Request for Bid

Fixed-Price Defined Scope of Work for Site Characterization

Solicitor

Charles J. Peters III

Chuck's Stop

737 Pennsylvania State Route 56
Apollo, PA 15613

PADEP Facility ID #: 03-24734 **PAUSTIF Claim #: 2014-0132(F)**

Date of Issuance

July 21, 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 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. A $5,000 deductible applies.

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	July 28, 2017 by 5 p.m.
Mandatory Pre-Bid Site Visit	August 3, 2017 at 11 a.m.
Deadline to Submit Questions	August 18, 2017 by 5 p.m.
Bid Due Date and Time	August 31, 2017 by 3 p.m.

Contact Information

Technical Contact
Lawrence F. Roach, P.G. **Groundwater Sciences Corporation** **2601 Market Place Street, Suite 310** **Harrisburg, PA 17110**

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 **"Chuck's Stop / 2014-0132 – 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 "Chuck's Stop / 2014-0132 – 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, 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 # Chuck's Stop / 2014-0132".** 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
737 Pennsylvania State Route 56
Apollo, PA 15613
Kiskimenetas Township, Armstrong County

Site Description and Operation History
The Site is a former retail petroleum dispensing and service garage owned by Charles Peters III. Mr. Peters III reportedly purchased the property in 1985 and operated the Site (including petroleum dispensing) as Chuck's Stop until 2012. Although no detailed historic information was available for review, retail petroleum sales reportedly began in the early 1950s. The former Chuck's Stop service garage building, constructed as a slab-on-grade structure, is currently leased to a used car dealer.

The Site is located along State Route 56, approximately 0.75 miles east of Apollo, PA. The Site property slopes gently to the north-northwest (towards State Route 56) and has a surface elevation of approximately 985 feet above mean sea level (amsl). Beyond State Route 56 to the north, the topography slopes steeply downwards towards an unnamed tributary to the Kiskiminetas River. The unnamed tributary is located approximately 500 feet to the north of the Site at an elevation of approximately 885 amsl. The Kiskiminetas River, located west of Apollo, is a tributary to the Ohio River. The surrounding properties are a mix of residential and commercial use. The Site and surrounding properties are serviced by public water and sewer. A Site Location Map is presented as Figure 1 in Attachment 3a.

Site Background
Eight underground storage tanks (USTs) are known to have existed at the Site. Seven of the eight tanks were registered USTs (USTs 001 through 007) and one tank is an abandoned unregistered ("orphan") UST. Based on historical documentation, the seven registered USTs were reportedly closed by removal and the abandoned UST is still present in the ground at the Site. Although the specific location of former USTs 004, 005, and 006 is unknown, based on a review of historic documents, they are presumed to have been located to the east of USTs 001, 002, 003, and 007. A Site Map showing the former location of USTs 001, 002, 003, 007, the

orphan, and the presumed location of former USTs 004, 005, and 006 is included as Figure 2 in Attachment 3a.

The registered USTs included two 6,000-gallon unleaded gasoline tanks (USTs 001 and 002, installed in June 1984), one 6,000-gallon diesel fuel tank (UST 003, installed in June 1984), one 2,000-gallon diesel fuel tank (UST 004, installed in June 1982), and three 1,000-gallon kerosene tanks (USTs 005 and 006, installed in June 1982, and 007, installed in February 1999).

In June 1997, USTs 001, 002, and 003 were exposed, cut open, and lined with fiberglass to meet upcoming corrosion protection standards. The product piping and dispensing equipment was also reportedly upgraded in June 1997. During the upgrade work, contaminated soil was encountered and excavated. A Notification of Reportable Release (NORR) was submitted to the PADEP on June 3, 1997. The NORR stated "we uncovered tanks to have them fiberglassed inside them [and] found discolored sand, sheen on rain water that had accumulated in sand on top of tanks [and] slight odor in air in tank excavation". With regard to the excavated contaminated soil, the NORR stated that "soils staged on site and covered with plastic". A copy of the June 1997 NORR is included in Attachment 3b.

According to correspondence and weigh tickets provided by a representative of the claimant, the excavation was backfilled with approximately 183 tons of stone between June 16, 1997 and August 28, 1997 and the excavated soil (approximately 82 tons) was disposed of at the USA Waste Services Company's Monroeville Facility in Monroeville, PA on May 9, 1998. No soil sampling data associated with the excavation or soil disposal is available. Correspondence from the PADEP's Storage Tank Program Group Manager dated June 3, 2008 states that "no further action" (NFA) was required to address the release associated with the June 1997 NORR. The NFA determination documented in the June 3, 2008 correspondence is reflected in the PADEP's eFacts website with a Cleanup Status of "Cleanup Completed" and a Cleanup Status Date of September 30, 2011. A copy of the June 3, 2008 NFA correspondence and a screen capture of the PADEP's eFacts website showing the cleanup status for the June 1997 NORR is included in Attachment 3b.

According to a PADEP Registration/Permitting of Storage Tanks form, dated February 9, 1999, UST 007 was installed at the Site on February 9, 1999. The Registration/Permitting of Storage Tanks form also indicates that USTs 004, 005, and 006 were placed in Temporary out of Service (TOS) status on December 22, 1999. The February 9, 1999 PADEP Registration/Permitting of Storage Tanks form is included as Attachment 3c.

On February 17, 1999, the United States Environmental Protection Agency (USEPA) performed an inspection of the Site's USTs. The cover letter that accompanied the inspection report stated the following:

> "Mr. Peters has upgraded his gas station over the last two years by the following actions:

- Lining three tanks internally
- Replacing the iron pipe with FRP
- Closing out three tanks. One of the three (old No. 4) has been removed from the ground but remains on site.
- Installing a new tank (new No. 4)".

The USEPA report also states that "One of the old tanks, closed but not removed from the ground contains 4.5 inches of product or product and water. The second tank contains less than one inch of product. Bids have been received for the removal these tanks. The company that will remove the tanks is August Environmental of Morgantown, WV".

