-0650 Email – <a href="mailto:tpilcher@bbde.com">tpilcher@bbde.com</a></p>

All questions regarding this RFB and the subject Site conditions must be directed via email to the Technical Contact identified above with the understanding that all questions and answers will be provided to all bidders. The email subject line must be “**Shenango Township Municipal Building - PAUSTIF Claim #: 2016-0008(W) - RFB QUESTION**”. Bidders must neither contact nor discuss this RFB with the Solicitor, PAUSTIF, the Pennsylvania Department of Environmental Protection (PADEP), or ICF unless approved by the Technical Contact. Bidders may discuss this RFB with subcontractors and vendors to the extent required for preparing the bid response.

## Requirements

### Mandatory Pre-Bid Site Meeting

The Solicitor, the Technical Contact, or their designee will hold a mandatory Site visit on the date and time listed in the Calendar of Events to conduct a Site tour for one (1) participant per bidding company. The Technical Contact will collect questions and respond via email. All questions and answers will be provided via email to all attendees. This meeting is mandatory for all bidders, no exceptions. This meeting will allow each bidding company to inspect the Site and evaluate Site conditions. **A notice of the bidder's intent to attend this meeting is requested to be provided to the Technical Contact via email by the date listed in the Calendar of Events with the subject "Shenango Township Municipal Building - PAUSTIF Claim #: 2016-0008(W)] – SITE MEETING ATTENDANCE NOTIFICATION".** The name and contact information of the company participant should be included in the body of the email. Notification of intent to attend is appreciated; however, it is not required. Attendance at the Pre-Bid Site Meeting is mandatory. Changes to the Site meeting date and/or time due to inclement weather conditions or other unexpected circumstances will be posted at <https://ustif.pa.gov/bids>; and, the Technical Contact may notify via email all companies that provided Site Meeting Attendance Notification.

### Submission of Bids

To be considered for selection, **one (1) hard copy of the signed bid package and one (1) electronic copy (one (1) PDF file on a compact disk (CD) included with the hard copy) must be provided directly to the PAUSTIF's third party administrator, ICF, to the attention of the Contracts Administrator.** The Contracts Administrator will be responsible for opening the bids and providing copies to the Technical Contact and the Solicitor. Bid responses will only be accepted from those companies that attended the Mandatory Pre-Bid Site Meeting. **The ground address for overnight/next-day deliveries is ICF, 4000 Vine Street, Middletown, PA 17057, Attention: Contracts Administrator. The outside of the shipping package containing the bid must be clearly marked and labeled with "Bid – Claim # 2016-0008(W)".** Please note that the use of U.S. Mail, FedEx, UPS, or other delivery method does not guarantee delivery to this address by the due date and time listed in the Calendar of Events for submission. Companies mailing bids should allow adequate delivery time to ensure timely receipt of their bid.

**The bid must be received by 3 p.m., on the due date shown in the Calendar of Events.** Bids will be opened immediately after the 3 p.m. deadline on the due date. Any

bids received after this due date and time will be time-stamped and returned. If, due to inclement weather, natural disaster, or any other cause, the PAUSTIF's third party administrator, ICF's office is closed on the bid due date, the deadline for submission will automatically be extended to the next business day on which the office is open. The PAUSTIF's third party administrator, ICF, may notify all companies that attended the Mandatory Pre-Bid Site Meeting of an extended due date. The hour for submission of bids shall remain the same. Submitted bid responses are subject to the Pennsylvania Right-to-Know Law.

### **Bid Requirements**

The Solicitor wishes to execute a mutually agreeable contract with the selected consultant ("Remediation Agreement"). The Remediation Agreement is included as Attachment 1 to this RFB. The bidder must identify and document in their bid any modifications that they wish to propose to the Remediation Agreement language in Attachment 1 other than obvious modifications to fit this RFB (e.g., names, dates, and descriptions of milestones). The number and scope of any modifications to the standard agreement language will be one (1) of the criteria used to evaluate the bid. **Any bid that does not clearly and unambiguously state whether the bidder accepts the Remediation Agreement language in Attachment 1 "as is", or that does not provide a cross-referenced list of requested changes to this agreement, will be considered non-responsive.** This statement should be made in a Section in the bid entitled "Remediation Agreement". Any proposed changes to the agreement should be specified in the bid; however, these changes will need to be reviewed and agreed upon by both the Solicitor and the PAUSTIF.

The selected consultant will be provided an electronic copy (template) of the draft Remediation Agreement in Microsoft Word format to allow agreement-specific information to be added. The selected consultant shall complete the agreement-specific portions of the draft Remediation Agreement and return the document to the Technical Contact within 10 business days from date of receipt.

The Remediation Agreement fixed costs shall be based on unit prices for labor, equipment, materials, subcontractors/vendors, and other direct costs. The total cost quoted in the bid by the selected consultant will be the maximum amount to be paid by the Solicitor unless a change in scope is authorized and determined to be reasonable and necessary. There may be deviations from and modifications to this SOW during the project. The Remediation Agreement states that any significant changes to the SOW will require approval by the Solicitor, PAUSTIF, and PADEP. NOTE: Any request for PAUSTIF reimbursement of the reasonable costs to repair or replace a well will be considered on a case-by-case basis.

The bidder shall provide its bid cost using the Bid Cost Spreadsheet (included as Attachment 2) with descriptions for each task provided in the body of the bid document. Please note, if costs are provided within the text of the submitted bid and there is a discrepancy between costs listed in the Bid Cost Spreadsheet and in the text, the costs listed within the Bid Cost Spreadsheet will be used in the evaluation of the bid and in the Remediation Agreement with the selected consultant. Bidders are responsible to ensure spreadsheet calculations are accurate. The technical score for bids will be based solely on those tasks represented as milestones included in the Bid Cost Spreadsheet and the total bid cost. Any optional bidder-defined tasks, milestones, or cost adders that are not requested as part of this RFB will not be considered by the Bid Evaluation Committee in the technical review and technical score for the bid.

In addition, the bidder shall provide:

1. The bidder's proposed unit cost rates for each expected labor category, subcontractors, other direct costs, and equipment;
2. The bidder's proposed markup on other direct costs and subcontractors (if any);
3. The bidder's estimated total cost by task consistent with the proposed SOW identifying all level-of-effort and costing assumptions; and
4. A unit rate schedule that will be used for any out of scope work on this project.

Each bid will be assumed to be valid for a period of up to 120 days after receipt unless otherwise noted. The costs quoted in the Bid Cost Spreadsheet will be assumed to be valid for the duration of the Remediation Agreement.

Please note that the total fixed-price bid must include all costs, including those cost items that the bidder may regard as "variable". These variable cost items will not be handled outside of the total fixed-price quoted for the SOW unless the RFB requests costing alternatives for specific items or services. Any bid that disregards this requirement will be considered non-responsive to the bid requirements and, as a result, will be rejected and will not be evaluated.

The RFB is requesting a total fixed-price bid (unless the RFB requests costing alternatives for specific items or services). PAUSTIF will not agree to assumptions (in bids or the selected bidders executed Remediation Agreement) referencing a level of effort and/or hours. Costs provided in your bid should be developed using your professional opinion, experience, and the data provided. PAUSTIF will not reimburse costs for additional hours to complete activities included as part of the base bid/contract price.

Each bid response document must include at least the following:

1. Demonstration of the bidder's understanding of the Site information provided in this RFB, standard industry practices, and objectives of the project.
2. A clear description, specific details, and original language of how the proposed work scope will be completed for each milestone. The bid should specifically discuss all tasks that will be completed under the Remediation Agreement and what is included (e.g., explain groundwater purging/sampling methods, which guidance documents will be followed, what will be completed as part of the Site specific work scope/SCR/RAP implementation). Recommendations for changes/additions to the Scope of Work proposed in this RFB shall be discussed, quantified, and priced separately; however, failure to bid the SOW "as is" may result in a bid not being considered. Bids should include enough original language conveying bidder's thought such that the understanding of site conditions, closure approach (if applicable), and approach to addressing the scope of work can be evaluated. Since bidders are not prequalified, the bid response must provide the Bid Evaluation Committee and Solicitor enough information to complete a thorough review of the bid and bidder.
3. A copy of an insurance certificate that shows the bidder's level of insurance consistent with the requirements of the Remediation Agreement. Note: The selected consultant shall submit evidence to the Solicitor before beginning work that they have procured and will maintain Workers Compensation, commercial general and contractual liability, commercial automobile liability, and professional liability insurance commensurate with the level stated in the Remediation Agreement and for the work to be performed.
4. The names and brief resumes/qualifications of the proposed project team including the proposed Professional Geologist and Professional Engineer (if applicable) who will be responsible for overseeing the work and applying a professional seal to the project deliverables (including any major subcontractor(s)).
5. Responses to the following specific questions:
  - a. Does your company employ a Pennsylvania-licensed Professional Geologist that is designated as the proposed project manager? How many years of experience does this person have?
  - b. How many Pennsylvania Chapter 245 projects is your company currently the consultant for in the PADEP Region where the Site is located? Please list up to 10.

