

## **Request for Bid**

**Fixed-Price Defined Scope of Work to Complete Additional Characterization Activities  
and Interim Remedial Activities**

### **Solicitor**

**The Devereux Foundation  
Devereux Brandywine Campus  
444 Devereux Drive  
Villanova, Pennsylvania 19085  
PADEP FACILITY ID #15-25097  
PAUSTIF CLAIM #2012-0058(I)**

### **Date of Issuance**

**December 5, 2014**

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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	December 15, 2014 by 5 p.m.
Mandatory Pre-Bid Site Visit	December 17, 2014 at 10 a.m.
Deadline to Submit Questions	December 24, 2014 by 5 p.m.
Bid Due Date and Time	January 7, 2015 by 3 p.m.

## Contact Information

ICF International	Solicitor	Technical Contact
<p>Ms. Patricia Condran ICF International 4000 Vine Street Middletown, PA 17057 Email – Patricia.Condran@icfi.com</p>	<p>The Devereux Foundation Devereux Brandywine Campus 444 Devereux Drive Villanova, Pennsylvania 19085</p>	<p>Mr. Mark Bedle B&amp;B Diversified Enterprises, Inc. PO Box 16 Barto, PA 19504 Phone – 610-845-0640 Fax – 610-845-0650 Email – mbedle@bbde.com</p>

All questions regarding this Request for Bid (RFB) and the subject site conditions must be directed via e-mail 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 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 e-mail. Notification of intent to attend is appreciated; however, is not required. Attendance at the Pre-Bid Site Meeting is mandatory.

## Submission of Bids

To be considered for selection, **one hard copy of the signed bid package and one electronic copy (one 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 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 Request for Bid. 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 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 Scope of Work (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 ten.
  - 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. How many Pennsylvania Chapter 250 projects is your company currently the consultant for? Please list up to ten.
  - e. 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 (i.e 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**

Devereux Brandywine Campus  
Bingaman Building  
100 Shaw Drive  
Glenmoore, Pennsylvania 19343  
Wallace Township, Chester County

### **Site Location and Operation Information**

The Site is an approximate 58-acre property owned by the Devereux Foundation that is located at 100 Shaw Drive, Glenmoore, Pennsylvania, Wallace Township, Chester County. The Site is occupied by a one-story slab-on-grade building utilized as an active learning facility for special needs children. A 3,000 gallon heating oil underground storage tank (UST) is the subject of the current claim. The aforementioned UST (referred to as Tank 9002) was of steel construction and there was no leak detection on the tank or lines. The UST was installed in 1969 and closed on April 27, 2012. The tank contained #2 fuel oil that was used for heat and hot water for the on-site cafeteria building.

The properties surrounding the Site are a mix of rural, agricultural, and residential properties. The Site is provided with water from two on-site supply wells (No.2/Main Well and No.4/Springhouse). The closest surface water body is the East Branch of Brandywine Creek, located approximately 1,500 feet south-southwest of the Site. A Site Plan Map is attached as Figure 1.

### **Site Background Information**

On April 19, 2012, seven days after a scheduled fill-up, an abnormally low level of heating oil was noticed in the 3,000-gallon heating oil UST located on Site (Tank 9002). Subsequently, Tank 9002 was tightness tested and it failed the test.

On April 23, 2012, a Notice of Reportable Release (NORR) was submitted to the Pennsylvania Department of Environmental Protection (PADEP) indicting a suspected release of #2 fuel oil at the Site as a result of the failed tightness testing.

On April 24, 2012, the on-site supply wells were sampled and laboratory analyzed for PADEP drinking water constituents via EPA Method 524.2. None of the constituents of concern (COCs) were detected greater than their respective laboratory detection limits. The laboratory analytical reports are attached to the May 2014 Characterization Report (CR). The supply wells have been sampled monthly since April 2012 and no COC concentrations have ever been greater than the laboratory detection limits in any of the samples analyzed. The recent supply well laboratory reports are included with the attached recent Remedial Action Progress Report (RAPR).

