

Request for Bid

Fixed-Price Bid to Result

Remediation Project and Closure Activities

Solicitor

North Memorial Highway Retail Associates, LLC

155 North Memorial Highway

Shavertown, Pennsylvania 18708

PADEP FACILITY ID #40-18179

PAUSTIF CLAIM #2013-0151(F)

Date of Issuance

September 18, 2015

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The Pennsylvania Underground Storage Tank Indemnification Fund (PAUSTIF), on behalf of the claimant who hereafter is referred to as the Client or Solicitor, is providing this Request for Bid (RFB) to prepare and submit a bid to complete the Scope of Work (SOW) for the referenced Site. The Solicitor is the current owner and operator of the Site. PAUSTIF has determined that the claim reported by the Solicitor is eligible for coverage from the PAUSTIF subject to the applicable statutes and regulations. Reimbursement of Solicitor approved reasonable and necessary costs, not to exceed the claim aggregate limit, for the corrective action work described in this RFB will be provided by PAUSTIF. Solicitor is responsible to pay any applicable deductible and/or proration.

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

Calendar of Events

Activity	Date and Time
Notification of Intent to Attend Site Visit	October 6, 2015 by 5 p.m.
Mandatory Pre-Bid Site Visit	October 8, 2015 at 11 a.m.
Deadline to Submit Questions	October 20, 2015 by 5 p.m.
Bid Due Date and Time	November 3, 2015 by 3 p.m.

Contact Information

Technical Contact
Mr. Mark Bedle B&B Diversified Enterprises, Inc. PO Box 16 Barto, PA 19504 Phone – 610-845-0640 Fax – 610-845-0650 Email – mbedle@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 International (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 may answer questions at the Site meeting or may collect questions and respond via email. All questions and answers will be provided via email to all attendees. This meeting is mandatory for all bidders, no exceptions. This meeting will allow each bidding company to inspect the Site and evaluate Site conditions. **A notice of the bidder's intent to attend this meeting is requested to be provided to the Technical Contact via email by the date listed in the Calendar of Events with the subject "[insert Site name and claim number provided on cover page] – SITE MEETING ATTENDANCE NOTIFICATION"**. The name and contact information of the company participant should be included in the body of the email. Notification of intent to attend is appreciated; however, it is not required. Attendance at the Pre-Bid Site Meeting is mandatory.

Submission of Bids

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

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

Bid Requirements

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

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

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

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

In addition, the bidder shall provide:

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

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

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

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

Each bid response document must include at least the following:

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

proposed in this RFB shall be discussed, quantified, and priced separately; however, failure to bid the SOW “as is” may result in a bid not being considered.

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”.

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

North Memorial Highway Retail Associates Property
155 North Memorial Highway
Shavertown, Pennsylvania 18708
Kingston Township, Luzerne County

Site Location and Operation Information

The Site is located at 155 North Memorial Highway, Shavertown, Pennsylvania, Kingston Township, Luzerne County. The Site is currently occupied by a slab-on-grade, single-story building, operated as a Valero convenience store and gasoline station. The Site has been in operation since the late 1960's as a retail gasoline station. Several underground storage tank UST systems are believed to have existed at the Site. Currently there are four USTs, four product dispensers, and a canopy located at the Site. There was also a fifth known UST that was closed in 1997. The following is a summary of the known USTs associated with the Site:

- Tank 001 – 8,000-gallon gasoline, installed in 1977 and is currently active
- Tank 002 – 8,000-gallon gasoline, installed in 1977 and is currently active
- Tank 003 – 4,000-gallon gasoline, installed in 1977 and is currently active
- Tank 004 – 1,000-gallon kerosene, install date not available and closed by removal in 1997
- Tank 005 – 2,000-gallon racing fuel, installed in 1988 and is currently active

Tanks 001 through 003 are constructed of single-wall fiberglass and are located together in one tankfield. Tank 005 is constructed of single-wall steel and is located separately, in its own tankfield. Tank 002 is a drone tank that is connected to another UST and is not connected to the dispensers. The product piping is double-walled Enviroflex II.

