

Request for Bid

Fixed-Price Bid to Result

Remediation Project and Closure Activities

Solicitor

Lewis Brothers Garage

3 Hunts Court

Clark Summit, Pennsylvania 18411

PADEP Facility ID #: 35-10233 PAUSTIF Claim #: 2007-0053(F)

Date of Issuance

April 26, 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.

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	May 15, 2017 by 5 p.m.
Mandatory Pre-Bid Site Visit	May 16, 2017 at 12 p.m.
Deadline to Submit Questions	May 23, 2017 by 5 p.m.
Bid Due Date and Time	June 6, 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, 4000 Vine Street, Middletown, PA 17057, Attention: Contracts Administrator. The outside of the shipping package containing the bid must be clearly marked and labeled with "Bid – Claim # [insert claim number provided on cover page]".** Please note that the use of U.S. Mail, FedEx, UPS, or other delivery method does not guarantee delivery to this address by the due date and time listed in the Calendar of Events for submission. Companies mailing bids should allow adequate delivery time to ensure timely receipt of their bid.

The bid must be received by 3 p.m., on the due date shown in the Calendar of Events. Bids will be opened immediately after the 3 p.m. deadline on the due date. Any bids received after this due date and time will be time-stamped and returned. If, due to inclement weather, natural disaster, or any other cause, the PAUSTIF's third party administrator, ICF's office is closed on the bid due date, the deadline for submission will automatically be extended to the next business day on which the office is open. The PAUSTIF's third party administrator, ICF, may notify all companies that attended the Mandatory Pre-Bid Site Meeting of an extended due date. The hour for submission of bids shall remain the same. Submitted bid responses are subject to the Pennsylvania Right-to-Know Law.

Bid Requirements

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

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

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

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

In addition, the bidder shall provide:

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

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

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

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

Each bid response document must include at least the following:

1. Demonstration of the bidder's understanding of the Site information provided in this RFB, standard industry practices, and objectives of the project.
2. A clear description, specific details, and original language of how the proposed work scope will be completed for each milestone. The bid should specifically discuss all tasks that will be completed under the Remediation Agreement and what is included (e.g., explain groundwater purging/sampling methods, which guidance documents will be followed, what will be completed as part of the Site specific work scope/SCR/RAP implementation). Recommendations for changes/additions to the Scope of Work

proposed in this RFB shall be discussed, quantified, and priced separately; however, failure to bid the SOW “as is” may result in a bid not being considered. Bids should include enough original language conveying bidder’s thought such that the understanding of site conditions, closure approach (if applicable), and approach to addressing the scope of work can be evaluated. Since bidders are not prequalified, the bid response must provide the Bid Evaluation Committee and Solicitor enough information to complete a thorough review of the bid and bidder.

3. A copy of an insurance certificate that shows the bidder’s level of insurance consistent with the requirements of the Remediation Agreement. Note: The selected consultant shall submit evidence to the Solicitor before beginning work that they have procured and will maintain Workers Compensation, commercial general and contractual liability, commercial automobile liability, and professional liability insurance commensurate with the level stated in the Remediation Agreement and for the work to be performed.
4. The names and brief resumes/qualifications of the proposed project team including the proposed Professional Geologist and Professional Engineer (if applicable) who will be responsible for overseeing the work and applying a professional seal to the project deliverables (including any major subcontractor(s)).
5. Responses to the following specific questions:
 - a. Does your company employ a Pennsylvania-licensed Professional Geologist that is designated as the proposed project manager? How many years of experience does this person have?
 - b. How many Pennsylvania Chapter 245 projects is your company currently the consultant for in the PADEP Region where the Site is located? Please list up to 10.
 - c. How many Pennsylvania Chapter 245 Corrective Action projects involving an approved SCR, RAP, and RACR has your company and/or the Pennsylvania-licensed Professional Geologist closed (i.e., obtained Relief from Liability from the PADEP) using any standard?
 - d. Has your firm ever been a party to a terminated PAUSTIF-funded Fixed-Price (FP) or Pay-for-Performance (PFP) contract without attaining all of the milestones? If so, please explain.
6. A description of subcontractor involvement by task. Identify and describe the involvement and provide actual cost quotations/bids/proposals from all significant specialized subcontracted service (e.g., drilling/well installations, laboratory, etc.). If a bidder chooses to prepare its bid without securing bids for specialty subcontract services, it does so at its own risk. Added costs resulting from bid errors, omissions, or faulty assumptions will not be considered for PAUSTIF reimbursement.

7. A detailed schedule of activities for completing the proposed SOW including reasonable assumptions regarding the timing and duration of Solicitor reviews (if any) needed to complete the SOW. Each bid must provide a schedule that begins with execution of the Remediation Agreement with the Solicitor and ends with completion of the final milestone proposed in this RFB. Schedules must also indicate the approximate start and end date of each of the tasks/milestones specified in the Scope of Work, and indicate the timing of all proposed key milestone activities (e.g., within 30 days of the contract being executed).
8. A description of how the Solicitor, ICF, and the PAUSTIF will be kept informed as to project progress and developments and how the Solicitor (or designee) will be informed of and participate in evaluating technical issues that may arise during this project.
9. A description of your approach to working with the PADEP. Describe how the PADEP would be involved proactively in the resolution of technical issues and how the PADEP case team will be kept informed of activities at the Site.
10. Key exceptions, assumptions, or special conditions applicable to the proposed SOW and/or used in formulating the proposed cost estimate. Please note that referencing extremely narrow or unreasonable assumptions, special conditions, and exceptions may result in the bid response being deemed “unresponsive”.
11. The name and contact information of the person who is to be contacted in the event the bid is selected by the Solicitor and/or a Right to Know request is received by PAUSTIF.

