

Request for Bid

Fixed-Price Defined Scope of Work

Installation, Operation, and Maintenance of Remedial System, Remedial System Performance Monitoring, and Quarterly Groundwater Monitoring, Sampling, and Reporting.

Solicitor

United Refining Company

**Kwik Fill M-209
5574 Route 8
Barkeyville, Pennsylvania**

PADEP Facility ID #: 61-23779 PAUSTIF Claim #: 2015-0054(F)

Date of Issuance

November 2, 2017

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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. Solicitor is responsible to pay any applicable deductible and/or proration.

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	November 14, 2017 by 5 p.m.
Mandatory Pre-Bid Site Visit	November 15, 2017 at 10 a.m.
Deadline to Submit Questions	November 27, 2017 by 5 p.m.
Bid Due Date and Time	December 19, 2017 by 3 p.m.

Contact Information

Technical Contact
Mr. Timothy 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

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.

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

Kwik Fill Station M-209
5574 State Route 8
Barkeyville, Pennsylvania
Barkeyville Borough, Venango County

Site Location and Operation Information

The Site is located on the northeastern corner of the intersection of PA Route 347 and Hilltop Road in Barkeyville Borough, Venango County, Pennsylvania. The Site is located on a parcel of land with an approximate size of 93.4 acres. The parcel includes two separate retail petroleum stations (Kwik Fill M-209 and M-388) as well as a motel and a restaurant. Specifically, the subject facility (Kwik Fill M-209) includes a one-story slab on grade building with four 10,000-gallon diesel USTs and six product dispensers. The Kwik Fill M-388 facility also includes a one-story slab on grade building and separate gasoline/diesel UST system and is located to the east of Kwik Fill M-209. The two facilities are separated by the two-story restaurant and motel. The surrounding properties are a mix of residential, undeveloped and commercial properties.

Site Background Information

Historically, multiple releases were reported at the Site. First, a product line failed annual tightness testing in November 1996 that led to the initiation of characterization activities at the Site and the confirmation of unleaded gasoline COCs above the applicable PADEP standards in groundwater and soil. An additional line failed tightness testing the following year in October 1997. Limited information indicates that USTs were removed from the Site in April 1998 due to multiple holes noted in the USTs during an internal inspection. There is no record that a release related to the holes in the USTs was reported at the Site or that UST Closure activities were completed. A series of characterization activities were completed at the Site following the releases as well as pilot testing and the operation of a remediation system from November 1998 through January 2004 to mitigate soil and groundwater. A report titled "Additional Site Characterization/Remedial Action Completion Report" was submitted and approved by the PADEP in June of 2006. The selected remedial closure standards for the historical releases were a combination of Statewide Health Standards and Site Specific Standards for soil and groundwater.

In April 2015, ponded product / stained backfill was noted in two dispensers (diesel #1/2 and #7/8), but no active leak was observed. Characterization Activities began in August 2015 and continued until present. In a recent SCR, the current consultant summarized the characterization completed to date as follows –

- *Advanced 11 soil borings (SB-1 through SB-11);*
- *Collected one Shelby tube to evaluate soil properties;*
- *Constructed 13 shallow overburden aquifer groundwater monitoring wells (MW-1 through MW-9, MW-10S, MW-11, MW-14, and MW-15);*
- *Constructed 4 deep overburden aquifer groundwater monitoring wells (MW-10D, MW-12, MW-13, and MW-16);*
- *Installed three sub-slab soil gas monitoring points (SS-1 through SS-3) and collected two rounds of sub-slab soil gas samples;*
- *Completed slug testing at four groundwater monitoring wells (MW-3, MW-11, MW-14, and MW-16);*
- *Completed 81 soil samples at soil boring and groundwater monitoring well location; and*
- *Completed nine rounds of groundwater gauging and sampling.*

In September 2016, a SCR was submitted for the Site. The SCR summarized the release investigation and characterization completed to date. A SCR Addendum / RAP was prepared and submitted to the PADEP a few months later in November 2016. The November 2016 SCR Addendum / RAP referred back to the September 2016 SCR regarding characterization, but did not provide details on the proposed remedial approach. Specifically, the November 2016 SCR Addendum / RAP discussed the installation of four SVE points and then the completion of 8-

hour High Intensity Targeted (HIT) remediation events using a mobile vacuum truck on a twice a month schedule for a twelve-month period.

The PADEP disapproved the November 2016 SCR Addendum / RAP report in a correspondence dated January 13, 2017. The PADEP correspondence indicated that the November 2016 SCR Addendum / RAP was disapproved due to concerns with the vapor intrusion evaluation, the length of stay allowed at the on-site motel, and insufficient information to complete a remedial design due to an incomplete characterization.