- c. How many Pennsylvania Chapter 245 Corrective Action projects involving an approved SCR, RAP, and RACR has your company and/or the Pennsylvania-licensed Professional Geologist closed (i.e., obtained Relief from Liability from the PADEP) using any standard?
  - d. Has your firm ever been a party to a terminated PAUSTIF-funded Fixed-Price (FP) or Pay-for-Performance (PFP) contract without attaining all of the milestones? If so, please explain.
6. A description of subcontractor involvement by task. Identify and describe the involvement and provide actual cost quotations/bids/proposals from all significant specialized subcontracted service (e.g., drilling/well installations, laboratory, etc.). If a bidder chooses to prepare its bid without securing bids for specialty subcontract services, it does so at its own risk. Added costs resulting from bid errors, omissions, or faulty assumptions will not be considered for PAUSTIF reimbursement.
7. A detailed schedule of activities for completing the proposed SOW including reasonable assumptions regarding the timing and duration of Solicitor reviews (if any) needed to complete the SOW. Each bid must provide a schedule that begins with execution of the Remediation Agreement with the Solicitor and ends with completion of the final milestone proposed in this RFB. Schedules must also indicate the approximate start and end date of each of the tasks/milestones specified in the Scope of Work and indicate the timing of all proposed key milestone activities (e.g., within 30 days of the contract being executed).
8. A description of how the Solicitor, ICF, and the PAUSTIF will be kept informed as to project progress and developments and how the Solicitor (or designee) will be informed of and participate in evaluating technical issues that may arise during this project.
9. A description of your approach to working with the PADEP. Describe how the PADEP would be involved proactively in the resolution of technical issues and how the PADEP case team will be kept informed of activities at the Site.
10. Key exceptions, assumptions, or special conditions applicable to the proposed SOW and/or used in formulating the proposed cost estimate. Please note that referencing extremely narrow or unreasonable assumptions, special conditions, and exceptions may result in the bid response being deemed “unresponsive”.
11. The name and contact information of the person who is to be contacted in the event the bid is selected by the Solicitor and/or a Right to Know request is received by PAUSTIF.

## Bid Review and Evaluation

### 1. Bid Review and Scoring

Bidders' submissions that are administratively qualified (attend the mandatory pre-bid site meeting, submission of the bid by the designated due date and time) will be evaluated.

#### Technical Scoring

Bids are evaluated for technical viability before cost is considered. Bids that have technical scores that fall within 75% of the highest technical score will advance to cost scoring. Bids with technical scores below 75% of the highest technical score are eliminated from further consideration.

Numerical values will be assigned for defined SOW bids for two categories:

- Understanding the problem and demonstrating knowledge of how to perform the work
- Qualifications and Experience

Numerical values will be assigned to three categories in those cases where there is a bid-to-result request:

- Understanding of the problem
- Technical and Regulatory Approach to Remediation
- Qualifications and Experience

#### Cost Scoring

Cost scores are determined by a cost formula. The bid(s) with the lowest total cost receives the maximum cost points available. The remaining bids are scored by applying the following cost formula:  $(1 - ((B - A) / A)) \times C = D$

A = the lowest bid cost

B = the bidder's cost being scored

C = the maximum number of cost points available

D = bidder's cost score (points)

If a bid cost is equal to, or greater than, twice the amount of the lowest bid cost, the formula calculation will result in a negative number and the bid will be assigned zero cost points.

## **2. Evaluation of Bids**

A committee comprised of at least two members of the PAUSTIF staff, two members of ICF staff, and the TPR who assisted in developing the bid package will score all bids that are administratively qualified based on the above criteria. PAUSTIF recognizes that several bids may be acceptable and receive similar numerical scores. At the conclusion of the scoring process, the claimant will receive those bids whose numerical scores place them in the category of meeting Reasonable and Necessary criteria and acceptable for PAUSTIF funding. The claimant may select any of the consulting firms that submitted a qualified bid package to implement the tasks described in the bid; however, PAUSTIF will only provide funding up to the highest fixed price of those bids determined to be Reasonable and Necessary for PAUSTIF funding.

## **General Site Background and Description**

Each bidder should carefully review the existing information and documentation provided in Attachment 3. The information and documentation have not been independently verified. Bidders may wish to seek out other appropriate sources of information and documentation specific to this Site. If there is any conflict between the general Site background and description provided herein and the source documents within Attachment 3, the bidder should defer to the source documents.

### **Site Address**

Shenango Township Municipal Building  
3439 Hubbard-West Middlesex Road  
West Middlesex, PA 16159-2547

### **Site Location and Operation Information**

The Site is located at 3439 Hubbard-West Middlesex Road, on the southeast corner of Hubbard-West Middlesex Road and Jackson Road, in Shenango Township, Mercer County, Pennsylvania. The Site is approximately 10 acres. The subject property consists of the Shenango Township Municipal Building complex and Shenango Township Community Park. Approximately 8 acres of the property to the south and east of the underground storage tank (UST) area are utilized for the park. The park portion of the Site is hydraulically upgradient from and at a higher elevation than the UST area. The Site property was purchased by Shenango Township on May 14, 1966. Prior to the purchase the Site appears to have been used for agricultural purposes, based on historical aerial photographs. The current township municipal building was constructed at the Site in 1968. Shenango Township has used the property for municipal purposes since that time. In August 1979, a 10,000-gallon diesel fuel UST, a 10,000-gallon unleaded gasoline UST, and associated dispensers and piping were installed at the Site. On December 4, 2015, the 10,000-gallon unleaded gasoline UST, all associated piping, and dispenser were removed from the Site. According to the current owner, since the installation of the UST system no major repairs have been conducted on the USTs or delivery lines and only routine maintenance activities have occurred to date. Currently, the Site contains one (1) 10,000-gallon diesel UST (installed in 1979) located near the southeast corner of the garage section of the municipal building. The 10,000-gallon unleaded gasoline UST was replaced by an above ground storage tank.

Properties in the vicinity of the Site are a mix of residential, light commercial, and agricultural. The Site is bordered by residential properties to the north, east, and south.

There is a paving company to the northwest, wooded properties to the south, and agricultural properties to the east and west of the Site. The Site and surrounding properties utilize private on-lot septic systems and water supply wells.

Top of bedrock was encountered at approximately 6.9 to 11.5 feet below grade (ftbg). Groundwater is present at the Site in the overburden and bedrock aquifers at depths ranging from approximately 1.80 to 12.10 ftbg. Groundwater flow direction at the Site is primarily northwesterly in the shallow aquifer and northeasterly, north and northwesterly in the deep aquifer.

On December 4, 2015, the 10,000-gallon unleaded gasoline UST, all associated piping, and dispenser were removed from the Site. According to township personnel, no evidence of any damage to the UST or associated piping was observed during the removal activities. Based on the PADEP Storage System Report Form dated December 4, 2015, heavy dark staining and odors to 12 ftbg were observed in the soil and staining across the top of the UST was also observed. Laboratory analytical results from post excavation soil and groundwater samples collected on December 4, 2015 indicated that compounds associated with unleaded gasoline were detected at concentrations exceeding the PADEP Statewide Health Standards (SHS).

On December 4, 2015, a reportable release was called into the PADEP and a Notice of Reportable Release (NORR) was submitted to the PADEP on December 7, 2015. The NORR stated that an estimated 30 gallons of unleaded gasoline was released over an unknown period of time.

On January 7, 2016, an Underground Storage Tank System Closure Report was submitted to the PADEP stating that there were exceedances of PADEP SHSs for unleaded gasoline in soil and groundwater in samples collected from the UST excavation area, and that there were no exceedances of any PADEP SHSs in soil samples collected from beneath the former dispenser and piping.

