

Request for Bid

Fixed-Price Bid to Result

To Complete Remediation Project and Closure Activities

Solicitor

3608 Newtown Square Inc.

Newtown Square Amoco

**3608 West Chester Pike
Newtown Square, PA 19073-4104**

PADEP Facility ID #: 23-09154 PAUSTIF Claim #: 2013-0161(I)

Date of Issuance

November 30, 2018

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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 subject to application of \$5,000 deductible and 0% proration. Solicitor is responsible to pay any applicable deductible and/or proration. The deductible has been met.

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 | December 14, 2018 by 5 p.m. |
| Mandatory Pre-Bid Site Visit | December 17, 2018 at 11 a.m. |
| Deadline to Submit Questions | January 14, 2019 by 5 p.m. |
| Bid Due Date and Time | January 23, 2019 by 3 p.m. |

Contact Information

| Technical Contact |
|---|
| <p>Mr. Tim Pilcher, P.E. B&B Diversified Enterprises, Inc. PO Box 70 Barto, PA 19504 Phone – 570-369-5410 Fax – 610-845-0650 Email – tpilcher@bbde.com</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 “[insert Site name and claim number provided on cover page] – 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 "[insert Site name and claim number provided on cover page] – 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.

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 International, 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 # [insert claim number provided on cover page]".** 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 USTIF 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. USTIF 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 USTIF 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, USTIF will only provide funding up to the highest fixed price of those bids determined to be Reasonable and Necessary for USTIF funding.

General Site Background and Description

Each bidder should carefully review the existing information and documentation provided in Attachment 3. The information and documentation has 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

Newtown Square Amoco
3608 West Chester Pike
Newtown Square, PA 19073-4104

Site Location and Operation Information

The Site is located at 3608 West Chester Pike, on the southeast corner of the intersection of West Chester Pike and Newtown Square Road, in Newtown Square Township, Delaware County, Pennsylvania. The subject property is an active automotive fueling station. Historic operations at the Site included retail fuel sales, slab-on-grade, masonry building. The site was first developed as a retail petroleum facility in 1956. The former underground storage tanks (USTs) were installed in this time frame and were used to store and dispense petroleum products. The location of those former USTs is unknown but believed to have been in the same location as the current gasoline USTs. Currently, the Site contains three (3) 10,000-gallon gasoline USTs (installed in 1974), located on the northwestern portion of the Site and one (1) 10,000-gallon diesel UST (installed in 1981) located on the western portion of the site.

The Site and most surrounding properties are zoned as commercial or educational. To the north across West Chester Pike, there are two banks and a seafood store. To the west across Newtown Square Road, there is an animal hospital, a school and autobody shop. To the south, there is The Niemeyer Corporation (small engine repair) and a restaurant. To the east, there is Benari Jewelers and a Mobil gas station. The nearest residential neighborhoods are located approximately 750 feet west and north of the Site. Public water and public sewer services are available at the Site.

Bedrock has not been encountered during any of the previous investigations conducted at the Site. Groundwater is present at the Site in the unconsolidated overburden aquifer at depths ranging from approximately 17 to 23 feet below grade. Groundwater flow direction at the Site is variable and ranges from southeast, south to southwest.

A review of the PADEP eF.A.C.T.S website indicates a confirmed release of unleaded gasoline to soil at the Site on August 5, 1989. Cleanup was completed on June 10, 1996.

A Storage Tank Notification of Contamination Report (NOC) was received by the Pennsylvania Department of Environmental Resources (PADER), predecessor to the Pennsylvania Department of Environmental Protection (PADEP), on November 1, 1990. The NOC indicated minor and gross soil contamination, and that unleaded gasoline (free product) was observed on the blacktop drive on October 29, 1990. The Site was operated as a Gulf service station at that time and the property owner was Cumberland Farms, Inc.

On November 9, 1996, an UST Facility Operations Inspection (FOI) was conducted at the Site. Release detection methods and records were found to be noncompliant.