In June 2017, a Revised SCR / RAP was submitted to the PADEP. The aforementioned report indicated that the selected standards for the Site are the Non-Residential Statewide Health Standards for all constituents of concern in both soil and groundwater. In addition, the SCR / RAP proposes additional characterization activities “In order to validate the current CSM and fill potential data gaps”. Specifically, the SCR / RAP proposes the following:

- *Install two additional deep overburden aquifer groundwater monitoring wells in the paved area of the site to verify DPH impacts identified in AOC2 related to the April 2015 diesel release are confined to the shallow overburden aquifer near the dispenser islands.*
- *Re-install and re-construct groundwater monitoring well MW-10D to confirm that the well is monitoring the deep overburden aquifer water-bearing zone and not the bedrock aquifer.*
- *Install one additional shallow overburden aquifer groundwater monitoring well to the northeast of the dispenser #1/2 release area.*

The SCR / RAP also detailed the remedial feasibility study completed at the Site in March 2017 and then proposed the installation of a remediation system. Specifically, the SCR / RAP proposes the installation and operation of a vacuum enhanced groundwater extraction (VEGE) system that combines the technology of SVE with a pump and treat strategy.

In a correspondence dated August 22, 2017, the PADEP approved the Revised SCR / RAP dated June 2017 without modification. The aforementioned correspondence noted that the report indicated the selection of standards as the non-residential Statewide Health Standards for both soil and groundwater.

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. No response was received from the PADEP.

Objective

In general, the SOW described in this RFB requires pre-remedial groundwater gauging, sampling, and reporting on a quarterly basis; installation of the proposed VEGE remediation system as described in the June 2017 RAP; start-up and shakedown of the installed remediation system; eight (8) quarters of operation and maintenance (O&M) of the VEGE remediation system; performance monitoring, sampling, and reporting related to operation of the remediation system; an engineering evaluation of the remediation system's effectiveness after four quarters and seven quarters of O&M activity; and eight (8) quarters of quarterly groundwater monitoring, sampling and reporting. These work scope elements are not intended to include all tasks leading to site closure for the covered release impacts in soil or groundwater, although it is possible that site conditions could materialize during the contract period that suggest it is time for site closure tasks consistent with the Solicitor's selected remediation standard. The SOW contained in this RFB has been developed and structured as a limited duration, defined work scope-type solicitation. Therefore, in reviewing the quality of bids submitted under this type of solicitation, there is a greater emphasis placed on cost over technical approach (as compared to bids offered in response to "Bid to Result" RFBs). Nevertheless, technical detail, accuracy, and completeness remain important and are evaluated against the SOW requirements.

Constituents of Concern (COCs)

- 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 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

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

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 (i.e., within 30 days of the contract being executed or a specific date) as to when each of the milestones will be completed. This includes the expected date when the system construction will begin and the date of system startup. Please note that bid responses need to provide a very detailed schedule and that the expectation is that the schedule included in the bid responses will at a minimum meet all of the scheduling deadlines included in the recently approved June 2017 Revised SCR / RAP. In addition, the claimant has requested that the implementation of the SOW included in this RFB needs to begin by April 2, 2018. It is anticipated that the Remediation Agreement will be signed by the selected consultant and the claimant by no later than mid February. 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 ICF/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, adequately characterize the Site, and move the Site towards closure. By submitting a bid, Bidders agree that the proposed system will be effective in remediating the Site.
- **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.

- **Safety Measures:** Each bidder 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 (i.e. utility clearance and/or air knifing before trenching), 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.
- **Waste Disposal:** All IDW waste 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.
- **Optional Cost Adder Milestones:** Milestone A through Milestone M represents the base Scope of Work for this RFB solicitation. These milestones have been specifically developed in an effort to complete the PADEP’s corrective action requirements. In addition to the above base Scope of Work, the Optional Cost Adder Milestones (Milestone N through Milestone T) need to be addressed in your bid response. These cost adders will not be part of your initially approved contract. 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.

- **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.

- **Selected Standards:** According to the recent SCR / RAP Addendum, the claimant has selected to remediate the groundwater and soil at the Site to Non-Residential Statewide Health Standards for all constituents of concern.

- **Recent PADEP Correspondence –** The August 2017 PADEP approval of the June SCR / RAP is included in Attachment 3.