From May 2016 through February 2019, the current consultant conducted multiple soil and groundwater investigations within the source area and offsite in an effort to complete site characterization. The intent was to characterize the source area on the Site and delineate soil/groundwater impacts on site and off site in response to the release that was confirmed in December 2015. Investigation activities performed by the consultant included the completion of a sensitive receptor survey, advancement of 29 soil borings, installation of two soil gas sampling points, installation of 28 monitoring wells, aquifer testing, fate and transport modeling, vapor intrusion evaluation, and the installation and maintenance of a single point of entry treatment system on an offsite potable well. Soil, groundwater, and vapor samples were collected throughout the characterization process

for laboratory analyses. The results of these activities are summarized in the multiple reports that have been submitted to the PADEP and are attached to this RFB.

A Site Characterization Report/Remedial Action Plan (SCR/RAP), dated March 15, 2017, was prepared by the consultant and submitted to the PADEP. The March 15, 2017 SCR/RAP was revised by the consultant, based on feedback from the PADEP and resubmitted to the PADEP on April 13, 2017 (this version retained the same March 15, 2017 date). The selected standards listed in the RAP were Residential Statewide Health Standard (SHS) for Used Aquifers for all constituents of concern in soils and groundwater. The RAP proposed source removal (soil excavation) followed by three vacuum truck liquid removal events to obtain the selected cleanup standards. The PADEP approved, with modifications, the SCR/RAP in a letter dated May 2, 2017.

From July 5, 2017 through July 11, 2017, 558.93 tons of impacted soil and approximately 1,900 gallons of impacted groundwater were removed from the Site and sent offsite for proper disposal. Following the excavation activities, recovery wells RW-2 and RW-3 were installed within the excavation backfill (MW-6 was destroyed during the excavation activities). Three groundwater extraction events were conducted at the Site on September 5 & 6, 2017, October 10, 2017 and December 5, 2017. A total of approximately 10,100 gallons of impacted groundwater was extracted from the Site and sent offsite for proper disposal. During these events, the majority of the groundwater was extracted from RW-2 and RW-3.

Subsequent groundwater sampling conducted at the site, following the source removal and groundwater recovery events indicated that the remedial actions performed did not obtain the selected cleanup standards.

A Remedial Action Progress Report/Revised Remedial Action Plan (RAPR/RRAP), dated January 31, 2019, was prepared by the consultant and submitted to the PADEP. The selected standards listed in the RRAP were Residential SHS for Used Aquifers for all constituents of concern in soils and groundwater. The RAP proposed groundwater extraction and enhanced bioremediation to obtain the selected cleanup standards. The PADEP disapproved the RRAP in a letter dated March 27, 2019.

At the request of the PADEP, interim remedial actions are currently being completed at the Site. These interim remedial actions include a short-term pumping event on RW-1 and multiple high vacuum extraction events on RW-1 and MW-3. The results of these interim remedial actions will be included in a remedial action progress report (RAPR) prepared by the current consultant and provided to the bidders, upon receipt. The selected consultant will also be provided with the most recent data collected at the Site prior to start of this project.

## **Scope of Work**

This RFB seeks competitive bids from qualified contractors to perform the activities in the Scope of Work (SOW) specified herein. The SOW presented in this RFB was provided to the PADEP for review and comment. The PADEP responded with comments which have been incorporated into this SOW.

### **Objective**

This RFB is seeking qualified firms to prepare and submit a fixed price proposal to complete a Bid to Result project. "Bid to Result" RFBs identify task goals and rely on the bidders to provide a high level of project-specific detail on how they will achieve the goal. Each bid must detail the approach and specific methods for achieving the milestone objectives. In reviewing the quality of bids submitted under Bid to Result solicitations, there is an increased emphasis placed on technical approach and reduced emphasis on cost (as compared to bids for "Defined Scope of Work" RFBs).

For this Site, the selected goal for the project is to obtain a relief of liability from the PADEP under Chapter 245 and Chapter 250 regulations by demonstrating attainment of Residential SHSs for Used Aquifers for soil and groundwater. In order to achieve the aforementioned goals, bidders may propose to remediate the Site by one of the strategies listed below:

- Pump & Treat (via trenches only)/Soil Vapor Extraction
- Air Sparge/Soil Vapor Extraction
- Dual Phase Extraction

The specific remedial technologies previously mentioned shall be the basis for preparing a SOW and presenting a competitive fixed-price bid. As stated above, the objective of the remedial efforts is to remediate soil and groundwater to the SHSs. The selected consultant shall perform pilot testing to confirm that the remedial technology proposed in their bid would be feasible to meet the milestone objectives and remedial goal for this Site.

### **Constituents of Concern**

The list of constituents of concern (COCs) for this Site include the following:

- Benzene
- Toluene

- Ethylbenzene
- Total Xylenes
- MTBE (Methyl tert-butyl ether)
- Naphthalene
- Cumene (Isopropylbenzene)
- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene

### **General SOW Requirements**

The bidder's approach to completing the SOW shall be in accordance with generally accepted industry standards/practices and all applicable federal, state, and local rules, regulations, guidance, and directives. The latter include, but are not limited to, meeting the applicable requirements of the following:

- The Storage Tank and Spill Prevention Act (Act 32 of 1989, as amended);
- Pennsylvania Code, Title 25, Chapter 245 - Administration of the Storage Tank Spill and Prevention Program;
- The Land Recycling and Environmental Remediation Standards Act of 1995 (Act 2), as amended);
- Pennsylvania Code, Chapter 250 - Administration of Land Recycling Program; and
- Pennsylvania's Underground Utility Line Protection Law, Act 287 of 1974, as amended by Act 121 of 2008.

During completion of the milestone objectives specified below and throughout implementation of the project, the selected consultant shall:<sup>1</sup>

- Conduct necessary, reasonable, and appropriate project planning and management activities until the project (i.e., Remediation Agreement) is completed. Such activities may include Solicitor communications/updates, meetings, record keeping, subcontracting, personnel and subcontractor

---

<sup>1</sup> As such, all bids shall include the costs of these activities and associated functions within the quote for applicable tasks/milestones.

management, quality assurance/quality control, scheduling, and other activities (e.g., utility location). Project planning and management activities will also include preparing and implementing plans for health and safety, waste management, field sampling/analysis, and/or other plans that are necessary and appropriate to complete the SOW and shall also include activities related to establishing any necessary access agreements. Project planning and management shall include identifying and taking appropriate safety precautions to not disturb Site utilities including, but not limited to, contacting Pennsylvania One Call as required prior to any ground-invasive work. As appropriate, project management costs shall be included in each bidder's pricing to complete the milestones specified below.

- Be responsible for coordinating, managing, and completing the proper management, characterization, handling, treatment, and/or disposal of all impacted soils, water, and derivative wastes generated during the implementation of this SOW. The investigation-derived wastes (IDW), including purge water, shall be disposed in accordance with standard industry practices and applicable laws, regulations, guidance, and PADEP directives. Waste characterization and disposal documentation (e.g., manifests) shall be maintained and provided to the Solicitor and the PAUSTIF upon request. All investigation derived wastes shall be handled and disposed per PADEP's Regional Office guidance. It is the selected consultant's responsibility to conform with current PADEP Regional Office guidance requirements in the region where the Site is located.
- Be responsible for providing the Solicitor and facility operator with adequate advance notice prior to each visit to the property. The purpose of this notification is to coordinate with the Solicitor and facility operator to ensure that appropriate areas of the property are accessible. Return visits to the Site will not constitute a change in the selected consultant's SOW or result in additional compensation under the Remediation Agreement.

### **Site-Specific Guidelines**

As part of this RFB, the selected consultant will need to consider the following site - specific guidelines:

- **Scheduling:** As part of this RFB, bidders must provide a schedule as to when each of the milestones will be completed. All on-site work should be completed during the normal working days and hours of 8 am to 5 pm from Monday through

Friday. The selected consultant should discuss with the Solicitor any notifications required to complete on-site work.