The USEPA's report appears to contradict itself in that it states on the cover page of the report that "One of the three [tanks] (old No. 4) has been removed from the ground but remains on site" while Section III of the report (Tank Information) states that "old Tank 4" contained 4.5 inches and "Tank 6" was "Removed 2-1-99". The USEPA's report also states in Section III that "new tank 4 was installed on 2-9-99". Considering that a February 9, 1999 Registration/Permitting of Storage Tanks form documents the installation of registered UST 007 on February 9, 1999, it appears that the UST that the USEPA refers to as "new tank 4" is PADEP registered UST 007. Based on the conflicting information presented in the USEPA inspection report, it is unclear what, if any, tank was removed on February 1, 1999.

Considering that 1) an Underground Storage Tank System Closure Notification Form was submitted to the PADEP on August 20, 1999 notifying the PADEP that USTs 004, 005, and 006 would be closed by removal and 2) a Storage System Report Form dated December 15, 1999 was submitted to the PADEP that stated that while "Removing 004, 005, 006" "visible soil contamination and odor" was observed, it appears that USTs 004, 005, and 006 were present at the time of the USEPA inspection in February 1999. A copy of the USEPA Inspection Report is included as Attachment 3d and a copy of the August 20, 1999 Underground Storage Tank System Closure Notification Form and December 15, 1999 Storage System Report Form is included as Attachment 3e.

As a result of the contamination encountered during the removal of USTs 004, 005, and 006, a NORR was submitted to the PADEP on December 15, 1999. According to the NORR, the contractor was "removing 004, 005, and 006" and found "visible soil contamination and odor" and "soils were excavated and staged on plastic and covered". No UST closure report or data associated with the UST closure was discovered during the review of available files. PADEP correspondence to ICF (dated March 11, 2013) states that the "Department does not have any soil data from the removal in 1999". Likewise, no NFA documentation from the PADEP regarding the 1999 NORR was discovered. Despite the NORR and the absence of reviewable closure data, the PADEP's eFacts website lists Cleanup Status of the release as "Cleanup Completed" and a Cleanup Status Date of September 30, 2011. A copy of the December 15,

1999 NORR is included as Attachment 3f and a screen capture of the PADEP's eFacts website showing the cleanup status for the December 15, 1999 NORR is included in Attachment 3b.

On June 19, 2000, the PADEP conducted an inspection of the UST systems at the Site. According to the Underground Storage Tank Facility Operations Inspection report, USTs 001, 002, 003, and 007 were in operation at the time of the inspection and there was no mention of USTs 004, 005, and 006. The absence of USTs 004, 005, and 006 in the inspection report provides support to the December 15, 1999 Storage System Report Form and NORR that indicate that USTs 004, 005, and 006 were removed. The June 19, 2000 inspection report also lists UST 003 as containing gasoline, indicating that either the inspector made an error while completing the report or that its contents were switched from diesel fuel to gasoline sometime before June 19, 2000. In the comments section of the June 19, 2000 inspection report, the PADEP inspector stated "contamination on site under plastic and waiting for remediation". Based on previous site activities and correspondence from the claimant's representative, the referenced contamination was likely the contaminated soil from the closure by removal of USTs 004, 005, and 006. A copy of the June 19, 2000 Underground Storage Tank Facility Operations Inspection report is included as Attachment 3g.

According to weigh tickets and correspondence provided by a representative of the claimant, approximately 85 tons of soil was disposed of at the Valley Landfill in Irwin, PA between December 14, and 15, 2001. This soil was most likely the soil associated with the closure by removal of USTs 004, 005, and 006. There was no soil sampling data associated with the soil excavation and disposal in the files reviewed by GSC.

USTs 001, 002, and 003 reportedly remained in operation until 2012 when they failed a routine five-year testing of the lining. The tanks (including UST 007) were subsequently placed in TOS and closed by removal in September 2014. According to the UST closure report, dated October 16, 2014, USTs 001 and 002 were gasoline tanks, UST 003 was a diesel fuel tank (which contradicts the June 19, 2000 PADEP inspection report), and UST 007 was a kerosene tank. A copy of the UST Closure Report is included as Attachment 3h.

According to the UST closure report, prior to excavating, water in the tank cavity was measured in an observation well at 4.5 feet below grade (fbg). During the excavation work, water "with a heavy sheen" was reportedly encountered below the diesel product piping and dispensers and in the UST tank cavity. The water below the diesel dispenser and product line was encountered at approximately 2.5 to 3 fbg (water was also encountered beneath the gasoline dispensers at an unknown depth).

According to the UST Closure Report (included as Attachment 3h), five water samples (due to the presence of water in the vicinity of UST system components) and four soil samples were collected during the UST closure. Water samples were collected from beneath the product dispensers (W-1 from beneath the diesel dispenser and W-2 and W-3 from beneath the western

and eastern gasoline dispensers, respectively) and from the open UST excavation (W-4 and W-5). Soil samples (SW-W2, SW-W, SW-E, and SW-S) were collected from the UST sidewalls. Although four soil samples were collected, only two soil samples (SW-E and SW-W) were submitted for laboratory analysis. The locations of the UST closure samples are shown on Figure 3 of the UST Closure Report. According to the UST Closure Report, all samples were analyzed for the substances listed on the PADEP's unleaded gasoline, diesel fuel, and kerosene parameter shortlists.

Concentrations of benzene, ethylbenzene, naphthalene, 1,2,4-trimethylbenzene (124TMB), and 1,3,5-trimethylbenze (135TMB) were reported above PADEP's residential and non-residential Statewide Health Standard (SHS) Medium Specific Concentrations (MSCs) in the water sample collected from the northeast corner of the UST excavation (sample W-4) and concentrations of benzene, 124TMB, and 135TMB were reported above the PADEP's residential and non-residential SHS MSCs in the water sample collected from the southern portion of the UST excavation (sample W-5). The UST Closure Report stated that "tank cavity water appeared obviously impacted and sidewalls appeared dark-stained" and "tank-top fittings including corroded metal spill buckets are suspected as the source of contamination".

No analyzed substance was reported above the laboratory's reporting limits in the two soil samples submitted for analysis. With regard to the excavated soil, the UST closure report stated that "tank cavity fill material was comprised of pea gravel and sand and was re-used as backfill following removal of the UST systems" and that "contaminated media was not excavated from the cavity". No soil samples were collected from the excavated soil prior to its reuse as fill.