On March 24, 2004, a PADEP compliance inspection was conducted in response to an overdue third party inspection and deficient registration fees. Several violations were found, most notably water present in the USTs, and the station was temporarily shutdown. A PADEP Storage System Report Form dated March 31, 2004 indicated that during the March 24 inspection, water was present in the diesel mid-grade gasoline USTs. On March 26, 75 gallons of water was removed from the diesel UST and 25 gallons were removed from the mid-grade tank. On March 29 and 31, passing tightness tests were conducted on the four USTs and their associated product lines. Subsequently, the station was returned to operation.

On July 29, 2005, a resident complained of a "very strong odor" and spilled diesel fuel in an eight by four foot area near the on-site pump islands. Township records and a PADEP file review provided no other information on this spill.

On May 31, 2006, the PADEP issued a Notice of Violation (NOV) to the Site owner at that time, Mr. Ron Singh. The NOV was issued because it was determined during a FOI that the Site was being operated in violation of the PADEP release detection regulations. The PADEP requested that they be provided 2006 release detection records for Tanks 001 and 002.

On March 22, 2007, UST tightness tests were conducted at the Site. Tanks 001 through 003, along with the gasoline and diesel product piping, were determined to be tight. Tank 004 tightness test results were not available.

On November 8, 2007, as part of the Phase I, a review of the property files maintained at the Township of Newtown Municipal Office was conducted by KEM. The file review revealed groundwater sampling analytical results for samples collected at the Site in May 2002 by Mehar Investment Group, LLC from four on-site monitoring wells (MW-1 through MW-4). The Phase I states, "the only detected compounds in groundwater samples obtained at the Site were methyl tert-butyl ether (MTBE) and toluene. The detected compounds were below the PADEP Statewide

Health Standards (SHS).” The Phase I contained no laboratory analytical data to back this statement.

The Phase I included a Federal and State Regulatory Agency Database Review. The review indicated that the Site is included on the Leaking UST (LUST) list as a facility with a confirmed release(s) from USTs that have been reported to the PADEP. Completed cleanup was also indicated.

On September 24, 2013, KEM was retained to conduct an on-site groundwater evaluation because the Site was subject to foreclosure. The evaluation included monitoring and sampling of monitoring wells MW-1 through MW-4. The groundwater samples from each well were laboratory analyzed for PADEP unleaded and leaded gasoline, and diesel fuel parameters. The results indicated concentrations of benzene in MW-1 and MW-3, MTBE in MW-1 and MW-4, and ethylbenzene, xylenes, naphthalene, cumene, and lead in MW-1. The concentrations of benzene and MTBE in MW-1 were greater than the PADEP SHS.

A NOC was received by the PADEP, on October 23, 2013, based on the results of the groundwater samples collected from monitoring wells MW-1 through MW-4.

In October 2014, the solicitor retained the services of MIG Consulting, LLC (MIG) to complete site characterization activities at the site.

From October 2015 through February 2016, MIG conducted multiple soil and groundwater investigations within the source area and offsite in an effort to complete site characterization. The intent was to identify 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 October 2013. Investigation activities completed by MIG included the completion of a ground penetrating radar survey and the advancement of thirteen soil borings, two temporary well points, six monitoring wells and three temporary soil vapor points. Soil, groundwater and vapor samples were collected throughout the characterization process for laboratory analyses. The results of these activities are summarized in the Site Characterization Report (SCR), dated April 21, 2016. The SCR was approved by the PADEP in a letter dated July 20, 2016.

In June 2016, MIG conducted an additional soil and groundwater investigation within the source area and offsite in an effort to complete site characterization. The intent was to identify the source area on the Site and delineate groundwater impacts on site and off site. Investigation activities completed by MIG included the advancement of four soil borings and installation of four monitoring wells. Soil and groundwater samples were collected for laboratory analyses. The results of these additional activities are summarized in the Site Characterization Report Addendum (SCRA), dated July 22, 2016.