- **Responsibility:** The selected consultant will be the consultant of record for the Site. They will be required to take ownership and responsibility for the project and will be responsible for representing the interests of the Solicitor and PAUSTIF with respect to the project. This includes utilizing their professional judgment to ensure reasonable and appropriate actions are recommended and undertaken to protect sensitive receptors and move the Site towards closure.
- **Scope of Work:** Please bid the scope of work as provided in the RFB. Bidders are welcome to propose or suggest a change in the SOW; however, the bidders should bid the SOW as presented in the RFB and provide any suggested modification to the SOW and provide the cost difference (+ or -) separately in the proposal.
- **Selected Standards:** The Solicitor has selected to remediate the Site to the PADEP Residential SHSs for Used Aquifers for all COCs in soil and groundwater.
- **Onsite Potable Supply Well:** There is an onsite potable supply well that provides water to the municipal building and park restrooms. If it is later deemed necessary to relocate and replace the onsite potable supply well, those costs will be considered outside of the Remediation Agreement.
- **On-site Diesel Tank:** An operating diesel tank (10,000 gallon) remains in the tank cavity once shared with the gasoline tank, which was removed in 2016 and was the source of the release.
- **Safety Measures:** Each bidder should determine the level of safety measures needed to appropriately complete the milestones. Specifically, if a bidder feels it is appropriate and necessary to complete additional safety measures other than or beyond what is required in the SOW, the cost should be included in their proposal and costs. More importantly, if a bidder includes the cost to complete safety activities, they should specify it in their proposal and discuss why it is appropriate and necessary and indicate which methods will be utilized and to what extent. As discussed in the RFB, cost is not the only factor when evaluating proposals and other factors are taken into consideration during the review process, including appropriate safety measures.
- **Off-site Access:** Due to access being required to five off-site properties to complete the proposed SOW, a series of timeframes have been established with regards to this project. The selected consultant should be prepared to start attempting to secure access to the off-site properties within 10 days of contract

execution. If after 30 days of the first attempt; access is not secured or about to be secured; then the selected consultant should request assistance in obtaining access from the PADEP.

- **Waste Disposal:** The IDW (including soil/rock cuttings, development water, and liquids generated during installation and aquifer testing) should be disposed of per the instructions included in the “General SOW Requirements” section of the RFB. The selected consultant will be responsible for arranging any off-site waste disposal (if required) and including costs in their bid response to cover the disposal of all potential waste related to the milestones included in the SOW. Containerized soil and groundwater may be temporarily stored on Site, but should be removed from the Site in a timely manner. In an effort to eliminate or minimize the need for change orders on a fixed price contract, please include costs to dispose of all anticipated volumes of waste in your bid response. PAUSTIF will not entertain any assumptions on the contract with regards to a volume of waste (i.e. Project costs assume that no more than 1,000 gallons of groundwater will require disposal after the completion of the pump test). Bidders will be responsible for including costs in their bid response to cover the disposal of all potential waste related to the milestones included in the SOW. Please estimate the volume of waste using your professional opinion, experience, and the data provided. Invoices submitted to cover additional costs on waste generated as part of activities included under the fixed price contract for this Site will not be paid. If your bid proposes to dispose of waste under a permit, then your bid needs to address the potential situation of a permit not being approved. Bids need to specifically indicate that your bid costs include the costs to dispose of the waste even if a permit is not approved. As indicated in the bid, there should be no assumptions on waste and assuming that a permit will be approved is still making an assumption on waste.
- **Standard Operating Procedures:** Please include in the bid as an attachment, your firm’s standard operating procedures for all major field tasks proposed in the SOW.
- **Prior Approval – Site-Specific Milestones:** For consideration of PAUSTIF reimbursement, PAUSTIF approval must be obtained prior to completing the following Site-Specific Milestone. The request for approval to proceed with the milestone is being done in an effort to determine whether the milestone in question is warranted based on the data collected during the investigation.
  - **Milestone Q – Indoor Air and Soil Gas Sampling**

- **Prior Approval – Optional Cost Adder Milestones:** For consideration of PAUSTIF reimbursement, Solicitor and PAUSTIF approval must be obtained prior to completing any Optional Cost Adder Milestones. Milestone A through Milestone S (excluding Milestones O9 through O12) represent the base SOW for this RFB solicitation. In addition to the base SOW, the Optional Cost Adder Milestones (Milestones O9 through O12, and Milestones T through Y) need to be addressed in your bid response. These cost adders will not be part of your initially approved base contract price. However, if it becomes necessary to complete any of these activities, they will be completed under the Remediation Agreement signed as part of this project.
- **Milestones with Multiple Events:** Several Site-Specific Milestones and Cost Adder Milestones include multiple events. For those milestones, PAUSTIF will only reimburse the selected bidder for the actual number of events conducted (i.e. if a bidder includes the costs to complete two events, but only one event is conducted; then the bidder will only be paid for the one event completed).

### **Site-Specific Milestones**

**Milestone A – Obtain Off-Site Access:** Provide a cost to secure off-site access on five adjacent residential/commercial properties in an effort to complete routine monitoring and sampling, POET maintenance and potable well sampling. A summary of the off-site properties is provided below:

- 3462 Hubbard Middlesex Road: Access has been granted to the current consultant and a POET system has been installed on the potable supply well. The selected consultant should secure access to the property to sample the potable supply well and maintain the POET system.
- 3444 Hubbard Middlesex Road: The property is currently vacant and dilapidated. The selected consultant should contact the property owner and determine the future plans for the property. In the event that the owner plans to occupy the property, access should be requested to sample the potable supply well.
- 3434 Hubbard Middlesex Road: Access has been denied to the current consultant. The selected consultant should attempt to gain access to the property to sample the on-site potable supply well.
- 3430 Hubbard Middlesex Road: Access has been granted to the current consultant. The selected consultant should secure access to the property to sample the on-site potable supply well.

- 3429 Hubbard Middlesex Road: Access has been granted to the current consultant. The selected consultant should secure access to the property to sample the on-site potable supply well

The cost should cover the necessary time and materials needed to contact the off-site property owners, draft access agreements for each property, and obtain approval with one draft revision of the access agreements. Providing this cost does not commit the selected consultant to obtain the access agreement. If necessary, the cost should also cover the required time and material needed to provide the PADEP with the information they will require to facilitate access to the properties. In the event access to an additional off-site property is needed for sampling (POET install, etc.) those costs will be considered outside of the Remediation Agreement.

**Milestone B – Private Utility Markout:** Prior to any intrusive investigation work at the Site (i.e. soil borings, excavation, system install), a private markout is to be conducted at the Site (and/or off-site location where intrusive activities will be conducted) to confirm the location of any obstruction or underground utility present in the vicinity of the proposed intrusive activity locations. The locations of the identified features should be marked with appropriately colored paint on the asphalt areas and flags in grassy areas. A report shall be provided with an explanation of the identified features.

**Milestone C – Supplemental Site Characterization Activities:** This Milestone provides bidders the opportunity to identify the additional site characterization work that will be completed in advance of finalizing the remedial approach design and moving ahead with its implementation. Conducting supplemental investigative activities under this Milestone is mandatory. PAUSTIF will be reimbursing up to \$10,000 for supplemental site characterization costs under this Milestone. Bidders are to describe what supplemental site characterization will be completed, the rationale for the work, and how the derived data will be used. For purposes of bidding, and to ensure consistent cost scoring of bids, each bidder will enter exactly \$10,000 as the bid price for Milestone C in the Bid Cost Spreadsheet. PAUSTIF will only reimburse up to \$10,000 of reasonable and necessary costs for those tasks actually performed. The selected bidder must provide time and material documentation in addition to supporting documentation required (in Exhibit B of the executed Remediation Agreement) to support the requested reimbursement and completion of this Milestone.

Bidders may also use this opportunity to: 1) confirm any elements of the site characterization completed by a previous consultant; 2) address any perceived data gaps in the existing site characterization work; 3) assist in the evaluation and

determination of remedial technologies and system design which are characterization-type activities (e.g., analysis for C<sub>4</sub>-C<sub>10</sub>); 4) assist with refining the cleanup timeframe estimate and/or other reasons related to validating the bidder's remedial approach and design (e.g., additional sampling to better determine mass in place). Note that all tasks and costs related to pilot testing and reporting must be captured under the Pilot Testing and Reporting Milestone, not Supplemental Site Characterization Activities. If pilot testing tasks and costs are included in this Site Characterization Milestone, the bidder's technical score will be negatively impacted.

Supplemental Site Characterization activities completed under this Milestone shall be documented and reported in the SCR Addendum.

**Milestone D – Site Survey:** Following the completion of Milestones A through C, a professional survey of the Site by a Pennsylvania-licensed surveyor including all current Site features (i.e., buildings, property boundaries, monitoring wells, sanitary and storm sewers, etc.) shall be completed. All on-site and off-site monitoring wells, soil borings, soil gas points, stormwater inlets, and other important Site features are to be surveyed with the purpose of placing their horizontal coordinates on a scaled site map. The benchmark elevation shall be obtained by referencing the approximate ground surface elevation of the property or from an available benchmark from a USGS topographic map or benchmark elevation marker located at the Site. In conjunction with collecting depth to groundwater readings during sampling events and in an effort to establish groundwater flow at the Site, tops of casing for the existing monitoring wells are to be surveyed to facilitate the construction of a Site wide groundwater flow map. In addition, the presence of SPL (if detected) needs to be taken into consideration when calculating the static water levels in the wells and constructing accurate Site wide groundwater flow maps. Please note the Site has been surveyed by Henry T. Welka & Associates Surveying and Engineering previously.