Bid Review and Evaluation

1. Bid Review and Scoring

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

Technical Scoring

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

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

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

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

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

Cost Scoring

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

A = the lowest bid cost

B = the bidder's cost being scored

C = the maximum number of cost points available

D = bidder's cost score (points)

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

2. Evaluation of Bids

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

General Site Background and Description

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

Site Address

Lewis Brothers Garage
PA Route 347
Olyphant PA 18447
Scott Township, Lackawanna 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 Scott Township, Lackawanna County, Pennsylvania. Located at the Site are a one (1) story building, including a garage and offices, one (1) 6,000 gallon unleaded gasoline UST, and one (1) 10,000 gallon unleaded gasoline UST. In May 2007 the residual product remaining in both of the unleaded gasoline UST's located at the Site were pumped out and the UST's were placed in Temporarily Out of Service status. During April 2008 a partial system closure consisting of dispenser and product line removal was completed with the USTs remaining in place and out of service. Petroleum impacted soils were excavated to the maximum extent practical and post excavation soil samples indicate petroleum impacted soils remained in place exceeding the residential used aquifer Statewide health standard (SHS). One (1) 1,000 gallon used motor oil UST (orphan) was removed from the Site in July 2010. The surrounding properties are a mix of residential and commercial properties. The Site is supplied water from an off-site potable well and utilizes an on-lot septic system (unknown location). Public water is not available and all properties in the vicinity of the Site utilize potable wells.

Site Background Information

In December 2006, Ms. Amy Jarrow, a resident of 899 Justus Boulevard (approximately 200 feet southeast of the Site) reported the presence of petroleum odors in the potable water at her residence to the PADEP. Analytical results of a potable water sample collected by the PADEP from the Jarrow residence potable well indicated the presence of MTBE at a concentration of 40.0 micrograms per liter (ug/L), which is above the Residential and Non-Residential SHS. Based on the results of the aforementioned sample, the Solicitor retained a consultant to complete site characterization activities at the Site.

During May 2007, the residual product was pumped out of both of the unleaded gasoline USTs (Tank #003 and Tank #004) and the USTs were placed in Temporarily Out Of Service status.

From May 2007 through August 2011, a total of 73 initial and 29 confirmatory drinking water samples were collected from private potable supply wells in the vicinity of the Site. The drinking water samples were laboratory analyzed for PADEP unleaded gasoline target compounds (benzene, toluene, ethylbenzene, total xylenes, cumene, naphthalene, MTBE, 1,2,4-TMB, and 1,3,5-TMB). Laboratory analytical results indicated that concentrations were detected in 27 individual wells. Point of Entry Treatment (POET) systems were installed on each of the 27 potable wells with detectable unleaded gasoline target compound concentrations.

Between February 28, 2008 and March 3, 2008, a total of 21 soil borings (TB-1 through TB-21) were installed at the Site. A total of 22 soil samples were analyzed for PADEP unleaded gasoline target compounds. The laboratory analytical results indicate benzene, ethylbenzene, toluene, naphthalene, xylenes, 1,2,4-TMB and 1,3,5-TMB were detected above their respective Residential PADEP SHS.

From March 10, 2008 through March 12, 2008, a total of five (5) overburden monitoring wells (MW-1S through MW-5S) were installed at the Site to depths ranging from 22.5 feet below surface grade (ftbsg) to 30 ftbsg. Initial sampling results indicated that benzene, MTBE, 1,2,4-TMB, and 1,3,5-TMB were detected above their respective PADEP SHS in monitoring well MW-4S.

On April 15, 2008, the two (2) product dispensers and product supply lines were removed from the UST systems. Approximately 60 tons of petroleum-impacted soil was excavated from these areas and ultimately transported off-site for disposal. Post-excavation soil samples were not collected.

On June 12, 2008, a total of four (4) additional soil borings (TB-22 through TB-25) were installed at the Site and five (5) soil samples were collected for laboratory analysis. The laboratory analytical results indicated that benzene, 1,2,4-TMB and 1,3,5-TMB were detected above their respective Residential PADEP SHS.

On June 12, 2008, a total of four (4) vapor monitoring wells (VP-1 through VP-4) were installed at the Site. Initial soil gas sampling results indicated that all parameters were below their respective PADEP screening criteria.

On June 13, 2008, three (3) surface water samples (SW-1, SW-2, and SW-3) were collected from an unnamed tributary to Hull Creek located adjacent to the Site. The laboratory analytical results for surface water indicated that all parameters were below PADEP SHS.

From June 18, 2008 through June 23, 2008, a total of one (1) overburden monitoring well (MW-6S) and three (3) bedrock monitoring wells (MW-1D, MW-2D, and MW-6D) were installed at the Site. Initial groundwater sampling results indicated that benzene, toluene, ethylbenzene, and total xylenes, naphthalene, 1,2,4-TMB, and 1,3,5-TMB were detected above their respective PADEP SHS in some or all of the wells.

In August 2008, both rising and falling head slug tests were performed on monitoring well MW-3S, MW-5S, and MW-2D. In August 2010, both rising and falling head slug tests were performed on multiple monitoring wells (MW-2S through MW-5S, MW-7S through MW-12S, and MW-8D through MW-13D).

On October 3, 2008, bedrock monitoring well (MW-7D) was installed at the Site to a total depth of 60 ftbsg.

In October 2008, a Preliminary Site Characterization Report (SCR) was prepared and submitted to the PADEP. The aforementioned report summarized the characterization efforts completed to date for the Site and recommended additional characterization activities.

On March 22, 2009, soil gas sampling points VP-1 through VP-4 were sampled and laboratory analytical results indicated that all parameters were below the PADEP SHS screening values.

On April 30, 2009, an 8-hour high vacuum extraction event was conducted at the Site on monitoring well MW-2S. A total of 1,199 gallons of product and petroleum impacted water was extracted from monitoring well MW-2S.

During March 2010 and April 2010, a total of six (6) additional bedrock monitoring wells (MW-8D through MW-13D) were installed at the Site to total depths ranging from 100 ftbsg to 201 ftbsg.