On April 27, 2012, Tank 9002 was closed by removal. Approximately 20 tons of contaminated soil was removed during the initial UST excavation activities and disposed of off-site. "Small pinholes" were observed in the bottom of the tank after it was removed. Four soil samples (H-1 through H-4) were collected from the bottom of the excavation at approximately 9 feet below grade (ftbg) to 10 ftbg. Based on the elevated photoionization detector (PID) readings of H-1 through H-4, over excavation of contaminated soils continued on April 30, 2012. Excavation was halted due to encountered utilities. The total depth of the excavation was approximately 20 ftbg. Twelve additional soil samples (SS-1 through SS-12) were randomly collected from the excavation. The 16 soil samples were laboratory analyzed for benzene, toluene, ethylbenzene, methyl tertiary-butyl ether (MTBE), naphthalene, cumene, 1,2,3-trimethylbenzene (1,2,4-TMB), and 1,3,5-TMB. Concentrations of benzene, naphthalene, 1,2,4-TMB, and 1,3,5-TMB were detected greater than their respective PADEP Statewide Health Standards (SHS) in many of the sample locations. Laboratory data packages and soil sampling location information is provided in the documentation included in Attachment 3.

In response to the release identified at the Site on April 23, 2012, the PADEP issued a Notice of Violation (NOV) dated April 27, 2012.

On June 5, 2012, 10 soil borings (SB-1 through SB-10) were advanced around the former tank location to further characterize soil contamination. Soils were field screened with a PID and samples were collected from all of the boring locations except SB-4, SB-6, SB-8, and SB-9 for laboratory analysis of benzene, toluene, ethylbenzene, MTBE, naphthalene, cumene, 1,2,4-TMB, and 1,3,5-TMB. Concentrations of benzene, ethylbenzene, 1,2,4-TMB, and 1,3,5-TMB were detected greater than their respective PADEP SHS in many of the sample locations.

Laboratory data packages and soil sampling location information is provided in the documentation included in Attachment 3.

Based on PID readings and observations made during the June 5, 2012 soil boring investigation, excavation of soils from the former tank hole continued on June 14, 2012 and June 15, 2012. The excavation was opened to approximately 25 ftbg, which was the maximum reach of the equipment and approximately 107 tons of additional soil was removed. The horizontal extent of the excavation was limited due to an above ground propane tank.

On November 2 – 5, 2012, three monitoring wells (MW-1 through MW-3) were installed at the Site. The wells were installed at depths ranging from 37 to 48 ftbg. The top 5 feet to 7 feet of each well was constructed of solid 4-inch PVC well casing and the remaining casing was PVC well screen. Two soil samples were collected from each borehole and were laboratory analyzed for benzene, toluene, ethylbenzene, MTBE, naphthalene, cumene, 1,2,4-TMB, and 1,3,5-TMB. All COC concentrations were detected less than their respective PADEP SHS. Laboratory data packages, construction information, and well location information is provided in the documentation included in Attachment 3.

Groundwater samples were collected from monitoring wells MW-2 and MW-3 for the first time on December 11, 2012. A groundwater sample was not collected from monitoring well MW-1, because a separate phase liquid (SPL) was present in the well. The groundwater samples were laboratory analyzed for benzene, toluene, ethylbenzene, MTBE, naphthalene, cumene, 1,2,4-TMB, and 1,3,5-TMB. The results indicated a concentration of 1,2,4-TMB in MW-2 greater than its PADEP SHS. Laboratory data packages and sampling information is provided in the documentation included in Attachment 3.

On December 19, 2012, a vacuum truck was utilized to extract SPL from monitoring well MW-1. Approximately 32 gallons of product and 124 gallons of groundwater were recovered during the event. Subsequent product removal activities have included routine hand bailing and the use of a passive skimmer. Product gauging and recovery data collected from MW-1 is summarized in the most recent RAPR included in Attachment 3.