A Remedial Action Plan, dated July 22, 2016, was prepared by MIG and submitted to the PADEP. The selected standards listed in the RAP were Residential Statewide Health Standard (SHS) for Used Aquifers for all constituents of concern in soils and Site Specific Standards (SSS) for used aquifers for all constituents of concern in groundwater. The RAP proposed monitoring natural attenuation, combined with pathway elimination to obtain the selected cleanup standards. The PADEP approved the RAP in a letter dated October 12, 2016.

From July through October 2017, B&B had multiple discussions with the PADEP regarding several issues with the current status of the Site including the overall progress of the remedial efforts and recent increases in groundwater COC concentrations. In general, B&B discussed with the PADEP the ongoing increasing trends observed in several monitoring wells, the need to complete an accurate vapor intrusion investigation, complete a full site survey, groundwater flow and well construction issues and the validity of the F&T modeling. B&B summarized the results of the discussions in multiple emails to ICF. Copies of these emails are provided as an attachment to this RFB.

Groundwater sampling has been conducted on a periodic basis from May 2002 through the present. The most recent RAPR available for the Site is dated April 16, 2018 and contains the 1st quarter 2018 groundwater monitoring and sampling results. The selected consultant will be provided with the most recent data collected at the Site prior to start of this project.

Scope of Work (SOW)

This RFB seeks competitive bids from qualified contractors to perform the activities in the SOW specified herein. The SOW presented in this RFB was provided to the PADEP for review and comment. The PADEP responded stating that they would not review the SOW nor provide any comments or feedback.

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 release of liability from the PADEP under Chapter 245 regulations by demonstrating attainment of SHSs for soil and SSSs for groundwater. In order to achieve the aforementioned goals, Bidders may propose to remediate the Site by one of the strategies listed below:

- In Situ Chemical Oxidation
- 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 not to remediate groundwater to the SHSs but reduce groundwater/source concentrations to levels that will allow the Site's groundwater to be closed under SSSs, via pathway elimination (if possible). The selected bidder 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 (COCs)

The list of COCs for this Site include the following:

- Benzene
- Toluene

- Ethylbenzene
- Xylenes
- MTBE
- Naphthalene
- Cumene
- 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:¹

- 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 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

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

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, 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, the selected consultant shall provide a clear deadline (e.g. within 30 days of the contract being executed) as to when each of the milestones will be completed. This includes the expected date (e.g. within 90 days of the contract being executed) when the draft deliverables will be submitted to the Solicitor and PAUSTIF for review. All on-site work should be completed during the normal working days and hours of 8 am to 5 pm from Monday through Friday.
- **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. Consultants are welcome to propose or suggest a change in the SOW; however, the consultant 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 claimant has selected to remediate the Site to the PADEP SHSs for Used Aquifers for all COCs in soils and SSSs for used aquifers for all COCs in groundwater (unless select COCs can be closed under SHSs).
- **Safety Measures:** Each consultant should determine the level of safety measures needed to appropriately complete the milestones. Specifically, if a consultant 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 consultant 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 several 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 all 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 waste (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. Bidders will be responsible for arranging any offsite 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 scope of work.
- **Optional Cost Adder Milestones:** Milestone A through Milestone N (excluding Milestones L9 through L12) represent the base Scope of Work for this RFB solicitation. These milestones have been specifically developed in an effort to complete the applicable PADEP requirements. In addition to the above base Scope of Work, the Optional Cost Adder Milestones (Milestone L9 through L12, Milestone O and Milestone P) 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. For consideration of PAUSTIF reimbursement, Solicitor and PAUSTIF approval must be obtained prior to completing Optional Cost Adder Milestones.