In May 2010, a total of seven (7) additional overburden monitoring wells (MW-7S through MW-13S) were installed at the Site. Initial groundwater sampling results indicated that benzene, toluene, ethylbenzene, total xylenes, MTBE, naphthalene, 1,2,4-TMB, and 1,3,5-TMB were detected above their PADEP SHS in some or all of the new wells.

On July 27, 2010, an orphan 1,000-gallon used motor oil UST was closed via removal after it was exposed by a precipitation event. Analytical results from two (2) soil samples collected as part of the UST closure activities indicated that all parameters were below PADEP SHS.

In September 2010, approximately 426.67 tons of petroleum-impacted soil was excavated from the vicinity of the former dispenser islands and product piping runs and transported off-site for disposal. A total of 12 post excavation soil samples were collected from the excavation area in accordance with the Systematic Random Sampling Procedures set forth in the Act 2 Technical Guidance Manual. The laboratory analytical results indicate that benzene, MTBE, 1,2,4-TMB, and 1,3,5-TMB were detected above their respective Act 2 standards in some of the samples.

During October 2010, aquifer testing was conducted at the Site. Both a step pump test and a constant rate pump test were conducted at the Site on monitoring well MW-11D.

During July 2011 and August 2011, a replacement potable supply well was installed off-site at the Jarrow residence. The replacement supply well was installed to a total depth of 352 ftbsg and had steel casing installed to 230 ftbsg, and was left a 6" open rock borehole from 230 ftbsg to 352 ftbsg. Initial sampling results indicated that all parameters were not detected above PADEP SHS and the well was placed on-line on October 4, 2011. On December 2, 2011 the former Jarrow production well was abandoned by filling the well from bottom to top with grout.

On August 16, 2011, one (1) additional overburden monitoring well (MW-14S) was installed at the Site to a total depth of 20 ftbsg.

Groundwater, surface water, potable well, and soil gas sampling events have been conducted at the Site on a periodic basis over the past five (5) years and have been reported to PADEP in numerous reports prepared by the previous environmental consultant.

On June 19, 2013, a SCR was submitted to the PADEP on behalf of the client by the previous consultant. The SCR summarized characterization and risk assessment activities completed to date and indicated that a combination of SHS (groundwater) and SSS (soil) would be applied to the Site. A remedial alternatives evaluation suggested leaving impacted soils in place (SSS – pathway elimination), active remediation of shallow groundwater, natural attenuation of groundwater within the bedrock aquifer, and the utilization of POET systems on potable wells as an engineering control.

In a letter dated September 12, 2013, the June 2013 SCR was disapproved by PADEP. A copy of the letter is included in Attachment 3. Several reasons and/or comments were cited in the letter as to why the SCR was disapproved. A summary of the reasons and comments follows:

1. Soils have not been fully delineated as required.
2. Provide details of the steps that have been taken or are being taken to restore or replace affected or diminished water supplies.
3. The SCR indicates that there are vapor standards. The numerical values associated with PADEP's guidance are screening criteria and not cleanup standards.
4. The SCR indicates vapor modeling results pass with regard to the "subject property". All potential receptors and source areas need to be fully evaluated and described within the SCR.
5. The potential exposure pathways for soils were evaluated incorrectly. All potential exposure pathways must be evaluated.
6. The presence and use of POETS as an engineering control to eliminate an exposure pathway may be viable. However, they need to be properly maintained, sampled, and included in a post remedial care plan. They may also need to be included in a covenant(s).
7. Results and an explanation of the results is needed pertaining to why the provided report contains no sampling data from both the monitoring wells and supply wells after June of 2012.
8. The SCR indicates the SSS is proposed for soils via the installation and maintenance of an asphalt cap as an institutional control. This proposed remedy does not address the off-site impacted soils in the smear zone. Also, the corresponding plot maps depicting the impact to each of the specific soil zones should only include the specific sampling locations associated with that zone.

9. The SCR indicates 12 post-excavation soil samples were collected from the September 2010 source area excavation. A plot map drawn to scale and indicating all pertinent features is needed including but not limited to the sampling locations and depths. Also, an explanation is needed regarding why additional source removal was not completed, since nine (9) of the 12 samples collected still exceed the applicable standards.
10. The SCR indicates the September 2010 post-remedial soil sampling was done in a systematic random manner. The soil impact has not been delineated and the excavation did not remove all impacted soils. Therefore, the PADEP views them as characterization not attainment samples.
11. The former 1,000-gallon used motor oil tank needs to be noted on all applicable plot maps.
12. Contaminant trend analysis contained within the SCR indicates increasing trends in groundwater including the bedrock aquifer. Therefore the proposed monitored natural attenuation of this aquifer needs to be reconsidered. All data needs to be provided in tabular format. The SCR indicates the observed increasing trends were likely due in part to the completed interim remedial actions. Documentation was not provided to substantiate this assertion.
13. Figure 9C needs to be modified. It shows TB-11 within the zone of impact but was not sampled and TB-5 is also shown within the zone of impact and it was not impacted.
14. Provide an explanation of the detected levels of benzene for the 11/8/11 sampling event of MW-12D.
15. A pilot study will be necessary for the selected remedial technique after the characterization is completed. The pilot study will need to verify effectiveness of the selected technique as well as any effects on the nearby stream and/or water supply wells.
16. The evaluation of remedial options needs to address removal of free product to the maximum extent practical.
17. The screens for shallow monitoring wells 4, 11, and 14 are “drowned” or completely submerged under water. This is viewed as a result of the the extremely high water table. Therefore, when collecting samples for laboratory analysis the water level must be within the screened portion of the well.
18. An explanation is needed regarding the November 2011 sampling event for the MTBE Isoconcentration map. Specifically, how was the 5ppb isopleth determined without wells to the extent of the projected concentration extent?
19. The Remedial Action Plan [the SCR included a section titled Review of Remedial Options; a full RAP was not prepared] was not reviewed in its entirety and the draft environmental covenant was not evaluated due to the incompleteness of the site characterization, as well as the fact that all off-site impacts were not evaluated.