**Milestone E – Quarterly Groundwater Monitoring, Sampling, and Reporting Before Remediation Implementation:** For this milestone, the total number of groundwater monitoring and sampling events that will be needed will be based on the schedule proposed by the bidder. Specifically, bidders should include costs to complete all quarterly groundwater sampling activities scheduled to be completed prior to the implementation of the remedial strategy. The selected consultant should be prepared to conduct the first groundwater sampling event at the Site in accordance with the current quarterly monitoring schedule. Following the

completion of each quarterly groundwater monitoring and sampling event, the selected consultant should prepare a RAPR for submittal to the PADEP.

Bid responses should note the following:

- Bid responses as well as the Bid Cost Spreadsheet should clearly indicate the number of events that are included in the costs for this Milestone.
- The groundwater monitoring and sampling should be conducted in accordance with generally accepted practices as outlined in the PADEP Groundwater Monitoring Guidance Manual, (Appendix A of the PADEP Land Recycling Program Technical Guidance Manual, Document No. 261-0300-101, dated January 19, 2019).
- Collect water level readings from each of the monitoring wells using an interface probe capable of distinguishing water and/or the presence or absence of product to the nearest 0.01 feet.
- Prior to the collection of groundwater samples, the water column in each of the monitoring wells should be purged by either the removal of approximately three volumes of the water column, via EPA low flow sampling method or other PADEP acceptable method.
- Following purging activities, groundwater samples should be collected as quickly as practical from each of the wells into laboratory supplied bottle ware.
- Purging and sampling equipment should be decontaminated (if necessary) prior to sample collection in accordance with generally accepted industry practices.
- In addition, one equipment blank sample (if necessary) will be collected and submitted per day of sampling
- Groundwater samples collected during each of the events will be sent to a PADEP accredited laboratory to be analyzed for the above noted COCs, using PADEP required analytical methods.
- Samples should be properly handled under chain of custody documentation protocol and kept cold from sample collection until the samples are relinquished to the accredited laboratory.
- The laboratory to be utilized should be identified in the bid package.

- The RAPR should detail the observations documented during the event, summarize the analytical results, field procedures used during the event, map the groundwater flow direction in all aquifers for the Site, provide iso-concentration maps for compounds exceeding the SHS, provide hydro-graphs, discuss the interim remediation efforts (if any), and provide additional scheduling details for upcoming events or other Site activities. A copy of the RAPR should be provided to the Solicitor and PAUSTIF.
- **All IDW waste** should be disposed of per the instructions included in the “General SOW Requirements” and “Site Specific Milestones” section of the RFB.

**Milestone F – Potable Well Sampling:** There is an on-site and multiple off-site potable supply wells that are to be sampled on either a quarterly or annual basis. This milestone is broken down into the following two sub-milestones.

**Milestone F1 – Quarterly Potable Well Sampling:** A total of one on-site and one off-site (3462 Hubbard Middlesex Road) potable wells are sampled on a quarterly basis. The off-site well has a POET system that has influent, mid-fluent, and effluent sample collection locations. Both potable wells need to be sampled on a quarterly basis, through Site closure.

**Milestone F2 – Annual Potable Well Sampling:** A total of two off-site (3429 Hubbard Middlesex Road and 3430 Hubbard Middlesex Road) potable wells are sampled on an annual basis. Both potable wells need to be sampled on an annual basis, through Site closure. The annual sampling needs to occur during the 1<sup>st</sup> quarter of each year.

Bid responses should note the following:

- For this milestone, the total number of potable well sampling events that will be needed will be based on the schedule proposed by the bidder. Specifically, bidder should include costs to complete all quarterly and annual potable well sampling activities needed through closure. Bid responses as well as the Bid Cost Spreadsheet should clearly indicate the number of events that are included in the cost for these sub-milestones.
- The potable well sampling should be conducted in accordance with generally accepted practices as outlined in the PADEP Groundwater Monitoring Guidance Manual, (Appendix A of the PADEP Land Recycling Program Technical Guidance Manual, Document No. 261-0300-101, dated January 19, 2019).

- Prior to the collection of potable well samples, the potable well should be purged for a minimum of 15 minutes.
- Following purging activities, potable samples should be collected as quickly as practical from each of the wells into laboratory supplied bottle ware.
- Groundwater samples collected during each of the events will be sent to an accredited laboratory to be analyzed for the above noted COCs. For the potable well with a POET, influent and mid-fluent samples should be analyzed via EPA Method 8260B and the effluent samples analyzed via EPA Method 524.2. The on-site and other off-site potable wells do not have POET systems and a single sample should be collected from each well and analyzed via EPA Method 524.2.
- Samples should be properly handled under chain of custody documentation protocol and kept cold from sample collection until the samples are relinquished to a PADEP accredited laboratory.
- The laboratory to be utilized should be identified in the bid package.
- Upon receipt of the laboratory analytical report the bidder shall prepare and submit a letter format report to the individual property owners, with copies provided to the Solicitor, PADEP, and PAUSTIF. The results of the potable well sampling activated should also be summarized in the quarterly RAPRs.
- **All IDW waste** should be disposed of per the instructions included in the “General SOW Requirements” and “Site Specific Milestones” section of the RFB.

**Milestone G – Pilot Testing and Reporting:** Bidders shall prepare a conceptual remedial action plan including the conceptual design of a remedial system in their response to this RFB. It is industry practice to perform a pilot test and provide the results of this testing to support the feasibility of the proposed remedial technology and approach. More specifically, the purpose of the pilot test is to:

- Confirm that the proposed technology is technically feasible;
- Confirm that the proposed technology is cost-effective;
- Confirm that the proposed technology will provide a timely closure; and,
- Determine design criteria.

The bidder shall provide a detailed description of the proposed pilot testing including rationale, the use of existing or installation of new data

monitoring/collection points, proposed equipment to be used, and the data that is proposed to be collected. Additionally, the bidder shall specify up to five basic, objective criteria that would be evaluated to determine whether the remedial action proposed in the bid response document is feasible. These “critical criteria” shall be listed with an upper and lower limit that will define the range of acceptable results (i.e., pilot testing results) relevant to the proposed remedial approach. These critical criteria must be tightly-controlled measurements or calculations that could be independently measured or verified by others during the pilot test.

For example, bids shall include language such as, “For our proposed remedial action approach to be successful and for the technology(ies) used thereby to operate as planned and meet our proposed clean up schedule, the pilot testing must show:

1. A hydraulic conductivity greater than A, but not more than B;
2. A pumping rate exceeding AA gpm at the end of BB hours of vacuum-enhanced pumping;
3. The capacity to generate a soil vapor extraction vacuum of at least A in the native soil while not exceeding a soil flow rate of B; and,
4. Iron and manganese hardness within groundwater at or below AA milligrams per liter (mg/L).”

This is only an example. Actual bid language and the associated critical criteria will vary by bidder.

The critical criteria identified in each bid and their associated acceptable range of testing results will be evaluated by the bid evaluation committee as part of the technical review. Unrealistic critical criteria or critical criteria that are unreasonably narrow will reduce the favorability of the bid as viewed by the bid evaluation committee.

The selected bidder will prepare a Pilot Test Report and submit it to the Solicitor and PAUSTIF. The Pilot Test Report shall show that the pilot test was conducted according to the selected consultant’s bid and shall constitute documentation for payment of this Milestone regardless of the result. If the results of the pilot testing show that the proposed remedial action is feasible based on the specified critical criteria and ranges, the selected consultant shall move forward on the project.

**“Pilot Test Off-Ramp”** – The selected consultant and the Solicitor are protected from being obligated to move forward with a remedial action under the executed

Remediation Agreement if the proposed remedial approach cannot be implemented as proposed in the conceptual design based on critical criteria outside the bidder's defined ranges from the pilot test data from this Milestone. Exhibit A of the Remediation Agreement (Attachment 1) will contain a provision that if the selected consultant's proposed remedial approach is not reasonable based solely on pilot test results indicating that it cannot be implemented as proposed in the conceptual design based on critical criteria outside the bidders defined ranges from the pilot test data, then one of the following conditions will apply:

1. With advance Solicitor and PAUSTIF approval, the selected bidder may elect to modify the remediation plan and continue with the project at no additional cost; that is, for the same total fixed price found in the bid response or a lesser fixed-cost. If selected consultant's modified plan is approved by Solicitor and by PAUSTIF for funding, the executed Remediation Agreement may be amended, if necessary, to agree with the modified remediation plan and costs; however, the total fixed price of the Remediation Agreement shall not be increased.
2. If the Solicitor or PAUSTIF choose not to approve the selected consultant's revised remediation plan adjusting to the new data, the Remediation Agreement for the project will terminate.
3. If the selected consultant adequately demonstrates the Site conditions revealed by the results of pilot testing performed under this Milestone could not have reasonably been expected prior to conducting the activities, the selected consultant may elect to not proceed and to terminate the Remediation Agreement for the project.