The areas surrounding the Site are a mix of residential and commercial properties. The Site is provided water from United Water Pennsylvania. The closest surface water bodies are the Toby Creek and an unnamed tributary to the Toby Creek, located along the eastern and southern boundaries of the Site, respectively. According to available documentation, groundwater beneath the Site is indicated to flow southeast, towards these surface water bodies.

Site Background Information

On September 23, 1997, Tank 004 (1,000-gallon kerosene) was excavated and removed from the Site. No groundwater or bedrock was encountered during the excavation activities. Two soil samples were collected from the tank excavation (depths unknown) and one sample was collected beneath a joint in the piping run (1.5 feet below grade (ftbg.)). The samples were laboratory analyzed for volatile and semi-volatile organic compounds (VOCs and SVOCs). The results indicated naphthalene (1,092 milligrams per kilogram (mg/kg)) greater than its respective Pennsylvania Department of Environmental Protection (PADEP) Statewide Health Standard (SHS).

Also in September 1997, in conjunction with the UST closure activities, the product feed lines were upgraded. During the upgrade, contaminated soil was encountered beneath the concrete apron around the dispensers (drive mats) to approximately two to three ftbg. A total of 19.87 tons of petroleum-impacted soil was excavated and transported off-site for proper disposal. Five test pits were excavated in areas surrounding the product dispensers to depths of approximately seven to eight ftbg. No visibly impacted soils were encountered in the test pits. One soil sample was collected from each test pit (depth unknown) and laboratory analyzed for VOCs and SVOCs. The results indicated none of the compounds of concern (COCs) greater than their respective PADEP SHS.

On October 22, 2013, eleven soil borings (TB-1 through TB-11) were advanced at the Site utilizing direct push drilling techniques. The total depths of the borings ranged from 3.5 to 12 ftbg. A separate phase liquid (SPL) was observed in borings TB-1 (9 ftbg – 9.5 ftbg.) and in TB-9 (7 ftbg – 8 ftbg.). Twelve soil samples were collected from the borings and laboratory analyzed for the PADEP Unleaded Gasoline Parameters (benzene, toluene, ethylbenzene, xylenes (BTEX), methyl tert-butyl ether (MTBE), naphthalene, cumene, 1,2,4-trimethylbenzene (TMB), and 1,3,5-TMB). The results indicated concentrations of benzene (TB-1, TB-5A, TB-6A, TB-9, and TB-10), toluene (TB-5A), ethylbenzene (TB-5A), naphthalene (TB-5A, TB-6A), 1,2,4-TMB (TB-5A, TB-6A, TB-9, and TB-10), and 1,3,5-TMB (TB-5A, TB-6A, TB-9, and TB-10), greater than their respective PADEP SHS. Temporary well points (TMPs) were installed in borings TB-1, TB-5, TB-10, and TB-11. Groundwater in these TMPs was encountered at approximately eight ftbg. Samples were collected from each TMP and analyzed for the PADEP Unleaded Gasoline Parameters. The results indicated concentrations of benzene (TB-5 and TB-10), MTBE (TB-5 and TB-10), and 1,2,4-TMB (TB-1, TB-5, and TB-10) greater than their respective PADEP SHS.

From March 11 – 12, 2014, six monitoring wells (MW-1 through MW-6) were installed at the Site utilizing hollow stem auger techniques. Each well was completed to a total depth of 18 ftbg and constructed with three feet (ft.) of 2-inch PVC well casing and 15 ft. of slotted well screen.

On March 17, 2014, thirteen soil borings (TB-12 through TB-24) were advanced at the Site utilizing direct push drilling techniques. The total depths of the borings ranged from 4.5 ftbg to 12 ftbg. SPL was observed in boring TB-18 (4 ftbg.). Thirteen soil samples were collected from the borings and laboratory analyzed for the PADEP Unleaded Gasoline Parameters. The results indicated concentrations of benzene (TB-17, TB-18, TB-19, TB-20, TB-21, TB-22, and TB-23), toluene (TB-18), ethylbenzene (TB-18 and TB-19), naphthalene (TB-19), 1,2,4-TMB (TB-16, TB-18, TB-19, TB-20, TB-21, TB-22, and MW-8), and 1,3,5-TMB (TB-18, TB-19, TB-20, TB-21, and TB-22), greater than their respective PADEP SHS.