The release was verbally reported to the PADEP on September 24, 2014 and a NORR was submitted to the PADEP on September 30, 2014.

The table below provides a summary of the Technical Contact's understanding of the registered USTs known to have been installed at the Site. Please note, as described above, there is contradictory information, and so all of the information in the table could not be verified.

UST	Capacity	Contents	Installation Date	Removal Date
001	6,000 gallons	Gasoline	June 1984	September 2014
002	6,000 gallons	Gasoline	June 1984	September 2014
003	6,000 gallons	Diesel/Gasoline*	June 1984	September 2014
004	2,000 gallons	Diesel	June 1982	December 1999
005	1,000 gallons	Kerosene	June 1982	December 1999
006	1,000 gallons	Kerosene	June 1982	December 1999
007	1,000 gallons	Kerosene	February 1999	September 2014

* - A PADEP inspection report, dated June 19, 2000, identified the contents as gasoline

No physical environmental characterization activities have been conducted at the Site since the closure by removal of USTs 001, 002, and 003.

Scope of Work (SOW)

This RFB seeks competitive bids from qualified contractors to perform the activities in the SOW specified herein. The PADEP has reviewed and provided comments on this RFB.

Objective

The objective of this RFB is to execute the defined SOW that will gather additional soil quality data, groundwater quality data, and other subsurface information necessary to evaluate site conditions that will allow for the submission of a complete Site Characterization Report (SCR), i.e., the SCR shall be submitted without recommendations for additional characterization work. PADEP has indicated upon completion of their review of this RFB that they would prefer to receive a complete SCR rather than an SCR that includes recommendations for additional work necessary to complete site characterization.

Following the completion of the SOW specified in this RFB, the remaining corrective action activities necessary tor the Solicitor to obtain relief from liability will either be competitively bid or the consultant selected for this RFB may be invited to continue work under a fixed-price contract.

Constituents of Concern (COCs)

The COCs for this site are the substances identified on the unleaded gasoline parameter short list provided in the PADEP's December 15, 2012 Technical Document (Technical Guidance Number 263-4500-601) *Closure Requirements for Underground Storage Tank Systems.* Specifically, the COCs are benzene, toluene, ethylbenzene, xylenes (total), cumene (isopropylbenzene), methyl tert-butyl ether (MTBE), naphthalene, 124TMB, and 135TMB).

General SOW Requirements

The Milestones presented below are separated into two categories; Base Scope of Work Milestones and Optional Milestones. The Base Scope of Work Milestones (Milestones A through G) represent the level of effort deemed reasonable to successfully characterize the Site based on the limited amount of characterization data available for the Site and assumes that a soil aquifer is present, dissolved-phase contamination (if present) is limited to the soil aquifer, and the soil and groundwater characterization activities outlined in the Base Scope of Work Milestones successfully delineate the petroleum contamination at the Site. The Optional Milestones (Milestones H through O) represent additional work that may be necessary if one or more of the site assumptions are false. All bidders shall note that the initiation of the Base Scope of Work Milestones D, E, and F are predicated on the findings of Milestone C and will require approval from the Solicitor, ICF/PAUSTIF, and/or the Technical Contact.

All bidders shall assume that mobile separate phase liquid (SPL) (defined as a thickness of 0.01 feet or greater as measured by an interface probe) will not be encountered in any of the groundwater monitoring wells installed as part of the SOW.

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.

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

- 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 bidder shall consider the following site-specific guidelines:

Scheduling

- The selected bidder shall provide a schedule for which each milestone is expected to be completed (i.e., within 30 days from the execution of the Remediation Agreement).
- The selected bidder shall provide a 72-hour notification of all pending on-site work to the Solicitor so that the Solicitor can notify any tenant or occupant of the property so that the tenant or occupant can make the necessary arrangements to allow the selected bidder access to the Site.
- All on-site work should be completed during normal business hours on normal business days (from 8 AM to 5 PM on Monday through Friday).

Responsibility

- Upon execution of the Remediation Agreement, the selected bidder shall become the consultant of record for the Site and the Solicitor. It shall be expected that the selected bidder will represent the interest of the Solicitor and ICF/PAUSTIF during the execution of all aspects of the project associated with this RFB.

Milestones Requiring Approval Prior to Initiation

- Due to the limited characterization information and data available for the Site, the SOW contained within this RFB includes optional milestones that may not be reasonable and

necessary for characterizing the Site based on information gathered by the selected bidder upon completion of required milestones. For this reason, the selected bidder shall be required to obtain approval from the Solicitor, ICF/PAUSTIF, and/or the Technical Contact prior to initiating the Optional Milestones (listed below) and any sub-milestone to the Optional Milestones. Approval from the Solicitor, ICF/PAUSTIF, and/or the Technical Contact is also required prior to initiating Base Scope of Work Milestones D, E, and F. The Optional Milestones are:

- Milestone H – Bedrock Monitoring Well Installation, Survey, and Development
- Milestone I – Bedrock Groundwater Monitoring Well Sampling
- Milestone J – Vapor Intrusion Sampling
- Milestone K – Supplemental Soil Groundwater Monitoring Well Installation and Development
- Milestone L – Supplemental Bedrock Groundwater Monitoring Well Installation and Development
- Milestone M – Supplemental Groundwater Sampling
- Milestone N – Supplemental Soil Sampling
- Milestone O – Professional Land Survey Update
- Milestone P – Off-Site Access

Site-Specific Milestones

BASE SCOPE OF WORK MILESTONES

Milestone A – Professional Land Survey

All bidders are required to provide in Attachment 2 the cost to conduct a professional land survey of the Site. The survey shall be conducted by a Pennsylvania-licensed land surveyor. The survey should include all principal site features (including but not limited to: buildings, curbs, manholes, utility poles, and public utility valves) and the Site's property lines and rights of way.

Milestone B – Geophysical Survey and Engineering Evaluation of Underground Utilities

All bidders are required to provide in Attachment 2 the cost to perform a geophysical survey of the Site and an evaluation of the underground utilities beneath the Site by a Professional Engineer licensed in the Commonwealth . The geophysical survey and underground utility evaluation shall be conducted prior to intrusive characterization activities describe within this SOW.