If either party elects to cancel the Remediation Agreement, the PAUSTIF will have complete discretion with regard to the use of the information obtained during Milestone C activities and/or in the Pilot Test Report. The PAUSTIF may use the data as the basis for rebidding the project; however, it will be specified that any use that a third party makes of the supplemental site characterization data and/or Pilot Test Report will be at the sole risk of the third party.

For consistency, bidders shall budget a maximum of 10% of the total bid cost for this Milestone, with a maximum of \$50,000. For example, if the total proposed cost for Milestones A through S (excluding G) is determined to be \$300,000, the fixed-price cost of Milestone G specified in the bid cost spreadsheet shall be up to, but not exceed \$30,000. However, if the total proposed cost for Milestones A through

S (excluding G) is determined to be \$550,000, the fixed-price cost of Milestone G specified on the bid cost spreadsheet shall be up to, but not exceed \$50,000.

**Milestone H - Fate and Transport Modeling:** Fate and Transport evaluations shall be completed as appropriate and consistent with Act 2 guidance documents in order to assess the potential for contaminant migration. This evaluation should take into consideration both the groundwater and soil exceedances at the Site. Each firm should evaluate the data and site-specific information provided and determine the most applicable model or models needed to complete appropriate fate and transport modeling for the Site. Please specify which modeling software will be used to predict fate and transport of the COCs exceeding the PADEP SHS in groundwater at the release location and its applicability to the Site.

Fate and Transport Modeling activities completed under this Milestone shall be documented and reported in the SCR Addendum.

**Milestone I – Preparation and PADEP Approval of a Site Characterization Report Addendum / Amended Remedial Action Plan:** Following the completion of the activities proposed in Milestones A through D, Milestones G and H, and a relevant number of events in Milestones E and F, the selected consultant will prepare a combined Site Characterization Report Addendum (SCRA) / Amended Remedial Action Plan (ARAP) for the Site. The information gathered during the aforementioned milestones should be incorporated into a comprehensive SCRA with ARAP that will be submitted to the PADEP and will facilitate the objective to complete regulatory requirements governing both the SCR and RAP and gain PADEP approval. Specifically, the SCRA should summarize the results of any recent investigations, the findings of the previous investigations, a comprehensive Site history, sensitive receptor information, vapor intrusion investigation, geologic data, results and analysis of any aquifer testing, discussion on the completed remediation efforts, summary of the predictive modeling efforts completed, and a series of summary tables, appendices, and figures illustrating the information provided in the report.

The ARAP should present a clear discussion to the PADEP as to what testing has been completed, the results (lab and fields) collected, and a structured argument as to why the selected remedial design is appropriate and applicable for this Site. The ARAP must include the elements listed in 25 Pa Code § 245.311(a). It is particularly important for the ARAP to evaluate hydrogeological conditions and explain how the proposed remedial action will manage the groundwater plume and prevent further contaminant migration. The ARAP should also reference the feasibility testing results as well as provide the design and specifications of the

remedial strategy to be implemented at the Site. Specifically, the selected consultant should include tables, figures, and attachments that detail the proposed remediation specifics, equipment specifications, operation parameters, and any applicable drawings or figures (i.e. P&IDs, remediation equipment and treatment point location figures, etc.) in the ARAP. The ARAP should clearly identify the parameters to be tested and the methodology that will be incorporated to determine when active remediation is completed. In addition, the ARAP should clearly define the anticipated standards selected for the project. The aforementioned standards should be supported in the ARAP by pathway elimination and/or risk assessment, as required by the applicable regulations and guidelines.

The report will be completed following the guidelines specified in Pennsylvania Code, Title 25, Chapter 245 and the Land Recycling Program (Act 2) Technical Guidance Manual with regards to both an SCR as well as a RAP. The report will be appropriately signed and sealed by a Professional Geologist and a Professional Engineer registered in the Commonwealth of Pennsylvania.

The draft SCRA / ARAP and all AutoCAD maps / plans included in the report (e.g., site plan / base map, groundwater elevation maps, dissolved plume maps, soil contaminant distribution maps, etc.) and appendices (e.g., boring logs, tables, waste disposal documentation, aquifer testing and analysis, transducer survey results and analysis, and sensitive receptor information) shall be submitted electronically (in Adobe PDF format) to the Solicitor and PAUSTIF for review / comment at least 2 weeks prior to finalizing the SCRA/ARAP. Once the selected consultant has addressed comments on the draft, the selected consultant shall finalize and issue the report to the PADEP. The final report is to be submitted no later than the date specified in the schedule presented by the selected bidder.

The cost for this Milestone will be reimbursed as follows:

- I1 – SARA/ARAP PADEP Submittal: 75% of proposed Milestone cost
- I2 – SCRA/ARAP PADEP Approval: 25% of proposed Milestone cost

**Milestone J – Remedial Design and Installation:** For this Milestone, bidders should include all necessary activities and costs associated with the design, purchase, installation, and startup of the remedial strategy. The successful bidder shall demonstrate that their remedial strategy selection would be effective in attaining the remediation goals for the project in the schedule proposed. The three generally acceptable remedial technologies discussed with PADEP include:

- Pump & Treat (via trenches only)/Soil Vapor Extraction
- Air Sparge/Soil Vapor Extraction
- Dual Phase Extraction

Bidders must propose one of these three alternatives as their proposed remedial approach, and it is critical that the bidder show that their proposed technology and system design is feasible on a conceptual level before pilot testing. The bidder should perform a thorough demonstration of the feasibility and practicality during pilot testing. It is also critical that any proposed alternatives do not exacerbate Site impacts.

Bid responses should note the following:

- Bid responses should describe in great detail how the strategy has been designed and how it will be implemented.
- Bid responses should clearly discuss the reasons as to why the selected strategy is applicable to this Site.
- Bid responses need to provide a clear discussion referencing specific data and available information that supports that the proposed remedial strategy will remediate the contaminants to the selected standards in the proposed timeframe.
- Where applicable, the bid response should provide specifics on all equipment and vendors to be utilized.
- Where applicable, the bid response should provide Process and Instrumentation Diagrams and Cut Sheets.
- Where applicable, the bid response should describe what permits are anticipated and include all associated costs in obtaining those permits, in this Milestone.
- Bid responses need to clearly define both intermediate and end remedial strategy goals that will be used as a guideline to determine if the proposed strategy is successfully remediating the Site. The end goals would be used to determine when remediation will be considered complete and successful.
- Bid responses should note the documentation to be submitted as proof of payment by providing a specific milestone schedule that details the strategy proposed in the bid response. The aforementioned milestone schedule

should be in a format similar to the milestone schedule included in the Remediation Agreement.

- The Solicitor and PAUSTIF will be provided the opportunity to inspect and confirm the remediation strategy has been installed and is operating as per the ARAP. The Technical Contact will coordinate and conduct the inspection with the Solicitor and selected consultant.

The cost for this Milestone will be reimbursed as follows:

- J1 – Remedial Design & Equipment Purchase
- J2 – System Installation
- J3 – System Startup

**Milestone K – Remedial Implementation:** For this Milestone, bidders should include all necessary activities and costs associated with the implementation of the remedial strategy as described in the selected consultant's approved ARAP.

As discussed, the fixed cost for this Milestone in submitted bid responses needs to include all activities and sufficient costs related to any and all operation & maintenance (O&M) activities necessary to implement the remedial strategy. Where applicable, this may include activities such as all routine O&M visits, telemetry triggered O&M visits, equipment maintenance, equipment repairs, etc. The only costs that should be excluded from this Milestone are any vapor or liquid phase treatment vessel change outs, any routine discharge fees (i.e., sanitary sewer discharge fees), and monthly utility bills (i.e., electric, gas, telephone, cellular service, etc.).

This Milestone would also cover all activities and costs related to quarterly groundwater monitoring and sampling events and quarterly RAPRs to be completed during the implementation of the remedial strategy.