Also on March 17, 2014, two soil vapor monitoring points (VP-1 and VP-2) were installed at the Site. The VPs were constructed of flexible tubing connected to 6-inch vapor implants set to a total depth of six ftbg.

On March 18, 2014, a SPL sample was collected and laboratory analyzed for GC Fingerprint analysis. The results indicated that the SPL was hazardous for the sake of transportation and disposal.

Starting on March 18, 2014 (through November 10, 2014), SPL gauging and recovery events were conducted at the Site utilizing MW-3 as a recovery well. Each event included hand-bailing the well and containerizing the recovered liquids. An excess of two 55-gallon drums of SPL and groundwater were recovered in the eight month period. The viscosity and the slow recharge rates of the SPL have hampered recovery efforts.

On March 21, 2014, another SPL sample was collected and laboratory analyzed for Flash Point analysis. The results indicated that the SPL was a combination of gasoline and diesel range organics (GRO and DRO). The gasoline product was believed to be less than two years old and the diesel product was highly weathered with no age provided.

On March 31, 2014 and May 1, 2014, groundwater samples were collected from monitoring wells MW-1, MW-2, and MW-4 through MW-6. MW-3 was not sampled due to the presence of SPL. Also, surface water samples (SW-1 through SW-3) were collected from three locations in the Toby Creek. The samples were laboratory analyzed for the PADEP Unleaded Gasoline Parameters and the results indicated only benzene (MW-2 on March 31), slightly greater than its respective PADEP SHS.

On April 25, 2014 and June 12, 2014, soil vapor samples were collected from VP-1. Sample collection from VP-2 was attempted on both dates, however no vacuum could be drawn from the point. The VP-1 samples were laboratory analyzed for VOCs via Method TO-15 and the results indicated no exceedances of the PADEP Non-Residential MSCs.

On May 20, 2014, a potable water sample was collected at the Burger King property located across North Memorial Highway, southwest of the Site. Burger King maintains a on-site

production well in association with its public water supply. The well is an 8-inch open rock hole with a total depth of 185 ftbg. The water sample was laboratory analyzed for the PADEP Unleaded Gasoline Parameters and the results indicated no COC concentrations greater than their respective PADEP SHS for Drinking Water.

On September 15, 2014, twelve soil borings (TB-25 through TB-36, and MW-8) were advanced at the Site utilizing direct push drilling techniques. The total depths of the borings ranged from 15 to 20 ftbg. SPL (oily film) was observed in boring TB-33 (10 - 15 ftbg.). A total of 24 soil samples were collected from the borings and laboratory analyzed for the PADEP Unleaded Gasoline Parameters. The results indicated concentrations of 1,2,4-TMB and 1,3,5-TMB in TB-29A, greater than their respective PADEP SHS.

From September 15 – 17, 2014, five monitoring wells (MW-7 through MW-11) and one soil vapor point (VP-2A) were installed at the Site. Each monitoring well was completed to a total depth of 18 ftbg. and constructed with three ft. of 2-inch PVC well casing and 15 ft. of slotted well screen. Vapor point VP-2A was installed to replace VP-2 (due to sampling issues). VP-2A was constructed of flexible tubing connected to a 6-inch vapor implant set to a total depth of six ftbg.

On October 2, and November 4, 2014, samples were collected from MW-1, MW-2, MW-4 through MW-11, and SW-1 through SW-3. MW-3 was not sampled due to the presence of SPL. The samples were laboratory analyzed for the PADEP Unleaded Gasoline Parameters and the results indicated only benzene (MW-8 on November 4) and MTBE (MW-9 on both dates), slightly greater than its respective PADEP SHS.