20. Quarterly sampling and reporting should continue through the site characterization process.

In November 2015, an additional soil investigation was conducted at the Site. The investigation included the advancement of 15 additional test boring (TB-26 through TB-40) at the Site, in the PennDOT right of way, and three additional properties. A total of 30 soil samples were submitted for laboratory analysis.

During 2015 and 2016, additional surface water samples, groundwater samples, and potable well samples were collected. Also, additional and replacement soil vapor points were installed and sampled. The soil vapor points were installed to depths ranging from 3 ftbsg to 8 ftbsg. Results of the sampling were summarized in the 2016 SCR.

In May 2016, aquifer testing activities were completed at the Site. Specifically, preliminary slug testing and step rate testing were done in preparation for the completion of a constant rate pump test. The methods and results were discussed in the September 2016 SCR.

A SCR dated September 26, 2016 was submitted to the PADEP for review and consideration. The aforementioned SCR summarized historical activities and sampling results as well as presented recent sampling efforts and activities. The PADEP responded on December 22, 2016 with a SCR approval with modification. Specifically, the correspondence provided nine modifications/stipulations of the SCR approval, which are provided below:

- 1. Dissolved lead has not been detected above laboratory method detection limits in groundwater since sampling was initiated in 2008. Analysis for dissolved lead may be discontinued.*
- 2. The Department concurs that under current conditions, no additional assessment of surface water is necessary at this time.*
- 3. The Johnson and Ettinger model performed for the Jarrow residence used a depth of groundwater value of ten feet below the floor of the basement. Groundwater elevations in nearby monitoring wells are often at depths of six to seven feet below grade. It does not appear that there is a buffer of five feet of soil between impacted groundwater and the basement floor. Indoor air sampling should be conducted.*
- 4. In Table BB-1 for the Strong residence, results are listed for an August 1, 2015 sampling event. Laboratory data sheets could not be located within the report for this date.*
- 5. The Department has reviewed the analytical results of Point of Entry Treatment (POET) systems and has determined that influent results for Tier 2 wells have non-detect results for five to six quarterly events over seven to eight years. Tier 3 wells have non-detect*

results for seven to eight events over seven to 8 years. Based on current conditions the POET systems may be removed from Tier 2 and Tier 3 wells.

- 6. In accordance with Section 250.305(c)(1) of the Department's Land Recycling regulations, the use of Direct Contact Values for soil is not relevant for screening the constituents of concern at the site. In sections 5.6, 6.1 and other locations of the report the Direct Contact Values are used. The Soil-to-Groundwater MSCs are the correct screening values for the site.*
- 7. Based on refusal of access to potentially relevant properties to the west and southwest, the Department will not require additional delineation in this direction at this time. The report indicates that impacted smear zone soils to the southeast are not delineated based on results collected from soil boring TB-38A; which contained an exceedance of the benzene MSC at the nine to ten foot interval. Based on nine of twelve previous gauging events of groundwater in nearby monitoring wells MW-10s, this interval is saturated. No further smear zone delineation is necessary in this direction.*
- 8. In section 9.2 of the report, it is suggested that the Site Specific standard (SSS) may be selected for soils at the site. There is no discussion of how that may be attained. Such a remedy would require activity and use restrictions be applied to impacted off-site properties memorialized in an Environmental Covenant. This might be very difficult to obtain.*
- 9. Additional remedial alternatives need to be evaluated and/or additional remedial pilot testing should be conducted. In Section 10.9 it is concluded that soil vapor extraction/air sparge technology is not appropriate for the site. There is a lack of detail in the pilot study, including but not limited to justification of the diameter and construction of SVE test wells, and the selection of specifications of the test equipment. Additionally, sparging was not conducted during this test.*

A copy of both the SCR and PADEP correspondence are provided in Attachment 3.

As directed in the December 22, 2016 PADEP correspondence, the current consultant is actively working on notifying the Tier 2 and Tier 3 homeowners that the POETs may be removed. It is anticipated that all of the efforts needed will be completed prior to the execution of the Remediation Agreement.

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. A response was received from the PADEP via e-mail on March 22, 2017 and this RFB was modified based upon PADEP comments. Specifically, the PADEP indicated the following:

"I have reviewed the RFB document for the above referenced site. My only comments are related to the Vapor Intrusion assessment. The interpreted impacted groundwater plume exceeds the groundwater MSCs within thirty lateral feet of the Jarrow property, and there is less than five feet of soil-like material between the foundation and groundwater. As was indicated in the Department's December 22, 2016 SCR response letter, an indoor air sample should be collected from the Jarrow property. This analysis should be conducted by the current consultant or might be included as part of Milestone A; as any exceedance could potentially require indoor air mitigation. The balance of the Vapor Intrusion assessment may be conducted post-remediation, however, should take into consideration the newest vapor intrusion guidance published January 18, 2017. The existing vapor monitoring points may or may not be relevant under the new guidance. This is something that might be considered in the potential add-on items."

Objective

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

For this Site, the selected goal for the project is to obtain a release of liability from the PADEP under Chapter 245 regulations by demonstrating attainment of the selected Statewide Health Standards for both soil and groundwater. In order to achieve the aforementioned goals, Bidders may propose to remediate the Site by one of the strategies listed below:

- High vacuum multi-phase extraction using a Liquid Ring Pump (LRP) or High Vacuum Blower to extract groundwater, SPL, and soil gas.
- Combination of soil vapor extraction and groundwater/SPL pumping (via submersible pumps).
- Combination of air sparge and either soil vapor extraction or multi-phase high vacuum extraction (i.e.; LRP).

The specific remedial technologies previously mentioned shall be the basis for preparing a SOW and presenting a competitive fixed-price bid. The selected bidder shall perform pilot testing to confirm that the remedial technology proposed in their bid would be feasible to meet the milestone objectives and remedial goal for this site.