Site-Specific Milestones

Milestone A – Obtain Off-Site Access – Provide a cost to secure offsite access on two adjacent commercial properties in an effort to complete surveying and routine monitoring and sampling. The cost should cover the necessary time and materials needed to contact each of the off-site property owners, draft an access agreement for each property, and obtain approval with one (1) draft revision to each of the access agreements. Providing this cost does not commit the 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 property. Please note that PAUSTIF will only pay the selected firm for the actual number of access agreements drafted (i.e. if a firm only drafts one agreement, then the firm will not be paid for the entire milestone).

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 – Geophysical Survey. Prior to any intrusive investigation work at the Site, a geophysical survey is to be completed at the Site. The purpose of the geophysical survey is to locate any other potential sources at the Site and any preferential pathways that may exist at the Site, as well as assist with the identification of any subsurface utilities. A report shall be provided with an explanation of the identified features. If the selected consultant chooses to do so, the report required for Milestone B can be combined with the report required for Milestone C.

Milestone D – Supplemental Site Characterization Activities and Reporting. 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 and reporting 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 D 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.

As part of this milestone, the selected consultant will be required to investigate and attempt to determine the construction methods used for monitoring wells MW-1 through MW-4. At this point in time, it is unclear how these wells were installed or constructed. The primary goal of this investigation activity is to identify the approximate screen interval for each of the monitoring wells.

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 C₄-C₁₀); 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 and Reporting. If pilot testing tasks and costs are included in this Site Characterization Milestone, the bidder's technical score will be negatively impacted.

Milestone E – Site Survey. Following the completion of Milestones A through D, 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 onsite and offsite 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.

Milestone F – J&E Modeling, Soil Vapor Sampling Point Installation and Soil Gas Sampling – As previously indicated, there are concerns with regards to the soil vapor intrusion investigations completed at the Site. Specifically, the PADEP has requested that the previously completed J&E modeling be updated using the current data set and other relevant information. The vapor intrusion investigation is to be completed in accordance with the PADEP Vapor Intrusion Technical Guidance Manual, dated January 18, 2017. The milestone will be completed in two steps (Milestone F1 and Milestone F2). Prior authorization from the Solicitor and ICF will be necessary before completing Milestone F2.

- Milestone F1 will be completing the J&E modeling for the Site. If the results of the J&E modeling indicate an unacceptable risk to the occupants of the onsite building or any offsite buildings, Milestone F2 will be completed. A summary of the J&E modeling results should be provided to the Solicitor and ICF for their review. The modeling results will be summarized and presented in the report to be completed as part of Milestone J.
- Milestone F2 will be the installation and sampling for the soil vapor points (SVPs). The SVPs should be constructed to near source sample depths. Bid responses should clearly discuss how points will be constructed and where they will be installed.

For Milestone F2, the costs should include the installation and sampling the appropriate number of soil vapor points. Samples are to be collected from each of the proposed SVPs during two separate sampling events appropriately spaced. Please note that PAUSTIF will only pay the selected firm for the actual number of events conducted (i.e. if a firm includes the costs to complete 1 event, but no event is conducted; then the firm will not be paid for the milestone). The selected consultant should be prepared to conduct the first soil gas/indoor air sampling event at the Site within two weeks of the installation of the SVPs. The selected consultant should conduct the second event at an appropriate timeframe after the first event. As part of the soil gas investigation, the selected consultant should consider the following:

- Soil Vapor Points will be advanced in appropriate locations, based on available site data. The proposed locations should be provided in the bidder's response.
- Sampling should be performed using a tracer gas to confirm that ambient air is not short-circuiting and mixing with the soil gas samples. Photo documentation of the tracer gas procedure should be part of the documentation required for this milestone.
- The vapor intrusion investigation 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 18, 2017. Bid responses should specifically indicate how the consultant anticipates constructing the proposed soil gas point and completing the proposed sampling events.
- Samples should be collected in laboratory provided Summa canisters equipped with laboratory calibrated flow regulators and analyzed for the above noted COCs.
- The laboratory to be utilized should be identified in the bid package. Upon receipt of the results, the consultant should forward a copy of the analytical data to the solicitor and PAUSTIF (or its designated representative).
- Results from soil gas point installation and soil gas/indoor air sampling activities should be summarized and presented in the report to be completed as part of Milestone J.