On October 6, and November 7, 2014, soil vapor samples were collected VP-2A. The samples were laboratory analyzed for VOCs via Method TO-15 and the results for both events indicated concentrations of benzene, ethylbenzene, xylenes, 1,2,4-TMB, and 1,3,5-TMB in exceedance of the PADEP Non-Residential MSCs for Soil Gas.

On December 5, 2014, a Site Characterization Report (SCR) for the Site was submitted to the PADEP. The PADEP approved the SCR in a letter dated January 29, 2015.

In January 2015, two sub-slab vapor monitoring points (VP-3 and VP-4) were installed inside the on-site convenience store building. For each VP, a 0.5-inch diameter hole was drilled through the concrete floor of the building and advanced to three ftbg. Flexible tubing was installed in the holes and capped with rubber stoppers. Vapor samples were collected on January 23, 2015 and laboratory analyzed for VOCs via Method TO-15. The results indicated 1,2,4-TMB in VP-4 slightly greater than its respective PADEP Non-Residential MSC for Indoor Air Quality.

On March 14, 2015, a Remedial Action Progress Report was submitted to the PADEP for the Site. The report summarized recent activities that included groundwater monitoring and sampling, vapor intrusion evaluation, and a high vacuum extraction event. Specifically, groundwater monitoring and sampling activities were completed on March 2, 2015 and March 3, 2015 and sub-slab vapor sampling was completed on VP-3 and VP-4 on January 23, 2015 and February 26, 2015. The report indicates that the vapor sampling data shows the presence of COCs above the applicable PADEP standards. A single high vacuum extraction event was conducted on monitoring well MW-3 and during the event a total of 75 gallons of water and product were extracted. Details on the event are provided in the report.

On March 14, 2015, the current consultant prepared and submitted a request for an extension on the RAP due date. The letter requested that the RAP deadline being extended from March 31, 2015 to September 30, 2015.

The current consultant has continued to conduct interim remedial actions at the Site consisting of free product recovery from monitoring well MW-3. Specifically, the current consultant has conducted recent hand bailing events as well as multiple vacuum extraction events.

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 with suggestions related to the soil gas sampling / vapor intrusion evaluation efforts that were incorporated into the final version of the RFB. Specifically, the PADEP offered the following:

“After looking over the bid package the only change I would suggest is to include the soil gas sampling as part of the quarterly reporting, not just as a single cost adder. With the free product on the site and the analytical results from the new soil gas points indicating exceedances, there should be vapor sampling factored into the bid package on a schedule evenly spaced out at least twice a year. If the potential for indoor air impacts becomes greater during remediation efforts then the soil gas sampling frequency could be increased. Please include a vapor intrusion evaluation section in your request for bid and not just as a one-time cost adder. Everything else looks fine.”

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:

- SVE combined with groundwater depression
- Air Sparge/Soil Vapor Extraction
- Total Phase Extraction with a liquid ring type pump and drop tubes in recovery wells

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 and facility operator with adequate advance notice prior to each visit to the property. The purpose of this notification is to coordinate with the Solicitor and facility operator to ensure that appropriate areas of the property are accessible. Return visits to the Site will not constitute a change in the selected consultant's SOW or result in additional compensation under the Remediation Agreement.