Constituents of Concern (COCs)

The list of COCs for this Site include the following:

- Benzene
- Toluene
- Ethylbenzene
- Xylenes
- MTBE
- Naphthalene
- Cumene
- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene

General SOW Requirements

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

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

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

- Conduct necessary, reasonable, and appropriate project planning and management activities until the project (i.e., Remediation Agreement) is completed. Such activities may include Solicitor communications/updates, meetings, record keeping, subcontracting, personnel and subcontractor management, quality assurance/quality control, scheduling, and other activities (e.g., utility location). Project planning and management activities will also include preparing and implementing plans for health and safety, waste management, field sampling/analysis, and/or other plans that are necessary and appropriate to complete the SOW, and shall also include activities related to establishing any necessary access agreements. Project planning and management shall include identifying and taking appropriate safety precautions to not disturb Site utilities including, but not limited to, contacting Pennsylvania One Call as required prior to any ground-invasive work. As appropriate, project management costs shall be included in each bidder's pricing to complete the milestones specified below.
- Be responsible for coordinating, managing, and completing the proper management, characterization, handling, treatment, and/or disposal of all impacted soils, water, and derivative wastes generated during the implementation of this SOW. The investigation-derived wastes, including purge water, shall be disposed in accordance with standard industry practices and applicable laws, regulations, guidance, and PADEP directives. Waste characterization and disposal documentation (e.g., manifests) shall be maintained and provided to the Solicitor and the PAUSTIF upon request. All investigation derived wastes shall be handled and disposed per PADEP's Regional Office guidance. It is the selected consultant's responsibility to conform with current PADEP Regional Office guidance requirements in the region where the Site is located.
- Be responsible for providing the Solicitor, facility operator, and any affected off-site property owner with adequate advance notice prior to each visit to the property. The purpose of this notification is to coordinate with the Solicitor, facility operator, and any affected off-site property owner 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.

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

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) as to when each of the milestones will be completed. This includes the expected date when the draft RAP will be submitted to the Solicitor, PAUSTIF and B&B for review. All on-site work should be completed during the normal working days and hours of 8 am to 5 pm from Monday through Friday.
- **Responsibility:** The selected consultant will be the consultant of record for the Site. They will be required to take ownership and responsibility for the project and will be responsible for representing the interests of the Solicitor and 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.
- **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 consultant should determine the level of safety measures needed to appropriately complete the milestones. Specifically, if a consultant feels it is appropriate and necessary to complete additional safety measures other than or beyond what is required in the SOW, the cost should be included in their proposal and costs. More importantly, if a consultant includes the cost to complete safety activities, they should specify it in their proposal and discuss why it is appropriate and necessary and indicate which methods will be utilized and to what extent. As discussed in the RFB, cost is not the only factor when evaluating proposals and other factors are taken into consideration during the review process, including appropriate safety measures.
- **Waste Disposal:** The IDW waste (including soil/rock cuttings, development water, and liquids generated during installation and aquifer testing) should be disposed of per the instructions included in the “General SOW Requirements” section of the RFB. Bidders will be responsible for arranging any offsite waste disposal (if required) and including costs in their bid response to cover the disposal of all potential waste related to the milestones included in the SOW. Containerized soil and groundwater may be temporarily stored on site, but should be removed from the Site in a timely manner. In an effort to eliminate or minimize the need for change orders on a fixed price contract, please include costs to dispose of all anticipated volumes of waste in your bid response. PAUSTIF will not entertain any assumptions on the contract with regards to a volume of

waste (i.e. Project costs assume that no more than 1,000 gallons of groundwater will require disposal after the completion of the pump test). Bidders will be responsible for including costs in their bid response to cover the disposal of all potential waste related to the milestones included in the SOW. Please estimate the volume of waste using your professional opinion, experience, and the data provided. Invoices submitted to cover additional costs on waste generated as part of activities included under the fixed price contract for this Site will not be paid. If your bid proposes to dispose of waste under a permit, then your bid needs to address the potential situation of a permit not being approved. Bids need to specifically indicate that your bid costs include the costs to dispose of the waste even if a permit is not approved. As indicated in the bid, there should be no assumptions on waste and assuming that a permit will be approved is still making an assumption on waste.

- **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:** The claimant has selected to remediate the groundwater and soil at the Site to Statewide Health Standards for all constituents of concern.
- **Recent PADEP Correspondence –** Consultants should review the December 22, 2016 PADEP correspondence included in Attachment 3 for additional information on such topics as lead sampling and Tier 2 and Tier 3 POETs.

Site-Specific Milestones

The following Milestones are to be included in bid responses:

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

Bidders may use this opportunity to: 1) confirm any elements of the site characterization completed by a previous consultant; 2) address any perceived data gaps in the existing site characterization work; 3) assist in the evaluation and determination of remedial technologies and system design which are characterization-type activities (e.g., analysis for C₄-C₁₀); 4) assist with refining the cleanup timeframe estimate and/or other reasons related to validating the bidder's remedial approach and design (e.g., additional sampling to better determine mass in place). Note that all tasks and costs related to pilot testing and reporting must be captured under the Pilot Testing and Reporting Milestone, not Supplemental Site Characterization Activities and Reporting. If pilot testing tasks and costs are included in this Site Characterization Milestone, the bidder's technical score will be negatively impacted.

As requested by the PADEP, the Bidders should include the costs to collect an indoor air sample from the Jarrow property as part of Milestone A. Bidders may also want to consider completing some additional vadose zone soil delineation in the area immediately downgradient of the UST as well as installing an additional shallow point of compliance well downgradient of the UST field (onsite) between MW-3s and MW-4s.