The purpose of the geophysical survey is to attempt to identify and locate the historic UST excavation, the known abandoned UST, potential unknown USTs, conveyance lines, and other underground utilities and features. It is anticipated that at least electromagnetic and ground-penetrating radar technologies would be employed.

The purpose of the underground utility evaluation is to locate utilities prior to intrusive investigation activities so that they can proceed in a safe and effective manner and allow for the investigation of possible contaminant migratory pathways. The evaluation should include (but not be limited to) storm sewers (construction and depth), sanitary sewers (construction and depth), water lines, and natural gas lines beneath the Site property. The survey should extend to a distance of 50 feet beyond the property in public rights of way in all directions. The evaluation should include any on-site laterals to these utilities which may have served or currently serve as preferential migration pathways for petroleum impacted water, potential SPL, and/or vapor. This evaluation should include a review of available municipal and authority plans of the utilities beneath Pennsylvania State Route 56 and incorporate the geophysical survey.

Milestone C – Soil Boring Installation/Sampling and Temporary Monitoring Well Installation/Gauging

All bidders are required to provide in Attachment 2 the cost to perform a soil investigation on the Site property. The selected bidder shall perform a soil investigation at the Site to characterize the lateral and vertical extent of petroleum impacts to soil (if petroleum impacts are identified). Fourteen soil borings (SB-1 through SB-14) are proposed to characterize soil conditions at the Site. The approximate location of the fourteen soil borings (SB-1 through SB-14) are shown on Figure 3 in Attachment 3a.

Soil borings SB-1 through SB-4 are to be located in the vicinity of the former diesel and gasoline dispensers, soil borings SB-5 through SB-10 are to be located around the USTs closed by removal in 2014 (USTs 001, 002, 003, and 007), and soil borings SB-11 through SB-14 are to be located along and beneath the former diesel fuel product conveyance piping. The selected bidder shall exercise professional judgement and refer to the results of the geophysical survey and any other utility mark out procedures (i.e., engineering evaluation of underground utilities, PA One Call, etc.) and the professional land survey prior to advancing the soil borings to 1) avoid subsurface utilities, 2) ensure the soil borings are on the Site property, and 3) validate the location of the soil borings relative to the components of the former UST system. In the event that any of the prescribed soil boring locations are to be modified significantly, the selected bidder shall notify ICF/PAUSTIF and/or the Technical Contact with justification to do so before proceeding.

The soil borings shall be drilled using hollow stem auger methods. Soil samples shall be collected from split spoons advanced ahead of the augers. Soil borings SB-1 through SB-10 are to be advanced to a depth of 20 fbg or bedrock/equipment refusal, whichever is encountered first. Soil borings SB-11 through SB-14 are to be advanced to 5 fbg. Soil samples should be screened at two-foot intervals with a PID (using headspace measurements). In the event that bedrock/equipment refusal is not encountered in any

soil boring, soil borings SB-1 and SB-6 shall be advanced beyond 20 fbg to the top of bedrock/equipment refusal (with split spoon soil sampling every 5 feet) to investigate the depth to bedrock.

Continuous geological logs shall be prepared by a Professional Geologist licensed in the Commonwealth for each boring using a standard and consistent classification system procedure (Modified Burmister or USCS).

Bidders shall assume for the purpose of this RFB that two discrete soil samples will be collected from soil borings SB-1 through SB-10 and one soil sample shall be collected from soil borings SB-11 through SB-14 (a total of twenty-four soil samples). All soil samples shall be collected in laboratory-provided containers and analyzed by EPA Method 8260B for the substances listed in the COC section of this RFB.

With regard to sample collection depth, the following criteria shall be applied:

For soil borings SB-1 through SB-4 (two samples each):

- A soil sample shall be collected from approximately 4 fbg, and
- A depth coincident with bedrock/water table, whichever is shallower.

For soil borings SB-5 through SB-10 (two samples each):

- A soil sample shall be collected from between 3 fbg and 12 fbg using professional judgment based on PID response, visual observations, and soil saturation, and
- collected depth from an approximate depth of 12 fbg.

For soil borings SB-11 through SB-14 (one sample each):

- A sample shall be collected from a depth from approximately 4 fbg.

In addition to the petroleum analytical samples, discrete soil samples of representative soil types should be collected from soil borings SB-1 and SB-8 every five feet (5', 10', 15', 20', etc.) and conveyed to a laboratory for grain size analysis including quantification of silt and clay content and fraction organic carbon. Assume for the purpose of this RFB, that a total of eight (8) soil samples will be collected and analyzed based on the soil types observed during the soil sampling.

Due to the lack of characterization data for the Site, it is not known if the water encountered during the UST closure is representative of the water table. For this reason, the selected bidder shall install a temporary one-inch diameter PVC piezometer upon completion of soil borings SB-1 and SB-8 to allow for the gauging of water depths

in the subsurface prior to the installation of groundwater monitoring wells (Milestone D or Milestone H). For the purposes of this RFB, assume the one-inch PVC piezometers will consist of 15 feet of screen and 5 feet of riser. The piezometers shall not be used to collect groundwater samples.

At least 12 hours after the construction of the temporary piezometers, the selected bidder shall gauge the depth-to-water in each temporary piezometer for the purpose of determining the presence of water, and if present, the depth-to-water. This information will be used to determine the following:

1. If Milestones D, E, and F (pertaining to soil monitoring well installation, development, surveying, hydraulic conductivity testing, and sampling) will be activated and, if Milestone D is activated, provide information that would allow for the proper construction of the soil groundwater monitoring wells described in Milestone D, or
2. If optional milestones will be activated.

Milestone D – Soil Groundwater Monitoring Well Installation, Survey, and Development

The activation of this Milestone will require the presence of saturated soil and therefore is contingent upon the results of the data acquired in Milestone C and will require the prior approval of ICF/PAUSTIF and/or the Technical Contact.

All bidders shall provide in Attachment 2 all reasonable and necessary costs to install, survey, and develop five soil groundwater monitoring wells. The costs included in Attachment 2 shall include, but not be limited to, all mobilizations, subcontractors, labor, equipment, waste, etc.