Site-Specific Guidelines

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

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

- **Scheduling:** As part of this RFB, the selected consultant shall provide a clear deadline (e.g. within 30 days of the contract being executed) as to when each of the milestones will be completed. This includes the expected date (e.g. within 90 days of the contract being executed) when the draft deliverables will be submitted to the Solicitor and PAUSTIF for review. All on-site work should be completed during the normal working days and hours of 8 am to 5 pm from Monday through Friday.
- **Responsibility:** The selected consultant will be the consultant of record for the Site. They will be required to take ownership and responsibility for the project and will be responsible for representing the interests of the Solicitor and PAUSTIF with respect to the project. This includes utilizing their professional judgment to ensure reasonable and appropriate actions are recommended and undertaken to protect sensitive receptors and move the Site towards closure.
- **Scope of Work:** Please bid the scope of work as provided in the RFB. Consultants are welcome to propose or suggest a change in the SOW; however the consultant should bid the SOW as presented in the RFB and provide any suggested modification to the SOW and provide the cost difference (+ or -) separately in the proposal.
- **Selected Standards:** As indicated in the December 2014 SCR, the claimant has selected to remediate the Site to the PADEP Statewide Health Standard (SHS) for all constituents of concern in all affected media. Please note that during recent discussions, the PADEP has offered guidance with regards to obtaining a SHS closure at the Site for soil. The following should be taken into consideration when preparing your bid response:
 - With the UST system at the Site still being active and an in-situ remedial approach being pursued, the PADEP would recommend that the selected consultant use bias soil sampling to demonstrate attainment of SHS in soils onsite.
 - The PADEP has indicated that a SHS closure is possible for this Site even with soil impact present beneath the adjacent road. The PADEP will require a waiver be obtained for the impacts remaining beneath the road.
- **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.
- **Standard Operating Procedures:** Please include in the bid as an attachment, your firm’s standard operating procedures for all major field tasks proposed in the scope of work.
- **Optional Cost Adder Milestones:** Milestone A through Milestone K represents the base Scope of Work for this RFB solicitation. These milestones have been specifically developed in an effort to complete the applicable PADEP requirements. In addition to the above base Scope of Work, the Optional Cost Adder Milestone (Milestone L) needs to be addressed in your bid response. This cost adder will not be part of your initially approved base contract price. However, if it becomes necessary to complete any of these activities, they will be completed under the Remediation Agreement signed as part of this project. For consideration of PAUSTIF reimbursement, Solicitor and PAUSTIF approval must be obtained prior to completing Optional Cost Adder Milestones.

Site-Specific Milestones

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).

Milestone B – 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 B pilot testing must show:

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

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

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

Please note that all bidders shall perform a pilot test, even if the bidder is proposing to use exactly the same remedial technology and design as specified in a PADEP approved RAP for the subject site. In the event a bidder is proposing to use exactly the same remedial technology and design as specified in a PADEP approved RAP for the subject site, the bidder shall perform pilot testing to confirm the data and conclusions presented in the PADEP approved RAP and to confirm that the proposed remedial system and design as proposed in the bid response is feasible.

The selected bidder will prepare a Pilot Test Report and submit it to the Solicitor and PAUSTIF. The Pilot Test Report shall show that the pilot test was conducted according to the selected consultant's bid and shall constitute documentation for payment of Milestone B 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 B. 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 B, 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 B could not have reasonably been expected prior to conducting the Milestone B 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 B 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. End of “Pilot Test Off-Ramp” language.

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 K (excluding B) is determined to be \$300,000, the fixed-price cost of Milestone B 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 K (excluding B) is determined to be \$550,000, the fixed-price cost of Milestone B specified on the bid cost spreadsheet shall be up to, but not exceed \$50,000.

Milestone C – 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 quarterly groundwater sampling activities completed prior to the implementation of the remedial strategy. Please note that USTIF will only pay the selected firm for the actual number of events conducted (i.e. if a firm includes the costs to complete two (2) events, but only one (1) event is conducted; then the firm will only be paid for the one (1) event completed). The selected consultant should be prepared to conduct the first groundwater sampling event at the Site approximately two (2) weeks after the execution of the contract. 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 D – Product Recovery Efforts – Available information indicates from March 2014 through November 2014, free product was consistently recovered from monitoring well MW-3 on a frequent basis. The selected consultant will conduct product recovery visits to the Site every 2 weeks to remove all accumulated product from monitoring well MW-3. The recovered product is stored onsite in a 55-gallon drum with an overpack drum for secondary containment. The costs to dispose of the one (1) aforementioned drum will be treated as a separate milestone from the product recovery visits. For purposes of preparing this bid, the bidders should assume that the only product to be recovered will be from monitoring well MW-3 and should include enough product recovery events (conducted every two weeks) until remediation efforts in Milestone G are implemented. The events should be specifically noted in the schedule to be provided in each bidder’s bid response. The provided cost would be to cover all labor, equipment, laboratory, waste, etc. 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 events, but only six events are conducted; then the firm will only be paid for the six events completed).