Milestone B – Private Utility Markout. Prior to any intrusive investigation work at the Site, a private markout is to be conducted at the Site (and/or off-site location where intrusive activities will be conducted) to confirm the location of any obstruction or underground utility present in the vicinity of the proposed intrusive activity locations. The locations of the identified features should be marked with 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 – Pilot Testing and Reporting

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

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

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

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

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

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

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

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

“Pilot Test Off-Ramp” – The selected consultant and the Solicitor are protected from being obligated to move forward with a remedial action under the executed Remediation Agreement if the proposed remedial approach cannot be implemented as proposed in the conceptual design based on critical criteria outside the bidder's defined ranges from the pilot test data from Milestone C. Exhibit A of the Remediation Agreement (Attachment 1) will contain a provision that if the selected consultant's proposed remedial approach is not reasonable based solely on pilot test results indicating that it cannot be implemented as proposed in the conceptual design based on critical criteria outside the bidders defined ranges from the pilot test data from Milestone C, then one of the following conditions will apply:

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

may elect to not proceed and to terminate the Remediation Agreement for the project.

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

For consistency, bidders shall budget a maximum of 10% of the total bid cost for this Milestone, with a maximum of \$50,000. For example, if the total proposed cost for Milestones A through L (excluding C) is determined to be \$300,000, the fixed-price cost of Milestone C specified in the bid cost spreadsheet shall be up to, but not exceed \$30,000. However, if the total proposed cost for Milestones A through L (excluding C) is determined to be \$550,000, the fixed-price cost of Milestone C specified on the bid cost spreadsheet shall be up to, but not exceed \$50,000.

Milestone D – Obtain Off-Site Access – Provide a cost to secure offsite access to adjacent residential/commercial properties in an effort to complete intrusive work as well as access for routine sampling. The cost should cover the necessary time and materials needed to contact the off-site property owners listed below, draft an access agreement for each of the properties, and obtain approval with one draft revision to each of the access agreements. The cost for Milestone D should not include any legal fees, payments or permitting costs. Providing this cost does not commit the consultant to obtain the access agreement. If necessary, the cost should also cover the necessary time and material needed to provide the PADEP with the information they will require to facilitate access to the property. Bid response should provide a copy of the standard access agreement that will be modified and used by the consultant.

Please note that Milestone D will be used to obtain updated access agreements with the 8 adjacent property owners listed below and bidders should include the costs for all 8 properties in Milestone D. Additional properties may be identified in the future as needing an access agreement and will be handled separately in Cost Adder Milestone T. The following properties should be contacted for an updated access agreement:

1. Young Property – continued groundwater sampling and possible remediation system installation, through well abandonment/restoration activities.
2. Jones Property – continued groundwater sampling through well abandonment/restoration activities.

3. Siniawa Property – continued groundwater sampling through well abandonment/restoration activities.
4. Hryhorcoff Property – continued groundwater sampling through well abandonment/restoration activities.
5. Konosky Property – continued groundwater sampling through well abandonment/restoration activities.
6. Scott Township Rights of Way (Hilltop Drive & Hermel Street) – continued groundwater sampling through well abandonment/restoration activities.
7. Kovaleski Property – continued groundwater sampling through well abandonment/restoration activities.
8. Pascavage Property – continued soil vapor sampling through abandonment/restoration activities.

Milestone E – Quarterly Groundwater Monitoring, Sampling, and Reporting Before Remediation Implementation. For this milestone, the total number of groundwater monitoring and sampling events that will be needed will be based on the schedule proposed by the consultant. Specifically, consultants should include costs to complete all quarterly groundwater sampling activities scheduled to be completed prior to the implementation of the remedial strategy. Bid responses as well as the Bid Cost Spreadsheet should clearly indicate the number of quarters that are included in the costs for this milestone. Please note that 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).
- 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 F – Potable Well Sampling – Tier 1 Wells – A total of three (3) off-site potable wells (Crossley, Jones, & Kowalski) are categorized as Tier 1 wells for this project and are sampled on a quarterly basis. The Crossley and Kowalski wells have POET systems that have influent, mid-fluent, and effluent samples collected on a quarterly basis with influent and mid-fluent samples analyzed via EPA Method 8260B and the effluent samples analyzed via EPA Method 524.2. The previously impacted Jones well was abandoned and replaced with a new well that has not exhibited detectable concentrations of unleaded gasoline target compounds. Therefore the new Jones well does not have a POET system and a single sample is collected from the well and analyzed via EPA Method 524.2 on a quarterly basis. Upon receipt of the laboratory analytical report the bidder shall prepare and submit a letter format report to the individual property owners, with copies provided to the solicitor, PADEP, and PAUSTIF.

For this milestone, the total number of potable well sampling events that will be needed will be based on the schedule proposed by the consultant. Specifically, consultants should include costs to complete all quarterly potable well sampling activities needed through closure. 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 twelve (12) events, but only five (5) events are conducted; then the firm will only be paid for the five (5) events completed).

Milestone G – Preparation of a Remedial Action Plan (RAP). Following the execution of the contract, the selected consultant will start to prepare a comprehensive RAP for the Site that will be submitted to the PADEP and will facilitate the objective to complete regulatory requirements governing a RAP and gain PADEP approval. The RAP should present a structured argument to the PADEP as to why the proposed remediation strategy is appropriate and applicable for this Site. The RAP should also provide the details and specifications of how the remediation strategy proposed at the Site will be completed. In addition, the report should summarize the results of the recent pilot testing and investigations, the findings of the previous investigations, a comprehensive Site history, sensitive receptor information, risk assessment, geologic data, discussion on the

completed remediation efforts, summary of the predictive modeling efforts completed, and a series of summary tables, appendices, and figures illustrating the information provided in the report.

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

Prior to being finalized, the draft RAP and all AutoCAD maps / plans included in the report (e.g., site plan / base map, groundwater elevation maps, dissolved plume maps, soil contaminant distribution maps, etc.) and appendices (e.g., boring logs, tables, waste disposal documentation, and well logs) shall be submitted electronically (in Adobe PDF format) to the Solicitor and PAUSTIF for review / comment. Once the selected consultant has addressed comments on the draft, the selected consultant shall finalize and issue the report to the PADEP. **The final RAP must be submitted to the PADEP no later than August 30, 2017.**

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

- High vacuum multi-phase extraction using a Liquid Ring Pump (LRP) or High Vacuum Blower to extract groundwater, SPL, and soil gas.
- Combination of soil vapor extraction and groundwater/SPL pumping (via submersible pumps).
- Combination of air sparge and either soil vapor extraction or multi-phase high vacuum extraction (i.e.; LRP).