On March 12, 2013, soil vapor point SG-1 was installed at the Site. SG-1 was installed to assess vapor intrusion into the on-site building. SG-1 was installed to a total depth of 4 ftbg with a screen interval of 3.5 ftbg to 4 ftbg. The soil gas point location and construction log is provided in the documentation included in Attachment 3.

On March 13, 2013, three additional monitoring wells (MW-4 through MW-6) were installed at the Site. The wells were installed at depths ranging from 37 to 44 ftbg and were constructed of 4-inch PVC material. PVC casing lengths ranged from 17 feet to 20 feet and PVC screen lengths ranged from 20 to 25 feet long. One soil sample was collected from the MW-6 borehole and was laboratory analyzed for benzene, toluene, ethylbenzene, MTBE, naphthalene, cumene, 1,2,4-TMB, and 1,3,5-TMB. All COC concentrations were detected less than their respective

PADEP SHS. Laboratory data packages, construction information, and well location information is provided in the documentation included in Attachment 3.

On March 21, 2013, SG-1 was sampled for the first time. The sample was laboratory analyzed for benzene, toluene, ethylbenzene, total xylenes (BTEX), MTBE, naphthalene, cumene, 1,2,4-TMB, and 1,3,5-TMB. All COC concentrations were detected less than their respective PADEP SHS. The laboratory analytical data is summarized in the documentation included in Attachment 3.

Also on March 21, 2013, groundwater samples were collected from MW-1 through MW-6 for the first time. SPL was present in MW-1 and the groundwater sample was collected from below the product level. The samples were laboratory analyzed for benzene, toluene, ethylbenzene, MTBE, naphthalene, cumene, 1,2,4-TMB, and 1,3,5-TMB. The results indicated concentrations of benzene (MW-1, MW-2, MW-4), naphthalene (MW-1, MW-4), 1,2,4-TMB (MW-1, MW-2, MW-4), and 1,3,5-TMB (MW-1, MW-2, MW-4) greater than their respective PADEP SHS. The laboratory analytical data is summarized in the documentation included in Attachment 3.

On May 31, 2013, SG-1 was sampled for a second time. The sample was laboratory analyzed for BTEX, MTBE, naphthalene, and cumene. The results indicated concentrations of 1,2,4-TMB, and 1,3,5-TMB and benzene were detected greater than its respective PADEP SHS. The laboratory analytical data is summarized in the documentation included in Attachment 3. Based on the elevated benzene concentration in SG-1 in May 2013, the soil gas point was sampled again on September 5, 2013. The laboratory detection limits were elevated due to the use of a tracer gas during analysis, therefore the results were inconclusive.

On September 26, 2013, four additional soil borings (SB-11 through SB-14) were advanced to further characterize soil contamination around the former tank hold. Soils were field screened with a PID and samples were collected from SB-11 and SB-12 for laboratory analysis of benzene, toluene, ethylbenzene, MTBE, naphthalene, cumene, 1,2,4-TMB, and 1,3,5-TMB. The concentration of 1,3,5-TMB was detected greater than its respective PADEP SHS in SB-11(15-16'). Laboratory data packages and soil sampling location information is provided in the documentation included in Attachment 3.

Groundwater samples were collected from monitoring wells MW-1 through MW-6 most recently on March 18, 2014. SPL was present in monitoring well MW-1 and the groundwater sample was collected from below the product level. The samples were laboratory analyzed for benzene, toluene, ethylbenzene, MTBE, naphthalene, cumene, 1,2,4-TMB, and 1,3,5-TMB. The results indicated concentrations of benzene (MW-1, MW-4), naphthalene (MW-1), 1,2,4-TMB (MW-1, MW-4), and 1,3,5-TMB (MW-1, MW-4) greater than their respective PADEP SHS. The laboratory analytical data is summarized in the documentation included in Attachment 3.