Milestone D1 - The cost provided should be to complete product recovery visits every two weeks from the time of contract execution until remediation efforts in Milestone G are implemented based on the schedule to be provided by the bidder in the bid response. The provided cost would be to cover all labor, equipment, laboratory, etc. Bidders should plan on billing Milestone D1 on a monthly basis.

Milestone D2 - The cost provided should be to dispose of a 55-gallon drum with product recovered from the Site. The provided cost would be to cover all labor, equipment, subcontractor costs, waste, etc. Please include one Milestone D2 event in the bid. If any additional Milestone D2 events are warranted, then the additional events will be treated as a cost adder milestone and will require prior approval.

Milestone E - Soil Gas Sampling - For this milestone, the total number of soil gas sampling events that will be needed will be based on the overall schedule proposed by the consultant. Specifically, consultants should include costs to complete soil gas sampling events on a semi-annual basis through the completion of remediation. The

selected consultant should be prepared to conduct the first soil gas sampling event at the Site approximately two (2) weeks after the execution of the contract. The results of each semi-annual soil gas event should be included in the next summary progress report submitted to the PADEP. Please note that USTIF will only pay the selected firm for the actual number of events conducted (i.e. if a firm includes the costs to complete two (2) events, but only one (1) event is conducted; then the firm will only be paid for the one (1) event completed). If it is determined that the frequency needs to be increased or additional events are needed following the completion of remediation, then those events will be handled under the cost adder Milestone L.

Each of the semi-annual soil gas sampling events should include the collection of one round of samples from each of the existing vapor sampling points. All efforts should be completed in a manner consistent with the Land Recycling Technical Guidance Manual – Section IV.A.4 Vapor Intrusion Into Buildings from Groundwater and Soil under the Act 2 Statewide Health Standards, Document 253-0330-100, dated January 24, 2004. Soil gas samples should be collected in laboratory provided Summa canisters equipped with laboratory calibrated flow regulators and analyzed for the PADEP Constituents list for unleaded gasoline via TO-15. 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).

Milestone F – Preparation of a Remedial Action Plan (RAP). Following the completion of the activities proposed in Milestone A, Milestone B and Milestone C, the selected consultant will prepare a RAP for the Site. The information gathered during the aforementioned milestones should be incorporated into a comprehensive RAP that will be submitted to the PADEP and will facilitate the objective to complete regulatory requirements governing the RAP 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, risk assessment, geologic data, results and analysis of the aquifer testing, discussion on the completed remediation efforts, summary of the predictive modeling efforts completed, and a series of summary tables, appendices, and figures illustrating the information provided in the report.

The RAP should present a clear discussion to the PADEP as to what testing has been completed, the results (lab and fields) collected, and a structured argument as to why the selected remedial design is appropriate and applicable for this Site. The RAP should also reference the feasibility testing results as well as provide the design and specifications of the remedial strategy to be implemented at the Site. Specifically, the selected consultant should include tables, figures, and attachments that detail the

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

The Report will be completed following the guidelines specified in Pennsylvania Code, Title 25, Chapter 245 and the Land Recycling Program (Act 2) Technical Guidance Manual with regards to 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.

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, aquifer testing and analysis, transducer survey results and analysis, and sensitive receptor information) shall be submitted electronically (in Adobe PDF format) and in hard copy to the Solicitor and PAUSTIF for review / comment prior to finalizing the RAP. Once the selected consultant has addressed comments on the draft, the selected consultant shall finalize and issue the report to the PADEP. The draft report is to be submitted no later than the date specified in the schedule presented by the selected bidder.