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

This milestone would cover all activities and costs related to the implementation of the strategy as described in the selected consultant's approved RAP including the quarterly

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

Bid responses should note the following:

- Bid responses should describe in great detail how the strategy has been designed and how it will be implemented.
- Bid responses should clearly discuss the reasons as to why the selected strategy is applicable to this site.
- Bid responses should clearly note 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 H.
- Where applicable, the bid response should provide specifics on all equipment and vendors to be utilized.
- Where applicable, the bid response should provide Process and Instrumentation Diagrams and Cut Sheets.

- Where applicable, the bid response should describe what permits are anticipated and include all associated costs in this milestone.
- Bid response should describe with detail how progress of the remedial strategy will be monitored and how/when adjustments may be made. Bid response should provide specific parameters to be monitored and data values.
- Bid responses should provide a specific proposed remediation timeline and expected results with a discussion as to how the proposed timeline was calculated.
- Bid responses need to provide a clear discussion referencing specific data and available information that supports that the proposed remedial strategy will remediate the contaminants to the selected standards in the proposed timeframe.
- Bid responses need to clearly define both intermediate and end remedial strategy goals that will be used as a guideline to determine if the proposed strategy is successfully remediating the site. The end goals would be used to determine when remediation will be considered complete and successful.
- Quarterly groundwater sampling events proposed to be completed during the implementation of the remedial strategy should be included in Milestone H and conducted in a manner consistent with Milestone E.
- 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 two (2) events, but only one (1) event is conducted; then the firm will only be paid for the one (1) event completed).
- System maintenance & monitoring shall include monitoring and routine maintenance as specified by the equipment manufacturer(s) to ensure warranties are not voided and the equipment is kept in good working order. Operational time shall be logged by system instrumentation and reported quarterly in a RAPR. The selected consultant is expected to maintain at least an 85% uptime on the system

during each quarter. 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.
- 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.

With this being a Bid-to-Result RFB, please note that this Milestone also has a performance-based component to it. In the event that the remedial system operated for the entire time specified in the selected bidder's bid response, and the criteria for demonstrating attainment of the selected standards as described in the RFB is not met either prior to the initiation of attainment activities, during any of the eight quarters of the initial attainment groundwater demonstration following system shutdown, or based on soil attainment sampling then the system must be restarted within seven days following the receipt of the analytical results and operated for an additional two quarters at no additional cost to the Solicitor. Please note, this includes the necessary groundwater sampling as well as reporting costs required to be completed during each of the quarters. The two aforementioned quarters will be included in the milestone schedule with separate milestone designations in the Remediation Agreement with \$0 and marked as TBD in a similar fashion to the Optional Cost Adder Milestones.

If, following system shut down and restart, attainment of the selected standards can be reinitiated, PAUSTIF will reimburse (assuming all conditions have been met) remaining Milestone I events (I1 through I8). Any additional attainment groundwater sampling events beyond the 8 events included as part of Milestone I will be completed as an Optional Cost Adder Milestone I9 through I12 and will require approval from all parties before proceeding. In the event that attainment of the applicable remediation standards are determined to not be feasible following the additional two quarters of system operation, the selected bidder or the Solicitor would have the option to terminate or modify the Remediation Agreement.

If the remedial system is shut down before all of Milestone H quarterly events are completed, Consultant will be required to wait a minimum of two months before initiating groundwater attainment activities (Milestone I). If during the first quarter of groundwater attainment, concentrations of contamination rebounds above SHS in any POC well, Consultant shall restart the system within 7 days and continue with the residual quarterly Milestone H activities. Then, when all Milestone H activities have been completed (plus any or all of the performance Milestone H quarters) and groundwater attainment activities are re-initiated, Consultant will perform the first of the restarted series of quarterly attainment events at no cost.

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

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

If additional groundwater attainment monitoring Milestone I quarterly events (sampling and reporting) beyond the 8 quarterly events included in the Milestone I costs (to be noted as Milestone I1 through I8 in the Remediation Agreement) are needed, then up to 4 additional events will be handled as an Optional Cost Adder (Milestones I9 through I12). Optional Cost Adder Milestones I9 through I12 will require approval from all parties before proceeding.

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

- Milestone I (Milestone I1 through Milestone I8) – Costs to complete the 8 quarterly groundwater attainment events (sampling and reporting)
- Milestone I9 (Optional Cost Adder) - Provide a Unit Cost to complete one additional groundwater attainment sampling event and the subsequent RAPR preparation. The scope of work for this cost adder should follow Milestone I.

- Milestone I10 (Optional Cost Adder) - Provide a Unit Cost to complete one additional groundwater attainment sampling event and the subsequent RAPR preparation. The scope of work for this cost adder should follow Milestone I.
- Milestone I11 (Optional Cost Adder) - Provide a Unit Cost to complete one additional groundwater attainment sampling event and the subsequent RAPR preparation. The scope of work for this cost adder should follow Milestone I.
- Milestone I12 (Optional Cost Adder) - Provide a Unit Cost to complete one additional groundwater attainment sampling event and the subsequent RAPR preparation. The scope of work for this cost adder should follow Milestone I.