The five soil groundwater monitoring wells (MW-1 through MW-5) shall be installed by the selected bidder in soil borings SB-1, SB-3, SB-5, SB-6 or SB-7, and SB-8 as identified on Figure 3 in Attachment 3a. The selected bidder shall refer to the results of the geophysical survey and other utility mark out procedures (i.e., engineering evaluation of underground utilities, PA One Call, etc.) and the professional land survey prior to drilling the soil groundwater monitoring wells to avoid subsurface utilities and ensure the monitoring wells are located on the Site property. In the event that the location of any of the prescribed soil groundwater monitoring well locations are to be modified significantly or the well construction details vary from the assumptions presented below, the selected bidder shall notify ICF/PAUSTIF and/or the Technical Contact with a technical justification to do so before proceeding.

The soil groundwater monitoring wells shall be installed in the hollow stem auger borings installed as part of Milestone C (either through augers left in the borings or by using the borings if they stay open to the total depth or by over drilling the borings (including the

temporary piezometers if necessary)). Each well shall be constructed of two-inch PVC materials with the screened interval straddling the water table. Although the monitoring wells shall be constructed based on the data obtained from the temporary piezometers installed in Milestone C, for the purposes of this RFB, each bidder shall assume that each soil groundwater monitoring well boring shall be constructed to a total depth of 20 fbg and constructed of 15 feet of screen and 5 feet of riser. Well logs should be prepared by a Professional Geologist using the same consistent classification system procedure used in Milestone C. All soil groundwater monitoring wells shall be completed at the surface with a securable manhole, set in concrete flush with the ground surface. A locking, pressure fit, watertight cap shall be used to prevent the infiltration of surface runoff and rainwater and to restrict unauthorized access.

The tops of casings of the soil groundwater monitoring wells shall be vertically and horizontally surveyed by a licensed surveyor to allow for the calculation of groundwater elevations across the Site.

Following the installation of the soil groundwater monitoring wells, the selected bidder shall gauge the monitoring wells to determine the depth-to-water. The depth-to-water measurements should be collected no sooner than 24-hours following the installation of each soil monitoring well.

Following the depth-to-water measurements, the selected bidder shall develop the five soil groundwater monitoring wells in accordance with generally-accepted practices as outlined in the PADEP's Groundwater Monitoring Guidance Manual, dated December 1, 2001 (Document #383-3000-01).

All bidders shall provide in in Attachment 2 (as part of Optional Milestone K) the per foot cost to drill and construct the soil groundwater monitoring wells installed as part of this Milestone. In the event that it is reasonable and necessary to drill and construct one or more soil groundwater monitoring wells to a total depth greater than the assumed depth of 20 fbg, the per foot cost provided in Attachment 2 (as part of Optional Milestone K) will be reimbursement for each additional foot of well installation for each monitoring well beyond the assumed depth.

Milestone E – Hydraulic Conductivity Testing of Soil Groundwater Monitoring Wells

All bidders are required to provide in Attachment 2 the cost to perform single well hydraulic conductivity tests ("slug tests") in two soil groundwater monitoring wells. The activation of this Milestone is contingent upon the results of the data acquired in Milestones C and D and will require the prior approval of ICF/PAUSTIF and/or the Technical Contact.

Upon approval to proceed with Milestone E, the selected bidder shall conduct both rising head and falling head tests in two soil groundwater monitoring wells installed in native material or material representative of subsurface conditions at the Site. The aquifer test data should be analyzed by a Professional Geologist using standard industry practices and applicable guidance.

Milestone F – Soil Groundwater Monitoring Well Sampling

All bidders shall provide in Attachment 2, the cost to sample the five soil groundwater monitoring wells installed as part of Milestone D. The activation of this Milestone is contingent upon the results of the data acquired in Milestones C and D and will require the prior approval of ICF/PAUSTIF and/or the Technical Contact. As part of this RFB, two separate groundwater sampling events shall be completed. The activation of this Milestone is contingent upon the prior approval of ICF/PAUSTIF and/or the Technical Contact.

The selected bidder shall perform two rounds of soil groundwater sampling with the first soil groundwater sampling event occurring no sooner than two weeks following the development of the soil groundwater monitoring wells and the second soil groundwater sampling event occurring no sooner than 30 days following the first soil groundwater sampling event. Each sampling event shall include the comprehensive measurement of depths-to-water in the soil groundwater monitoring wells followed by the purging and sampling of each soil monitoring well. The soil groundwater samples shall be collected in laboratory-provided containers and analyzed by EPA Method 8260B for the substances listed in the COC section of this RFB.

Milestone G – Preparation of Site Characterization Report (SCR)

All bidders shall provide in Attachment 2, the cost to prepare an SCR. Upon completion of the activities described in this SOW, the selected bidder shall prepare the SCR in accordance with 25 Pa Co de §245.310. The SCR must be a stand-alone document with all necessary comprehensive data tables, figures, data appendices, etc. All files used in the preparation of this RFB will be made available to the successful bidder. The bidder may include by reference previous data in the bidder-prepared SCR. The selected bidder shall prepare the SCR in draft form for review and comment by the Solicitor and the PAUSTIF. The selected bidder's schedule shall provide two weeks for this review. The selected bidder shall address all of the comments received by the Solicitor and the PAUSTIF before submission of the SCR to the PADEP.

Prior to starting the SCR, the selected bidder shall contact the Solicitor to present the characterization data to the Solicitor and discuss all of the remedial standard options for the Site. Following the Solicitor's remedial standard selection, the selected bidder shall prepare an SCR that documents and discusses the data obtained and the conclusions drawn from the completion of the work contained within this RFB.

All bidders shall include in this Milestone, the costs necessary to evaluate the potential for vapor intrusion into buildings using soil and groundwater chemistry data and other physical data collected from the Site. The purpose of the vapor intrusion screening is to determine whether additional vapor intrusion investigation activities are necessary (i.e. optional Milestone J activities) to characterize the Site. The vapor intrusion screening shall be conducted in accordance with the PADEP's revised technical guidance document (*Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings from Groundwater and Soil under Act 2*) which became effective on January 18, 2017 (PADEP VI TGM).