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 Milestone G 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 unreasonable narrow will reduce the favorability of the bid as viewed by the bid evaluation committee.

Please note that all bidders shall perform a pilot test, even if the bidder is proposing to use exactly the same remedial technology and design as specified in a PADEP approved RAP for the subject site. In the event a bidder is proposing to use exactly the same remedial

technology and design as specified in a PADEP approved RAP for the subject site, the bidder shall perform pilot testing to confirm the data and conclusions presented in the PADEP approved RAP and to confirm that the proposed remedial system and design as proposed in the bid response is feasible.

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 Milestone G 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 Milestone G. 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 from Milestone G, 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 Milestone G could not have reasonably been expected prior to conducting the Milestone G 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 G 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 N (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 N (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 – 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 consultant. Specifically, consultants should include costs to complete all quarterly groundwater sampling activities scheduled to be completed prior to the implementation of the remedial strategy. Bid responses as well as the Bid Cost Spreadsheet should clearly indicate the number of quarters that are included in the costs for this milestone. Please note that USTIF will only pay the selected firm for the actual number of events conducted (i.e. if a firm includes the costs to complete two (2) events, but only one (1) event is conducted; then the firm will only be paid for the one (1) event completed). 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 sampling event, the selected consultant should prepare a summary progress report for submittal to the PADEP.

Each event should include the following:

- 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.
- Record the depth to water readings from the monitoring wells and then use the data to determine water level elevations such that groundwater flow direction can be confirmed.
- Groundwater sampling activities should be conducted in accordance with generally accepted practices as outlined in the final version of the PADEP Groundwater Monitoring Guidance Manual.
- 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 (3) volumes of the water column or via low flow sampling method.
- Sampling equipment should be decontaminated prior to sample collection in

accordance with generally accepted industry practices.

- Following purging activities, groundwater samples should be collected as quickly as practical from each of the wells into laboratory supplied bottleware.
- 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.
- Groundwater samples collected during each of the events will be sent to an accredited laboratory to be tested for the above noted COCs in accordance with Pennsylvania's Storage Tank Regulation procedures and cleanup standard criteria as specified in Pennsylvania's Act 2.
- In addition to the samples collected from the monitoring wells, one (1) duplicate sample and one (1) equipment blank sample will be collected and submitted per day of sampling.
- The laboratory to be utilized should be identified in the bid package. Upon receipt of the results, the consultant should forward a copy of the analytical data to the solicitor and ICF.
- The quarterly progress reports should detail the observations documented during the event, summarize the analytical results, map the groundwater flow direction for the Site, provide iso-concentration maps for compounds exceeding the SWHS, provide hydro-graphs, discuss the interim remediation efforts (if any), and provide additional scheduling details for upcoming events. A draft of the progress report should be provided to the Solicitor for review and approval prior to submittal to the PADEP. Once the report is approved by the Solicitor, the report can be finalized and submitted to the PADEP.
- **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 I - 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. The results of the modeling will be included in the report prepared under Milestone J.

Milestone J – Preparation and PADEP Approval of a Site Characterization Report Addendum (SCRA) / Remedial Action Plan (RAP). Following the completion of the activities proposed in Milestones A through G, and a relevant number of events in Milestone H, the selected consultant will prepare a combined SCRA/RAP for the Site. The information gathered during the aforementioned milestones should be incorporated into a comprehensive SCRA with RAP 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 RAP 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 RAP 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 RAP. The RAP 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 RAP should clearly define the anticipated standards selected for the project. The aforementioned standards should be supported in the RAP 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 / RAP 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 prior to finalizing the RAP. Once the selected consultant has addressed comments on the draft, the selected consultant shall

finalize and issue the report to the PADEP. The draft report is to be submitted no later than the date specified in the schedule presented by the selected bidder.