Milestone G – 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 included: SVE combined with groundwater depression, Air Sparge/Soil Vapor Extraction, or Total Phase Extraction with a liquid ring type pump and drop tubes in recovery wells. 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. The quarterly sampling and reporting portion of the project will be handled under Milestone G. 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.
- Where applicable, the bid response should provide specifics on all equipment and vendors to be utilized.
- Where applicable, the bid response should provide Process and Instrumentation Diagrams and Cut Sheets.
- The Solicitor and PAUSTIF will be provided the opportunity to inspect and confirm the remediation strategy has been implemented as per the RAP.
- Where applicable, the bid response should describe what permits are anticipated and include all associated costs in this milestone.
- Bid response should describe with detail how progress of the remedial strategy will be monitored and how/when adjustments may be made. Bid response should provide specific parameters to be monitored and data values.
- Bid responses should provide a specific proposed remediation timeline and expected results with a discussion as to how the proposed timeline was calculated.
- Bid responses need to provide a clear discussion referencing specific data and available information that supports that the proposed remedial strategy will remediate the contaminants to the selected standards in the proposed timeframe.

- Bid responses need to clearly define both intermediate and end remedial strategy goals that will be used as a guideline to determine if the proposed strategy is successfully remediating the site. The end goals would be used to determine when remediation will be considered complete and successful.
- Quarterly groundwater sampling events proposed to be completed during the implementation of the remedial strategy should be included in Milestone G and conducted in a manner consistent with Milestone C.
- 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. 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 chose to terminate the contract.
- If there is an unscheduled shutdown of the system, the selected bidder must notify the Solicitor and PAUSTIF within 48 hours after knowledge of the shutdown. If there is a scheduled shutdown of the system that will last greater than seven days, the selected bidder must notify the Solicitor and PAUSTIF at least 30 days prior to the planned system shutdown.

With 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. 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 H events (H1 through H8). Any additional attainment groundwater sampling events beyond the 8 events included as part of Milestone H will be completed as an Optional Cost Adder Milestone M 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.

Milestone H – 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 H 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 C.

As discussed in Milestone G, 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 H are unable to be completed due to the incomplete remediation of the Site to the selected standards, then PAUSTIF will only pay the selected firm for the actual number of milestone or events conducted (i.e. if a firm includes the costs to complete 8 quarterly events, but only one event is conducted; then the firm will only be paid for the one (1) event completed).

Milestone I – 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 cost to prepare any necessary waivers related to soil impact beneath the adjacent road should be included in this milestone. 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 J – 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 I 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) and in hard copy 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 Technical Contact for review / comment prior to finalizing it.

Milestone K – Site Restoration / Well Abandonment. Following confirmation that cessation of the remedial strategy is appropriate, any remaining equipment should be removed, and the site restored to as close a condition as possible prior to the remediation efforts. The selected consultant will abandon all of the monitoring wells in accordance with Pennsylvania Act 610 and the Groundwater Monitoring Guidance Manual dated February 29, 1996. 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 L - Soil Gas Sampling (Cost Adder Milestone). Provide a Unit Cost for the collection of one round samples from the existing vapor sampling points. All efforts should be completed in a manner consistent with the Land Recycling Technical Guidance Manual – Section IV.A.4 Vapor Intrusion Into Buildings from Groundwater and Soil under the Act 2 Statewide Health Standards, Document 253-0330-100, dated January 24, 2004. Soil gas samples should be collected in laboratory provided Summa canisters equipped with laboratory calibrated flow regulators and analyzed for the PADEP Constituents list for unleaded gasoline via TO-15. 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).

Milestone M – Additional Groundwater Attainment Sampling Event and RAPR preparation (Cost Adder Milestone)– Provide a Unit Cost to complete one additional groundwater attainment sampling event and the subsequent RAPR preparation. The scope of work for this cost adder should follow Milestone H.

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. Attachment 3A – Site Characterization Report dated December 5, 2014
 - b. Attachment 3B – PADEP Correspondence dated January 29, 2015 – SCR Approval
 - c. Attachment 3C – Remedial Action Progress Report dated March 14, 2015
 - d. Attachment 3D – Remedial Action Progress Report dated June 8, 2015
 - e. Attachment 3E – Remedial Action Progress Report dated August 30, 2015