- **Additional Notes on SOW -** Please note that the current consultant will be completing some of the scope of work proposed in the SCR / RAP in an effort to keep the schedule proposed in the SCR / RAP and approved by the PADEP. All well logs, data, and information will be provided to the selected consultant after bid award. Specifically, the current consultant will be completing the following:
 - Prepare and submit the NPDES permit
 - Installation of proposed monitoring wells and recovery wells

As noted above, the current consultant is tasked with some of the permitting tasks. If it is determined that additional permitting efforts are required; then that will be handled separately. In addition, the SCR/RAP discusses attainment demonstration, submission of a RACR, and system decommissioning/well abandonment. Those tasks will be contracted separately at a later time after remediation efforts are started.

Site-Specific Milestones

The following Milestones are to be included in bid responses:

Milestone A – 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 is 2 quarterly groundwater events. Specifically, consultants should include costs to complete 2 quarterly groundwater sampling activities scheduled to be completed prior to the implementation of the remedial strategy. Each quarterly groundwater event should include the monitoring and sampling of both the current monitoring well network of 13 shallow wells (MW-1 through MW-9, MW-10S, MW-11, MW-14, and MW-15); 4 deep overburden aquifer groundwater

monitoring wells (MW-10D (to be redrilled & reconstructed), MW-12, MW-13, and MW-16); and the 3 additionally proposed monitoring wells included in the June 2017 Revised SCR / RAP. 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 PAUSTIF 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 approximately two (2) weeks after the execution of the contract, if needed. 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 required constituents of concern in accordance with Pennsylvania's Storage Tank Regulation procedures and cleanup standard criteria as specified in Pennsylvania's Act 2. Specifically, each sample will be analyzed for BTEX, MTBE, naphthalene, cumene, 1,2,4-TMB and 1,3,5-TMB.
- 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 PAUSTIF (or its designated representative).

- If the NPDES permit has been issued, completion/submittal to PADEP of a Discharge Monitoring Report will be required.
- 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 B – Private Utility Markout. Prior to any intrusive investigation work at the Site, a private markout is to be conducted at the Site 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 white paint on the asphalt areas and white flags in grassy areas. A report shall be provided with an explanation of the identified features.

Milestone C through Milestone E – Remedial Installation, Implementation and Operation. For this milestone, bidders should include all necessary activities and costs associated with the purchase, installation, startup, and implementation of the remedial strategy. The successful bidder shall demonstrate that the remedial strategy selection would be effective in attaining the remediation goals for the project and be able to meet the schedule proposed in the June 2017 Revised SCR / RAP. As discussed, the remedial technology recently approved by PADEP was the installation and operation of a VEGE system that combines the technology of SVE with a pump and treat strategy. Bidders must propose to construct and operate the VEGE system as presented and specified in the PADEP approved June 2017 Revised SCR / RAP as their proposed remedial approach.

This milestone would cover all activities and costs related to the implementation of the strategy as described in the recently 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, first 2 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.

In addition, bid responses should be formatted with very detailed text and costs using the following milestone breakout:

Milestone C1 – Trenching, Piping, Mechanical and Electrical

Milestone C2 – System Procurement, Assembly, and Remedial Equipment Compound

Milestone C3 – Final Connections and Startup of Remediation System

Milestone D1 through D8 – Quarterly Remediation System O&M and Groundwater Monitoring, Sampling & Reporting and NPDES Discharge Monitoring Reporting During Remediation

Milestone E1 & E2 – Liquid Carbon Change Outs

Milestone F1 & F2 – Vapor Phase Carbon Change Outs

Milestone G1 through G24 – Monthly Electrical Charges (Marked in Bid Response as TBD and as \$0 in the Bid Cost Spreadsheet)

With regards to the discussion on remediation in Milestone C through Milestone G, bid responses should note the following:

- Bid responses should describe in great detail how the strategy will be implemented.
- Bid responses should be based on a fixed 2 years (8 quarters) of system operation time frame. If agreed upon by all parties that additional quarters of system operation are appropriate; then any additional quarters of Milestone D activities will be addressed as an optional cost adder milestone.
- Bid responses should clearly discuss the reasons as to why the selected strategy is applicable to this site.
- Bid responses should clearly discuss the construction and operation of the VEGE system in accordance with what is proposed in the PADEP approved Revised SCR / RAP.
- Bid responses should clearly note on a schedule how the payments for this milestone will be specifically broken out 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.
- Bid responses should clearly acknowledge that PAUSTIF will require the selected consultant to meet a Professional Engineer from the firm listed as the Technical Contact for an onsite system inspection. The aforementioned meeting will occur onsite in an effort to review the installed and operational remediation system and confirm the system construction as presented. Following the meeting, the Professional Engineer will provide PAUSTIF, the solicitor and the selected consultant with a written report on the meeting. The selected consultant should provide at least one week notice to the Technical Contact before expecting to meet. The meeting must occur prior to any of the selected consultant's invoices for Milestone H will be reimbursed. Specifically, the written report will be included in the Remediation Agreement as required documentation to support completion and reimbursement of Milestone C3.