Tables, figures, and other attachments that support the text shall include but not be limited to the following:

- The results of the geophysical survey;
- The results of the underground utility evaluation;
- An evaluation of vapor intrusion;
- A receptor survey for potential future remedial actions that include, but is not limited to:
    1. A review of the PA Groundwater Information System (PAGWIS) records available from the PA Topographic and Geologic Survey website. This task shall include plotting all recorded wells within a ½-mile radius of the Site on a scaled map and including a copy of the database records for the search distance in an appendix to the SCR; and
    2. A review of the Pennsylvania Natural Diversity Inventory (PNDI) to evaluate for the presence of special concern species and resources.
- Comprehensive groundwater elevation data in table form;
- Comprehensive groundwater sampling results in table form;
- Comprehensive soil sampling results in table form;
- Comprehensive soil vapor and/or indoor air and/or sub-slab vapor sampling results in table form (if applicable);
- Scaled figures showing the location of monitoring wells, soil samples, and indoor air and/or vapor samples (if applicable);
- Scaled figures for each round of groundwater elevation data collection showing groundwater elevations, groundwater elevation contours, and inferred direction(s) of groundwater flow;
- Scaled figures for each analyte found to be above the Solicitor-selected remedial goal for each round of groundwater sampling. Each figure should show analyte concentrations in each well and inferred dissolved-phase analyte plume contours;

- Laboratory reports, chains of custody, and field sampling documentation for all media sampled as part of characterization;
- Logs for all soil borings and monitoring wells including well construction logs;
- If necessary, clearly defined additional investigation work proposed for the characterization of the Site.

OPITIONAL MILESTONES

Milestone H – Bedrock Groundwater Monitoring Well Installation, Survey, and Development (Optional Milestone)

The activation of this Milestone will be contingent upon the absence of saturated soil and, therefore, relies upon the results of the data acquired in Base Scope of Work Milestones and will require the prior approval of ICF/PAUSTIF and/or the Technical Contact.

Milestone H1 – All bidders shall provide in Attachment 2 all reasonable and necessary costs to install, survey, and develop five bedrock groundwater monitoring wells. The costs included in Attachment 2 shall include, but not be limited to, all mobilizations, subcontractors, labor, equipment, waste, etc.

The five bedrock groundwater monitoring wells (MW-1D through MW-5D) shall be installed by the selected bidder in or adjacent to soil borings SB-1, SB-3, SB-5, SB-6 or SB-7, and SB-8 as identified on Figure 3 in Attachment 3a. The selected bidder shall exercise professional judgement and refer to the results of the geophysical survey and other utility mark out procedures (i.e., engineering evaluation of underground utilities, PA One Call, etc.) and the professional land survey prior to drilling the soil groundwater monitoring wells to avoid subsurface utilities and ensure the monitoring wells are located on the Site property. In the event that the location of any of the prescribed bedrock groundwater monitoring well locations are to be modified significantly or the well construction details vary from the assumptions presented below, the selected bidder shall notify ICF/PAUSTIF and/or the Technical Contact with a technical justification to do so before proceeding.

The bedrock groundwater monitoring wells shall be installed through the hollow stem auger borings installed as part of Milestone C or adjacent to the borings using air rotary drilling techniques. Each bidder shall specify their selected drilling method in the RFB response. That is, all bidders shall assume that each bedrock groundwater monitoring well will be installed using either a compressor with an air hammer through augers or an air rotary drilling rig. For the purposes of this RFB, please assume that each bedrock groundwater monitoring well will be installed to a total depth of 50 fbg with 20 feet of overburden cased off. Each well shall be completed with two-inch PVC materials with a 30-foot screen placed entirely in the bedrock. Well logs should be prepared by a

Professional Geologist for each well using the same consistent classification system procedure used in Milestone C. All bedrock groundwater monitoring wells shall be completed at the surface with a securable manhole, set in concrete flush with the ground surface. A locking, pressure fit, watertight cap shall be used to prevent the infiltration of surface runoff and rainwater and to restrict unauthorized access.

The tops of casings of the bedrock groundwater monitoring wells shall be vertically and horizontally surveyed by a licensed surveyor to allow for the calculation of groundwater elevations across the Site.

Following the installation of the bedrock groundwater monitoring wells, the selected bidder shall gauge the monitoring wells to determine the depth-to-water. The depth-to-water measurements should be collected no sooner than 24-hours following the installation of each soil monitoring well.

Following the depth-to-water measurements, the selected bidder shall develop the five bedrock groundwater monitoring wells in accordance with generally-accepted practices as outlined in the PADEP's Groundwater Monitoring Guidance Manual, dated December 1, 2001 (Document #383-3000-01).

Milestone H2 – All bidders shall provide in Attachment 2 the per foot cost to drill and construct the bedrock groundwater monitoring wells installed as part of Milestone H1 (and Milestones L1 and L2). In the event that it is reasonable and necessary to drill and construct one or more bedrock groundwater monitoring well to a total depth greater than the assumed depth of 50 fbg, the per foot cost provided in Attachment 2 will be reimbursement for each additional foot of well installation for each monitoring well beyond the assumed depth.

Milestone I – Bedrock Groundwater Monitoring Well Sampling (Optional Milestone)

All bidders shall provide in Attachment 2, the cost to sample the five bedrock groundwater monitoring wells installed as part of Milestone H. As part of this RFB, two separate groundwater sampling events shall be completed. The activation of this Milestone is contingent upon the prior approval of ICF/PAUSTIF and/or the Technical Contact.

The selected bidder shall perform two rounds of bedrock groundwater sampling with the first bedrock groundwater sampling event occurring no sooner than two weeks following the development of the bedrock groundwater monitoring wells and the second bedrock groundwater sampling event occurring no sooner than 30 days following the first bedrock groundwater sampling event. Each sampling event shall include the comprehensive measurement of depths-to-water in the bedrock groundwater monitoring wells followed by the purging and sampling of each soil monitoring well. The bedrock groundwater

samples shall be collected in laboratory-provided containers and analyzed by EPA Method 8260B for the substances listed in the COC section of this RFB.