Milestone K – Remedial Design, Installation and Implementation. For this milestone, bidders should include all necessary activities and costs associated with the design, purchase, installation, startup, and implementation 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:

- In Situ Chemical Oxidation
- 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.

This milestone would cover all activities and costs related to the implementation of the strategy as described in the selected consultant's approved RAP including the quarterly groundwater sampling events and quarterly remedial progress reports to be completed during the implementation of the remedial strategy. As discussed, the fixed cost for this milestone in submitted bid responses needs to include all activities and sufficient costs related to the selected remediation strategy. Where applicable, this may include activities such as all telemetry triggered visits, all carbon change outs, and equipment maintenance, etc. The only cost that should be excluded from the bid response is the monthly electric bill, which is discussed below in greater detail. A professional estimate of the expected monthly electric charges should be provided in the bid response.

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 should clearly note how the payments for this milestone will be specifically broken out (i.e., K1, K2, K3...) for the remedial strategy, the anticipated

completion date, and the documentation to be submitted as proof of payment by providing a specific milestone schedule in the bid response 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.

- 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.
- The Solicitor and PAUSTIF will be provided the opportunity to inspect and confirm the remediation strategy has been implemented as per the RAP.
- Where applicable, the bid response should describe what permits are anticipated and include all associated costs in this milestone.
- 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.
- Bid responses should provide a specific proposed remediation timeline and expected results with a discussion as to how the proposed timeline was calculated.
- 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.
- 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.
- Quarterly groundwater sampling events proposed to be completed during the implementation of the remedial strategy should be included in Milestone K and conducted in a manner consistent with Milestone H.
- Following the completion of each quarterly groundwater sampling event, the selected consultant should prepare a Remedial Action Progress Report (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 events. A

draft of the RAPR should be provided to the Solicitor for review and approval prior to submittal to the PADEP. Once the report is approved by the Solicitor, the report can be finalized and submitted to the PADEP.

- Please note that PAUSTIF will only pay the selected firm for the actual number of milestone or events conducted (i.e. if a firm includes the costs to complete two (2) events, but only one (1) event is conducted; then the firm will only be paid for the one (1) event completed).
- 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.
- If there is an unscheduled shutdown of the system, the selected bidder must notify the Solicitor and PAUSTIF within 48 hours after knowledge of the shutdown. If there is a scheduled shutdown of the system that will last greater than seven days, the selected bidder must notify the Solicitor and PAUSTIF at least 30 days prior to the planned system shutdown.
- 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 and will be treated as a separate milestone payment in the Remediation Agreement with a cost to be listed in the milestone schedule as TBD. Please note that USTIF will not reimburse any markup added the monthly electric bill as it is a utility related expense.

With this being a Bid-to-Result RFB, please note that this Milestone also has a performance-based component to it. In the event that the remedial system operated for the entire time specified in the selected bidder's bid response, and the criteria for demonstrating attainment of the selected standards as described in the RFB is not met either prior to the initiation of attainment activities, during any of the eight quarters of the initial attainment groundwater demonstration following system shutdown, or based on soil attainment sampling then the system must be restarted within seven days following the receipt of the analytical results and operated for an additional two quarters at no additional cost to the Solicitor. Please note, this includes the necessary groundwater sampling as well as reporting costs required to be completed during each of the quarters. The two aforementioned quarters will be included in the milestone schedule with separate

milestone designations in the Remediation Agreement with \$0 and marked as TBD in a similar fashion to the Optional Cost Adder Milestones.

If, following system shut down and restart, attainment of the selected standards can be reinitiated, PAUSTIF will reimburse (assuming all conditions have been met) remaining Milestone L events (L1 through L8). Any additional attainment groundwater sampling events beyond the 8 events included as part of Milestone L will be completed as an Optional Cost Adder Milestone L9 through L12 and will require approval from all parties before proceeding. In the event that attainment of the applicable remediation standards are determined to not be feasible following the additional two quarters of system operation, the selected bidder or the Solicitor would have the option to terminate or modify the Remediation Agreement (PAUSTIF approval required for funding).