- Where applicable, the bid response should provide specifics on all equipment and vendors to be utilized. Bidders should refer to the equipment list specifically included in the June 2017 Revised SCR / RAP.
- Where applicable, any monthly sampling and/or reporting that is required to be completed should be included in the appropriate quarterly milestone payments. For example, monthly influent and midfluent samples are to be collected to monitor system effectiveness and carbon consumption (as discussed in the Revised SCR / RAP). The cost for three of those monthly sampled should be included in each of the relevant Milestone D (Remediation System O&M and Quarterly Groundwater Monitoring, Sampling & Reporting During Remediation) payments.
- The specifications on the equipment proposed for the VEGE system are included in the PADEP approved Revised SCR / RAP dated June 2017.
- 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 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 D and conducted in a manner consistent with Milestone A.
- 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 SWHS, provide hydro-graphs, discuss/detail the remediation efforts, 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.

- 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 8 quarters of system operation and maintenance, but only 4 quarters are completed; then the firm will only be paid for the 4 quarters completed).
- The electrical compound shall be constructed and equipped as a Class I, Division II hazardous and explosion proof area and shall comply with applicable local/state codes and the National Electric Code.
- Buried piping shall be installed with tracer wire to aid in the location of the subsurface lines after the trenches have been filled. In addition, testing of the buried piping should be conducted and documented to confirm the integrity before the trenches are backfilled.
- 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. System uptime will be defined with the Remediation Agreement. 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.
- With regards to carbon change outs, the costs for two liquid and two vapor phase change outs will be included in the base bid cost and should be discussed as such in the bid response. However, all carbon change outs will be completed as needed based system sampling results. 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 2 events, but only 1 event is needed; then the firm will only be paid for the 1 event completed). In addition, if more than 2 change outs are required, then any additional change outs will be handled as an optional cost adder and require approval.
- 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 to the monthly electric bill as it is a utility related expense.

Milestone H – Remediation System Performance Evaluation. Provide a Unit Cost to prepare a letter report that provides a detailed evaluation on the performance of the Remediation System after the system has operated for 4 quarters (Milestone H1) and then a second letter report after the system has operated for 7 quarters (Milestone H2). The evaluation will be submitted to the Solicitor/PAUSTIF and should be comprehensive, discuss the data collected, and include both appropriate conclusions and suggestions as well as any recommended operational modifications such as the following:

- System should continue to operate as designed
- System should be modified to enhance performance
- System should be turned off and rebound should be monitored
- An alternate remedial strategy should be developed
- The Site closure goals should be reconsidered

The expectation is that a Professional Engineer will be involved in the system performance evaluation and the preparation of the letter report. If any system modifications are recommended, then the letter report should provide specific details on the proposed modifications. For instance, if the engineer recommends that additional points be installed and added to the system; then the letter report should include specific information on such items as how the points will be constructed, locations of the points, reasons for the change, etc.

Milestone I – 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 A.

Milestone I1 - The cost provided should be to complete only one (1) event with only the existing monitoring wells (13 shallow wells (MW-1 through MW-9, MW-10S, MW-11, MW-14, and MW-15) and 4 deep overburden aquifer groundwater monitoring wells (MW-10D (to be redrilled & reconstructed), MW-12, MW-13, and MW-16)).

Milestone I2 - The cost provided should be to complete only one (1) event with all the existing and proposed monitoring wells (13 shallow wells (MW-1 through MW-9, MW-10S, MW-11, MW-14, and MW-15); 4 deep overburden aquifer groundwater

monitoring wells (MW-10D (to be redrilled & reconstructed), MW-12, MW-13, and MW-16); and the 3 additionally proposed monitoring wells included in the June 2017 Revised SCR / RAP).

Milestone 13 - The cost provided should be to sample one (1) additional monitoring well during a groundwater sampling event. The provided cost would be to cover all labor, equipment, laboratory, waste, etc.

Milestone J – Additional Quarter of Remediation System O & M with Quarterly Groundwater Monitoring, Sampling, and Reporting and NPDES Discharge Monitoring During Remediation. (Cost Adder Milestone). Provide a Unit Cost to complete one additional quarter of System O & M with one quarterly groundwater sampling event and the subsequent RAPR preparation and the NPDES discharge monitoring. The scope of work for this cost adder should follow the relevant details of Milestone A.

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 dated September 2016
 - b. SCR Addendum / RAP dated November 2016
 - c. PADEP Correspondence dated January 13, 2017
 - d. Revised SCR / RAP dated June 2017
 - e. PADEP Correspondence dated August 22, 2017