Milestone J – Vapor Intrusion Sampling (Optional Milestone)

All bidders shall include the costs necessary to perform a vapor intrusion evaluation of site specific data as part of Milestone G. The purpose of the evaluation is to determine if the potential for vapor intrusion from the release of unleaded gasoline exists. If the evaluation determines that the potential for vapor-phase intrusion of regulated substances from the release of unleaded gasoline, kerosene, and/or heating oil exists, the selected bidder shall perform vapor intrusion sampling as part of this milestone. The activation of this milestone will be contingent upon the results of previously collected data and will require the prior approval of ICF/PAUSTIF and/or the Technical Contact.

All bidders shall provide in Attachment 2 the costs for each of the milestones below. In the event that one or more of the milestones described below are initiated by the selected bidder, the selected bidder shall conduct the activities described in the milestone(s) in accordance with the PADEP VI TGM. All air samples collected as part of the Milestones described below shall be collected in laboratory provided passivated stainless steel canisters (e.g., Summa) and analyzed for the substances listed in the COC section of this RFB by EPA Method TO15. All bidders shall include in Attachment 2 all laboratory analysis costs (e.g., Summa can rental, regulator rental, and analytical costs) for the anticipated number of air samples associated with each of the milestones below.

Milestone J1 – All bidders shall provide in Attachment 2 all reasonable and necessary costs to install two near-source soil gas sampling points, sample each near-source soil gas sampling point twice, and analyze the samples. Although the depth (and location) of each near-source soil gas sampling point shall be based on site-specific data collected as part of other milestones contained within this RFB, for the purposes of this RFB, each bidder shall assume that each near-source soil gas sampling point shall be installed to a total depth of 15 fbg. The near-source soil gas samples shall not be collected sooner than 24 hours following the installation of the sampling point and the two sampling events shall be separated by at least 45 days. All bidders shall assume that a total of four air samples shall be collected and analyzed as part of this milestone.

Milestone J2 – All bidders shall provide in Attachment 2 all reasonable and necessary costs to install and sample twice one additional near-source soil gas sampling point as an add-on to Milestone J1 (which accounts for installation and sampling mobilization costs). The installation assumptions and sampling times presented in Milestone J1 apply to this milestone. All bidders shall assume that a total of two additional near-source air samples shall be collected and analyzed as part of this milestone.

Milestone J3 – All bidders shall provide in Attachment 2 all reasonable and necessary costs to collect soil gas samples from two locations from beneath the concrete slab (sub-slab) of the Site building on two separate occasions. Both sampling events shall occur during the heating season. All samples shall be collected no sooner than 1 hour following the penetration of the concrete slab (to allow for sub-slab air equilibration) and the two sampling events shall be separated by at least 45 days. All bidders shall assume that a total of four sub-slab air samples shall be collected and analyzed as part of this milestone.

Milestone J4 – All bidders shall provide in Attachment 2 all reasonable and necessary costs to collect a sub-slab soil gas sample from one additional location on two separate occasions as an add-on to Milestone J3 (which accounts for mobilization costs). The sampling protocols presented in Milestone J3 apply to this milestone. All bidders shall assume that a total of two sub-slab air samples shall be collected and analyzed as part of this milestone.

Milestone J5 – All bidders shall provide in Attachment 2 all reasonable and necessary costs to collect two indoor air samples from within the Site building on two separate occasions. Both sampling events shall occur during the heating season and both sampling events shall be separated by at least 45 days. All bidders shall assume that a total of four indoor air samples shall be collected and analyzed as part of this Milestone.

Milestone J6 – All bidders shall provide in Attachment 2 all reasonable and necessary costs to collect one additional indoor air sample on two separate occasions as an add-on to Milestone J5 (which accounts for mobilization costs). The sampling protocols presented in Milestone J5 apply to this milestone. All bidders shall assume that a total of two indoor air samples shall be collected and analyzed as part of this milestone.

Milestone J7 – All bidders shall provide in Attachment 2 all reasonable and necessary costs to collect one outside ambient air sample as an add-on to Milestone J1, Milestone J3, and/or Milestone J5. All bidders shall assume that one ambient air sample shall be collected and analyzed as part of this milestone.

Milestone K – Supplemental Soil Groundwater Monitoring Well Installation and Development (Optional Milestone)

In the event that one or more supplemental soil groundwater monitoring wells are necessary in a subsequent drilling iteration to characterize dissolved-phase concentrations of COCs at the Site, all bidders are required to provide in Attachment 2 the cost to install and develop supplemental soil groundwater monitoring wells. All bidders shall assume that all supplemental soil groundwater monitoring wells will be installed, constructed, and developed in accordance with the methodology described in

Milestone D. In the event that it is reasonable and necessary to drill and construct the supplemental soil groundwater monitoring well(s) to a total depth greater than the assumed depth of 20 fbg, the per foot cost provided in Attachment 2 (as part of Optional Milestone K3) will be reimbursement for each additional foot of well installation for each monitoring well beyond the assumed depth. The activation of Milestones K1 and K2, described below, will require the prior approval of ICF/PAUSTIF and/or the Technical Contact and the selected bidder shall present the locations of all proposed soil groundwater monitoring wells to ICF/PAUSTIF and/or the Technical Contact for review and comment.

Milestone K1 – All bidders shall provide in Attachment 2 all reasonable and necessary costs to install and develop one soil groundwater monitoring well. The costs included in Attachment 2 shall include, but not be limited to, all mobilizations, subcontractors, labor, equipment, waste, etc.

Milestone K2 – All bidders shall provide in Attachment 2 all reasonable and necessary costs to install and develop an additional soil groundwater monitoring well as an add-on to Milestone K1 (which accounts for mobilization costs). The costs included in Attachment 2 shall include, but not be limited to, all subcontractors, labor, equipment, waste, etc.

Milestone K3 – All bidders shall provide in Attachment 2 the per foot cost to drill and construct the soil groundwater monitoring wells installed as part of Milestone D, Milestone K1, and Milestone K2.