Bid responses should note the following:

- Bid responses must provide a specific proposed remediation timeframe (duration) and expected results, with a discussion as to how the proposed timeframe was calculated. Bid responses as well as the Bid Cost Spreadsheet should clearly indicate the number of quarters that are included in the cost for this milestone.
- Payment under this Milestone will be on a quarterly schedule. Bid responses should note the documentation to be submitted as proof of

payment by providing a specific milestone schedule that details the strategy proposed in the proposal. The aforementioned milestone schedule should be in a format similar to the milestone schedule included in the Remediation Agreement.

- Where applicable, the bid response should provide specifics on all equipment and vendors to be utilized.
- Bid response should describe with detail how progress of the remedial strategy will be monitored and how/when adjustments may be made. Bid response should provide specific parameters to be monitored and data values.
- Where applicable, the bid response should provide anticipated number and schedule of O&M events.
- System maintenance & monitoring shall include monitoring and routine maintenance as specified by the equipment manufacturer(s) to ensure warranties are not voided and the equipment is kept in good working order. Operational time shall be logged by system instrumentation and reported quarterly in a RAPR. The selected consultant is expected to maintain at least an 85% uptime on the system during each quarter. Failure to meet this minimum expectation over two consecutive quarters will constitute, at the Solicitor's sole discretion, a breach of contract and the Solicitor may choose to terminate the contract.
- Quarterly groundwater monitoring and sampling events proposed to be completed during the implementation of the remedial strategy should be conducted in a manner consistent with Milestone E.
- Following the completion of each quarterly groundwater sampling event, the selected consultant should prepare a RAPR for submittal to the PADEP. The RAPR should detail the observations documented during the event, summarize the analytical results, provide applicable summary maps and tables, provide iso-concentration maps for compounds exceeding the SHS, provide an evaluation of COC trends, provide hydro-graphs, discuss/detail the remediation efforts, and provide additional scheduling details for upcoming activities. A copy of the RAPR should be provided to the Solicitor and PAUSTIF.
- Following the completion of one year of remedial system operations, the selected consultant will prepare a Remedial Performance Evaluation

Report. The report should discuss the overall progress of remediation, with respect to meeting the selected consultant timeframe for completion of remediation. Should the selected consultant identify deficiencies and recommend actions to optimize remedial effectiveness in the Remedial Performance Evaluation Report, and the stakeholders agree with the necessity and appropriateness of one or more of the recommendations, then enabling contracting mechanisms will be explored at that time. A copy of the Remedial Performance Evaluation Report should be provided to the Solicitor and PAUSTIF.

With this being a Bid-to-Result RFB, please note that this Milestone also has a performance-based component to it. To provide added incentive to the successful bidder to regularly scrutinize remedial system performance and optimize system operations for maximal efficiency in completing the remediation within the timeframe proposed, **10% of each quarterly payment for this Milestone will be withheld and accumulated pending successful completion of remediation and initiation of post-remedial groundwater demonstration of attainment activities. When this condition has been met, the accumulation of 10% holdback payments, for the Milestones actually completed, will be reimbursed in one lump sum to the selected consultant. The 10% hold-back milestone will not be paid to the selected consultant that has not attained the cleanup goal within the Consultant's proposed remediation timeframe.**

The cost for this Milestone will be reimbursed as follows:

- K1 – Quarterly Operation & Maintenance
- K2 – Quarterly Groundwater Monitoring, Sampling, and Reporting

**Milestone L – Vapor and Liquid Phase Treatment Vessel Change Outs:** For this Milestone, bidders should include all necessary activities and costs associated with the completion of any vapor or liquid phase treatment vessel change outs that would occur during the implementation of the remedial strategy.

Vapor and liquid phase treatment vessel change outs will be invoiced at unit costs per event. The unit costs proposed should include all necessary labor, materials, expenses and subcontractor costs to complete each event on each vessel type. Please include the total number of events for each vessel type that the bidder estimates will occur over the duration of the remediation (including the final event) on the Bid Cost Spreadsheet. Proposed unrealistic low number of vapor and liquid

phase treatment vessel change out events will reduce the favorability of the bid as viewed by the bid evaluation committee. These costs will be entered into the milestone payment schedule with the quoted Unit Costs under the Fixed Cost/Payment Request Amount and a “TBD” Estimated Completion Month, Number of Events and Extended Cost. Costs associated with this task would not be included in the Base Contract Price total.

**Milestone M – Electric Utility Bills:** Since the monthly electric charges can be variable, consultants should not include any costs for monthly electric charges in their fixed price bid, as all monthly electric charges will be handled separately. Monthly electric bills will be paid based on the actual bill amount with no mark-up and will be treated as a separate milestone payment in the Remediation Agreement with a cost to be listed in the milestone schedule as “actual cost”.

**Milestone N – Communication Utility Bills:** Since the monthly communication (Telemetry) charges associated with any remedial telemetry system can be variable and may or may not be applicable to all bidders, bidders should note the following:

- Bidders that are not proposing to use a telemetry system should not include any costs for monthly communication charges in their fixed price bid. The Bid Cost Spreadsheet should have a 1 entered as the Number of Units with a \$0.00 amount entered in the cost section.
- Bidders that are proposing to use a telemetry system should enter in the Bid Cost Spreadsheet a fixed cost of \$75.00 per unit and the number of Units should be the total number of months for the bidder’s proposed remediation timeframe. Monthly communication bills will be paid based on the actual bill amount with no mark-up and will be treated as a separate milestone payment in the Remediation Agreement with a cost to be listed in the milestone schedule as “actual cost”.

**Milestone O – Demonstration of Groundwater Attainment:** For this Milestone, bidders should include all necessary activities and costs associated with the completion of a groundwater monitoring and sampling attainment program. Bid responses should clearly detail the approach proposed to complete the PADEP’s attainment monitoring requirements. Costs for each quarterly event in this Milestone should include the costs to prepare and submit quarterly RAPRs as well. The groundwater monitoring, sampling and reporting efforts completed as part of the demonstration of attainment should be done in a manner consistent with

Milestone E. This Milestone includes the preparation and submittal of a groundwater attainment events reduction request. The letter should include all necessary information and data to support the request and be submitted to the PADEP, with copies provided to the Solicitor and PAUSTIF. Demonstration of attainment activities completed under this Milestone shall be documented and reported in quarterly RAPRs and the Remedial Action Completion Report.

If additional groundwater attainment monitoring quarterly events (sampling and reporting) beyond the 8 quarterly events included in this Milestone's costs (to be noted as Milestone O1 through O8 in the Remediation Agreement) are needed, then up to 4 additional events will be handled as Optional Cost Adders (Milestones O9 through O12). Optional Cost Adder Milestones O9 through O12 will require approval from all parties before proceeding.

Specifically, bidders should include the following costs in their bid response –

- Milestone O (Milestone O1 through Milestone O8) – Costs to complete the 8 quarterly groundwater attainment events.
- Milestones O9 through O12 (Optional Cost Adder) - Provide a Unit Cost to complete one additional groundwater attainment sampling event and the subsequent RAPR preparation and submittal.

**Milestone P – Demonstration of Soil Attainment:** For this Milestone, bidders should include all necessary activities and costs associated with the completion of a soil boring program that will demonstrate attainment of the selected soil standards for all COCs. Bid responses must describe in detail how the soil boring program will be completed and reference relevant data, historic investigations and the location of the active UST system in the source area. Specifically, each bid response must discuss, in detail, the soil sampling depth interval, the interpreted depth to the saturation zone, an illustration of the sampling grid location and extent, and how the aforementioned parameters were selected.

Bid responses should note the following:

- If a bidder feels it is appropriate and necessary to complete hole-clearing activities before advancing the borings, the cost should be included in their proposal and costs. If a bidder includes the cost to complete hole-clearing, they should state it in their proposal and discuss why it is appropriate and necessary. As discussed in the RFB, cost is not the only factor when evaluating proposals and other factors are taken into consideration during the review process, including appropriate safety measures.

- Soil samples shall be collected using Encore Samplers (or equivalent) and field-preserved in laboratory-provided glassware with the appropriate preservatives (e.g., methanol or sodium bisulfate) provided by the laboratory in general accordance with USEPA Method 5035 and the PADEP guidance.
- Sampling equipment should be decontaminated (if necessary) prior to sample collection in accordance with generally accepted industry practices.
- In addition, one equipment blank sample (if necessary) will be collected and submitted per day of sampling.
- Soil samples collected during this event will be sent to an accredited laboratory to be analyzed for the above noted COCs, using PADEP required analytical methods.
- Samples should be properly handled under chain of custody documentation protocol and kept cold from sample collection until the samples are relinquished to the accredited laboratory.
- The laboratory to be utilized should be identified in the bid package.
- Demonstration of attainment activities completed under this Milestone shall be documented and reported in the Remedial Action Completion Report.
- **All IDW waste** should be disposed of per the instructions included in the “General SOW Requirements” and “Site Specific Milestones” section of the RFB.