Milestone L – 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 (i.e. wells, quarters, etc.) to complete the PADEP's attainment monitoring requirements. Costs for each quarterly event in Milestone L 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 H.

As discussed in Milestone K, this is a Bid-to-Result RFB and as such there are some performance based components to the project. If some or all of the events included in Milestone K are unable to be completed due to the incomplete remediation of the Site to the selected standards, then PAUSTIF will only pay the selected firm for the actual number of milestone or events conducted (i.e. if a firm includes the costs to complete 8 quarterly events, but only one event is conducted; then the firm will only be paid for the one (1) event completed).

If additional groundwater attainment monitoring Milestone L quarterly events (sampling and reporting) beyond the 8 quarterly events included in the Milestone L costs (to be noted as Milestone L1 through L8 in the Remediation Agreement) are needed, then up to 4 additional events will be handled as an Optional Cost Adder (Milestones L9 through L12). Optional Cost Adder Milestones L9 through L12 will require approval from all parties before proceeding.

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

- Milestone L (Milestone L1 through Milestone L8) – Costs to complete the 8 quarterly groundwater attainment events (sampling and reporting)

- Milestone L9 (Optional Cost Adder) - Provide a Unit Cost to complete one additional groundwater attainment sampling event and the subsequent RAPR preparation. The scope of work for this cost adder should follow Milestone H.
- Milestone L10 (Optional Cost Adder) - Provide a Unit Cost to complete one additional groundwater attainment sampling event and the subsequent RAPR preparation. The scope of work for this cost adder should follow Milestone H.
- Milestone L11 (Optional Cost Adder) - Provide a Unit Cost to complete one additional groundwater attainment sampling event and the subsequent RAPR preparation. The scope of work for this cost adder should follow Milestone H.
- Milestone L12 (Optional Cost Adder) - Provide a Unit Cost to complete one additional groundwater attainment sampling event and the subsequent RAPR preparation. The scope of work for this cost adder should follow Milestone H.

Milestone M – Preparation and PADEP Approval of Remedial Action Completion Report. Prepare and submit a RACR for the PADEP approval that will appropriately present an evaluation of current Site conditions and present significant conclusions and request closure and a release from liability from the PADEP for all COCs. The information gathered during the activities completed as part of Milestone A through Milestone L 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 the 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 Remedial Action Completion Report. The RACR shall be sealed by a Professional Geologist registered in the State of Pennsylvania. A draft RACR shall be submitted electronically (in Adobe PDF format) to Solicitor and ICF for review / comment 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 report submission is to be submitted no later than the date specified in the schedule presented by the selected consultant. 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, disposal documentation, fate and transport modeling, risk assessment and sensitive receptor information) shall also be submitted electronically and in hard copy to Solicitor and ICF for review / comment prior to finalizing the report.

Milestone N – 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 prior to the remediation efforts. The selected consultant will abandon all of the monitoring wells in accordance with Pennsylvania Act 610 and the 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.

Milestone O - Soil Gas Sampling (Cost Adder Milestone). Provide a Unit Cost for the collection of one round of samples from all vapor sampling points. The scope of work for this cost adder should follow the sampling guidelines in Milestone F.

Milestone P – Additional Quarterly Groundwater Monitoring, Sampling, and Reporting Before Remediation Implementation. (Cost Adder Milestone). 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 H.

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. Attachment 3A – Phase I November 2007
 - b. Attachment 3B – Phase II October 2013
 - c. Attachment 3C – SCR April 2016
 - d. Attachment 3D – SCRA July 2016
 - e. Attachment 3E – RAP July 2016
 - f. Attachment 3F – PADEP April 2016 SCR Approval Letter
 - g. Attachment 3G – PADEP July RAP Approval Letter