Milestone L – Supplemental Bedrock Groundwater Monitoring Well Installation and Development (Optional Milestone)

In the event that one or more supplemental bedrock groundwater monitoring wells are necessary in a subsequent drilling iteration to characterize dissolved-phase concentrations of COCs at the Site, all bidders are required to provide in Attachment 2 the cost to install and develop supplemental bedrock groundwater monitoring wells. All bidders shall assume that all supplemental bedrock groundwater monitoring wells will be installed, constructed, and developed in accordance with the methodology described in Milestone H. In the event that it is reasonable and necessary to drill and construct one or more bedrock groundwater monitoring well to a total depth greater than the assumed depth of 50 fbg, the per foot cost provided in Attachment 2 (as part of Optional Milestone H2) will be reimbursement for each additional foot of well installation for each monitoring well beyond the assumed depth. The activation of Milestones L1 and L2, described below, will require the prior approval of ICF/PAUSTIF and/or the Technical Contact and the selected bidder shall present the locations of all proposed bedrock groundwater monitoring wells to ICF/PAUSTIF and/or the Technical Contact for review and comment.

Milestone L1 –All bidders shall provide in Attachment 2 all reasonable and necessary costs to install and develop one bedrock groundwater monitoring well. The costs included in Attachment 2 shall include, but not be limited to, all mobilizations, subcontractors, labor, equipment, waste, etc.

Milestone L2 – All bidders shall provide in Attachment 2 all reasonable and necessary costs to install and develop an additional bedrock groundwater monitoring well as an add-on to Milestone L1 (which accounts for mobilization costs). The costs included in Attachment 2 shall include, but not be limited to, all subcontractors, labor, equipment, waste, etc.

Milestone M – Supplemental Groundwater Sampling (Optional Milestone)

The purpose of this milestone is to allow for the performance of additional groundwater sampling events (beyond the two groundwater sampling events specified in Milestone F and optional Milestone I). All bidders shall assume that all monitoring wells will be sampled in accordance with the methodology described in Milestone F and/or Milestone I. The activation of Milestones M1, M2, M3, and M4 (described below), will require the prior approval of ICF/PAUSTIF and/or the Technical Contact.

Milestone M1 – All bidders shall provide in Attachment 2 the cost to complete one comprehensive sampling event that includes only the five soil groundwater monitoring wells installed as part of Milestone D (MW-1 through MW-5). The costs shall include, but not be limited to, mobilization, labor, equipment, subcontractors, waste, etc.

Milestone M2 – All bidders shall provide in Attachment 2 the cost to collect one groundwater sample from one soil groundwater monitoring well as an add-on to Milestone M1 (which accounts for mobilization costs). The costs shall include all subcontractors, labor, equipment, waste, etc. and will be used as necessary to modify the applicable Milestone M reimbursement for a supplemental comprehensive groundwater sampling event.

Milestone M3 – All bidders shall provide in Attachment 2 the cost to complete one comprehensive sampling event that includes only the five bedrock groundwater monitoring wells installed as part of Milestone H (MW-1D through MW-5D). The costs shall include, but not be limited to, mobilization, labor, equipment, subcontractors, waste, etc.

Milestone M4 – All bidders shall provide in Attachment 2 the cost to collect one groundwater sample from one bedrock groundwater monitoring well as an add-on to Milestone M1 and/or M3 (which account for mobilization costs). The costs shall include all subcontractors, labor, equipment, waste, etc. and will be used as necessary to modify

the applicable Milestone M reimbursement for a supplemental comprehensive groundwater sampling event.

Milestone N – Supplemental Soil Sampling (Optional Milestone)

The purpose of this milestone is to allow for the collection of additional soil data in the event that Milestone C does not sufficiently delineate petroleum impacts to soil. The activation of this milestone will require the prior approval of ICF/PAUSTIF and/or the Technical Contact. For the purposes of this RFB, all bidders shall assume that the supplemental soil samples collected as part of this milestone shall be collected via direct-push soil borings advanced up to 20 fbg. All soil samples shall be collected in laboratory-provided containers and analyzed by EPA Method 8260B for the substances listed in the COC section of this RFB. Soil samples should be screened at two-foot intervals with a PID (using headspace measurements) and continuous geological logs shall be prepared by a Professional Geologist for each boring using the same consistent classification system procedure used in Milestone C.

Milestone N1 – All bidders shall provide in Attachment 2 the cost to complete one direct push soil boring with the collection and analysis of one supplemental soil sample. The costs shall include, but not be limited to, mobilization, labor, equipment, subcontractors, waste, etc.

Milestone N2 – All bidders shall provide in Attachment 2 the cost to advance an additional soil boring with the collection and analysis of one supplemental soil sample as an add-on to Milestone N1 (which accounts for mobilization costs). The costs shall include all subcontractors, labor, equipment, waste, etc.

Milestone N3 – All bidders shall provide in Attachment 2 the cost for the collection and analysis of one additional soil sample from a soil boring accounted for in Milestone N1 and/or N2 as a cost adder to Milestone N1 and/or N2.

Milestone O – Professional Land Survey Update (Optional Milestone)

All bidders shall provide in Attachment 2 the cost to update the professional land survey. The update shall include, but not be limited to the vertical and horizontal locations of monitoring well casings installed as part of Optional Milestones. The activation of this milestone will require the prior approval of ICF/PAUSTIF and/or the Technical Contact.

Milestone P – Off-Site Access (Optional Milestone)

All bidders shall provide in Attachment 2, the cost to secure a formal access agreement to one property contiguous with the Chuck's Stop property. The activation of this milestone is contingent upon the prior approval of ICF/PAUSTIF and/or the Technical Contact.

For the purposes of this RFB, all bidders shall assume that the property owner(s) will grant access to their property.

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. Figures
    b. June 1997 Notification of Reportable Release, June 3, 2008 PADEP No-Further Action Letter, PADEP eFacts Screen Capture
    c. February 9, 1999 Registration / Permitting of Storage Tanks Form
    d. USEPA Inspection Report
    e. August 20, 1999 UST Closure Notification, December 15, 1999 Storage System Report
    f. December 1999 Notification of Reportable Release
    g. June 19, 2000 UST Facility Operations Inspection
    h. October 16, 2014 UST Closure Report