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

- The locations and depths of the soil samples shall be determined using the recent recommendation from the PADEP on the subject of Soil attainment.
- If a consultant feels it is appropriate and necessary to complete hole-clearing activities before advancing the borings, the cost should be included in their proposal and costs. If a consultant includes the cost to complete hole-clearing, they should state it in their proposal and discuss why it is appropriate and necessary. As discussed in the RFB, cost is not the only factor when evaluating proposals and other factors are taken into consideration during the review process, including appropriate safety measures.
- Soil samples shall be collected using Encore Samplers (or equivalent) and field-preserved in laboratory-provided glassware with the appropriate preservatives (e.g., methanol or sodium bisulfate) provided by the laboratory in general accordance with USEPA Method 5035 and the PADEP guidance.
- In addition, one (1) duplicate sample and one (1) equipment blank sample will be collected and submitted per day of sampling.

- 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.
- Soil samples shall be analyzed for benzene, toluene, ethylbenzene, total xylenes, MTBE, naphthalene, cumene, 1,3,5-trimethylbenzene, and 1,2,4-trimethylbenzene using laboratory EPA method 8260B in accordance with Pennsylvania's Storage Tank Regulation procedures and cleanup standard criteria as specified in Pennsylvania's Act 2.
- 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).
- Compile the field findings and laboratory data into a summary table and comprehensive soil boring logs.

Milestone K – Vapor Intrusion Assessment. As indicated in the recent PADEP comments, a Vapor Intrusion assessment should be completed following remediation. The Vapor Intrusion Assessment would need to take into consideration the vapor intrusion guidelines published on January 18, 2017. Consultants should evaluate any existing vapor monitoring points and determine whether they could be used or whether new vapor monitoring points will be needed. Results of the Vapor Intrusion Assessment should be summarized and included in the RACR.

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

The Report will be completed following the guidelines specified in Pennsylvania Code, Title 25, Chapter 245 and the Land Recycling Program (Act 2) Technical Guidance Manual for a Remedial Action Completion Report. The RACR shall be sealed by a Professional Geologist registered in the State of Pennsylvania. A draft RACR shall be

submitted electronically (in Adobe PDF format) to Solicitor and Technical Contact for review / comment prior to finalizing the RACR. Once the selected consultant has addressed comments on the draft, the selected consultant shall finalize and issue the report to the PADEP. The report submission is to be submitted no later than the date specified in the schedule presented by the selected consultant. All AutoCAD maps / plans included in the report (e.g., site plan / base map, groundwater elevation maps, dissolved plume maps, soil contaminant distribution maps, etc.) and appendices (e.g., boring logs, tables, disposal documentation, fate and transport modeling, risk assessment and sensitive receptor information) shall also be submitted electronically and in hard copy to Solicitor and PAUSTIF for review / comment prior to finalizing it.

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

Milestone N - Soil Gas Sampling (Cost Adder Milestone). Provide a Unit Cost for the collection of one round of samples from all existing vapor sampling points using the current PADEP guidance documents.

Milestone O – 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 E.

Milestone P – POET Maintenance – Carbon Change Out (Cost Adder Milestone). A total of 2 off-site properties have POETs installed that still require maintenance based on historic sampling results. The POETs are sampled on a periodic basis as discussed above in Milestone F. Each treatment system consists of two (2) 2-cubic foot granular activated carbon (GAC) vessels arranged in series, an ultraviolet lamp, and water softener. Should laboratory analytical results indicate it's necessary, both GAC vessels in the affected POET shall be changed out as soon as possible. The GAC will be replaced with virgin potable grade GAC suitable for treatment of the COC's and the spent carbon will be returned to the manufacturer for recycling and/or transported off-site for disposal. Upon completion of the carbon change out, two (2) confirmatory sampling events shall be conducted two (2) weeks apart to verify proper operation and treatment with influent and mid-fluent samples analyzed via EPA Method 8260B and the effluent samples analyzed via EPA Method 524.2. Upon receipt of the laboratory analytical

reports the bidder shall prepare and submit a letter format report to the individual property owners with copies provided to the solicitor, PADEP and PAUSTIF. This optional cost adder milestone is for the carbon change out at a single residence. However, this milestone may be utilized multiple times if necessary.

Milestone Q – POET Maintenance – UV Lamp (Cost Adder Milestone). A total of 2 off-site properties have POETs installed that still require maintenance based on historic sampling results. Each treatment system consists of two (2) 2-cubic foot granular activated carbon (GAC) vessels arranged in series, an ultraviolet lamp, and water softener. Should any of the UV lamps burn out, the bulbs should be changed out as soon as possible. The original invoice indicates the UV lamps are Sunburst 7GPM UV Lamps. This optional cost adder milestone is for the UV lamp replacement out at a single residence. However, this milestone may be utilized multiple times if necessary.

Milestone R – Additional Potable Well Sampling Event Tier 1 Wells (Cost Adder Milestone). Provide a Unit Cost to complete a Tier 1 potable well sampling event. The scope of work for this cost adder should follow Milestone F.

Milestone S – POET Removal (Cost Adder Milestone). A total of 2 Tier 1 off-site properties have POETs installed that still require maintenance based on historic sampling results. Once approval is received to discontinue the sampling and maintenance, the POET systems will need to be removed. In addition, the cost adder may be used if any additional Tier 2 and Tier 3 properties still need their POET systems removed. The current consultant has been working on getting the POET systems removed since the PADEP correspondence dated December 22, 2016 was received. The cost provided for this cost adder milestone should include the costs to remove one POET system. However, this milestone may be utilized multiple times if necessary.

Milestone T – Additional Off-site Access Agreement (Cost Adder Milestone). Provide a Unit Cost to obtain access to one off-site property. The scope of work for this cost adder should follow Milestone D.

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. PADEP approval may also be required.

List of Attachments

1. Remediation Agreement
2. Bid Cost Spreadsheet
3. Site Information/Historic Documents
 - a. Preliminary Site Characterization Report – October 2008
 - b. UST Closure Report – August 2010
 - c. Soil Excavation Summary Letter – February 2011
 - d. Site Characterization Report - June 2013
 - e. PADEP SCR Disapproval Letter – September 12, 2013
 - f. SCR – September 2016
 - g. PADEP Correspondence - December 22, 2016
 - h. RAPR - 4th Quarter 2016