**Milestone Q – Indoor Air and Soil Gas Sampling:** Historically, indoor air and soil gas sampling has indicated exceedances of the PADEP Indoor Air Criteria Nonresidential MSCs. Based on the nature of the activities conducted at this Site (on-site maintenance garage), there is a potential risk of indoor air quality being impacted from these activities. This Milestone will consist of sampling soil gas at two sub-slab locations and collection of two indoor air samples. Prior to completing this Milestone and receiving reimbursement from PAUSTIF, the selected bidder will need to demonstrate that post remedial groundwater and or soil data warrants the performance of this Milestone.

For this Milestone, the costs should include the necessary time and material needs to coordinate and collect the proposed samples. Samples are to be collected from each of the proposed locations during two separate sampling events appropriately spaced.

Bidder responses should note the following:

- All vapor intrusion investigation activities should be completed in a manner consistent with the Land Recycling Technical Guidance Manual – Section IV.A.4 Vapor Intrusion into Buildings from Groundwater and Soil under the Act 2 Statewide Health Standards, Document 261-0300-101, dated January 19, 2019.
- Sampling should be performed using a tracer gas to confirm that ambient air is not short-circuiting and mixing with the sub-slab soil gas samples. Photo documentation of the tracer gas procedure should be part of the documentation required for this Milestone.
- Samples should be collected in laboratory provided Summa canisters equipped with laboratory calibrated flow regulators and analyzed for the above noted COCs, via appropriate analytical methods. Bid responses should clearly identify the proposed laboratory analytical method.
- The laboratory to be utilized should be identified in the bid package.
- Results from soil gas/indoor air sampling activities (if conducted) will be summarized and presented in Remedial Action Completion Report

**Milestone R – Preparation and PADEP Approval of Remedial Action Completion Report:** Prepare and submit a Remedial Action Completion Report (RACR) that will appropriately present an evaluation of current Site conditions and present significant conclusions and request closure and a relief of liability from the PADEP for all COCs, in all media. The information gathered during the activities completed as part of Milestone A through Milestone O should be incorporated into a comprehensive RACR that will be submitted to the PADEP and will facilitate the objective to complete regulatory requirements governing the RACR and gain PADEP approval for the report. Specifically, the report should summarize the results of the recent investigations, the findings of any previous investigations, a comprehensive Site history, sensitive receptor information, geologic data, results and analysis of historical aquifer testing, discussion on the completed remediation efforts, summary of the predictive modeling efforts completed, risk assessments, and a series of summary tables, appendices, and figures illustrating the information provided in the report.

The report will be completed following the guidelines specified in Pennsylvania Code, Title 25, Chapter 245 and the Land Recycling Program (Act 2) Technical

Guidance Manual for a RACR. The RACR shall be sealed by a Professional Geologist registered in the State of Pennsylvania.

The draft RACR and all AutoCAD maps / plans included in the report (e.g., site plan / base map, groundwater elevation maps, dissolved plume maps, soil contaminant distribution maps, etc.) and appendices (e.g., boring logs, tables, waste disposal documentation, aquifer testing and analysis, remedial actions, soil and groundwater attainment sampling results, etc.) shall be submitted electronically (in Adobe PDF format) to the Solicitor and PAUSTIF for review / comment at least 2 weeks prior to finalizing the RACR. Once the selected consultant has addressed comments on the draft, the selected consultant shall finalize and issue the report to the PADEP.

The cost for Milestone R will be reimbursed as follows:

- R1 – RACR PADEP Submittal: 75% of proposed Milestone cost
- R2 – RACR PADEP Approval: 25% of proposed Milestone cost

**Milestone S – Site Restoration / Well Abandonment:** Following confirmation that cessation of the remedial strategy is appropriate, any remaining equipment should be removed, and the Site restored to as close a condition as possible to those that existed prior to the remediation efforts. The selected consultant will abandon all of the monitoring wells in accordance with Pennsylvania Act 610 and the PADEP Groundwater Monitoring Guidance Manual. Upon completion, a well abandonment report will be prepared and submitted to the DCNR on behalf of the solicitor. Bidders should specify in the bid packages how the wells will be abandoned, and the Site restoration activities included in the specified costs.

#### **Optional Cost Adder Milestones**

**Milestone T – Indoor Air and Soil Gas Sampling:** Provide a Unit Cost for the collection of one round of samples from all soil vapor points and indoor air sampling locations. The scope of work for this cost adder should follow the sampling guidelines in Milestone Q.

**Milestone U – Soil Gas Sampling:** Provide a Unit Cost for the collection of one round of samples from the two previously installed soil gas sampling points (SV-1 and SV-2). The scope of work for this cost adder should follow the sampling guidelines in Milestone Q.

**Milestone V – Additional Quarterly Groundwater Monitoring, Sampling, and Reporting Before Remediation Implementation:** Provide a Unit Cost to complete one additional groundwater sampling event and the subsequent RAPR preparation. The scope of work for this cost adder should follow Milestone E.

**Milestone W – Additional Potable Well Sampling:** Provide a Unit Cost to complete one potable well sampling event (both onsite and offsite potable wells). The scope of work for this cost adder should follow Milestone F.

**Milestone X – Potable Well Sampling Add-on:** Provide a Unit Cost to add one additional potable well to either a quarterly or annual routine potable well sampling event. The scope of work for this cost adder should follow Milestone F.

**Milestone Y – POET Maintenance – Carbon Change Out:** One off-site property has a POET installed that still requires maintenance based on historic sampling results. The POET is sampled on a periodic basis as discussed in the potable well sampling milestone. The treatment system consists of one pre-filter, two 75-pound granular activated carbon (GAC) vessels arranged in series, and a flow totalizer. Should laboratory analytical results indicate it's necessary, both GAC vessels in the POET shall be changed out as soon as possible. The GAC will be replaced with virgin potable grade GAC suitable for treatment of the COC's and the spent carbon will be returned to the manufacturer for recycling and/or transported off-site for disposal. The pre-filter should also be changed at that time. Upon completion of the carbon change out, two confirmatory sampling events shall be conducted two weeks apart to verify proper operation and treatment with influent and mid-fluent samples analyzed via EPA Method 8260B and the effluent samples analyzed via EPA Method 524.2. Upon receipt of the laboratory analytical reports the bidder shall prepare and submit a letter format report to the individual property owner with copies provided to the Solicitor, PADEP and PAUSTIF. This optional cost adder Milestone is for the carbon change out at a single residence. However, this Milestone may be utilized multiple times if necessary.

**Milestone Z – POET Removal:** A total of one off-site property has a POET installed that still requires maintenance based on historic sampling results. If approval is received to discontinue the sampling and maintenance, the POET system will need to be removed. The cost provided for this Milestone should include all labor and materials to remove one POET system and properly dispose of any spent carbon and other materials.

In the event groundwater conditions at the off-site property warrant continued groundwater sampling and POET maintenance following PADEP approval of the

RACR, costs associated with this work will be addressed separately outside of the Remediation Agreement.

**Additional Information**

In order to facilitate PAUSTIF's review and reimbursement of invoices submitted under this claim, the Solicitor requires that project costs be invoiced by the milestone identified in the executed Remediation Agreement. Actual milestone payments will occur only after successful and documented completion of the work defined for each milestone. The selected consultant will perform only those tasks/milestones that are necessary to reach the Objective identified in this RFB. Selected consultant will not perform, invoice, or be reimbursed for any unnecessary work completed under a milestone.

Any "new conditions", as defined in Attachment 1, arising during the execution of the SOW for any of the milestones may result in termination of or amendments to the Remediation Agreement. Modifications to the executed Remediation Agreement will require the written approval of the Solicitor and the PAUSTIF (for funding consideration). PADEP approval may also be required.

## List of Attachments

1. Remediation Agreement
2. Bid Cost Spreadsheet
3. Site Information/Historic Documents
  - a. SCR/RAP March 15, 2017
  - b. SCR/RAP Revision April 13, 2017 (Report is dated March 15, 2017)
  - c. PADEP RAP Approval May 2, 2017
  - d. RAPR/RRAP 4th Quarter 2018 January 31, 2019
  - e. PADEP RRAP Disapproval Letter March 27, 2019
  - f. RAPR 1<sup>st</sup> Quarter 2019 April 29, 2019
  - g. RAPR 2<sup>nd</sup> Quarter 2019 July 31, 2019