On March 20, 2014, the previous consultant formally notified the Wallace Township Manager of the intent to remediate the Site. The correspondence provided a copy of the Notice of Intent to Remediate (NIR) and indicated that it was also submitted to the PADEP and that the notice will

also be appropriately published. The PADEP acknowledged receipt of the NIR in a correspondence date April 4, 2014. Both of the aforementioned documents are included as attachments to the 2014 CR.

Because of the inconclusive laboratory data reported in September 2013, SG-1 was resampled on April 8, 2014. The sample was laboratory analyzed for BTEX, MTBE, naphthalene, cumene, 1,2,4-TMB, and 1,3,5-TMB and the results indicated concentrations of benzene, ethylbenzene, and naphthalene greater than their respective PADEP SHS. The laboratory analytical data is summarized in the documentation included in Attachment 3.

Under a cover letter dated May 9, 2014, the previous consultant submitted a Characterization Summary Report to the PADEP for the Site. Based on recent discussions with the PADEP, the PADEP will not be commenting on the report as the report is not a regulatory requirement under the Chapter 250 regulations for a Site that will be cleaned up to statewide health standards.

## **Scope of Work (SOW)**

This RFB seeks competitive bids from qualified contractors to perform the activities in the Scope of Work (SOW) specified herein. The general SOW presented in this RFB was previously provided to the PADEP and the PADEP has declined to comment on the SOW due to the following:

*“There is no report in house for the PADEP to review so we have no involvement at this point. And the PADEP cannot approve well and/or soil boring locations.”*

This site is considered a Non-Regulated Underground Storage Tank with the PADEP and as such the remediation of the Site is governed under the Act 1995-2 (the Land Recycling and Environmental Remediation Standard Act - Act 1995-2) and Pa Code Title 25 §250 (Administration of Land Recycling Program). It should also be noted that the Solicitor has decided to pursue closure under statewide health standards and therefore no reports are required until characterization and remediation (if necessary) are completed and the applicable standards have been met. Once the aforementioned is completed, then the Final Report would be submitted with the applicable PADEP review fee and the PADEP will be willing to provide comments.

## **Objective**

This RFB is seeking qualified firms to prepare and submit a fixed price proposal to complete a Defined Scope of Work. Specifically, this RFB seeks competitive bids to complete additional characterization activities, prepare an appropriate comprehensive summary report, evaluate

potential remedial strategies, and facilitate progress towards site closure in a timely, efficient, and cost effective manner. A petroleum release has been confirmed at the Site in both soil and groundwater.

### **Constituents of Concern (COCs)**

The list of COCs for this Site include the following:

- Benzene
- Toluene
- Ethylbenzene
- 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:<sup>1</sup>

- 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 of 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.
  - **If the site is located in PADEP Southwest Region:** All investigation derived wastes shall be handled and disposed of per PADEP's Southwest Regional Office guidance. Investigation derived wastes include personal protective equipment, disposable equipment, soil and drill cuttings and groundwater obtained through monitoring well development and purging, as well as equipment decontamination fluids. Investigation derived wastes must be containerized in DOT-approved drums and staged on-site in a pre-determined location, pending results of laboratory analyses and selection of final disposal method(s). Each container must be labeled to indicate contents, site location and date of generation. It is the selected consultant's responsibility to conform with current PADEP Southwest Regional Office guidance requirements.

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

- **If the site is located in any PADEP Region other than Southwest:** All investigation derived wastes shall be handled and disposed of per PADEP's Regional Office guidance. It is the selected consultant's responsibility to conform with current PADEP Regional Office guidance requirements in the region where the site is located.
- Be responsible for providing the Solicitor and facility operator with adequate advance notice prior to each visit to the property. The purpose of this notification is to coordinate with the Solicitor and facility operator to ensure that appropriate areas of the property are accessible. Return visits to the site will not constitute a change in the selected consultant's SOW or result in additional compensation under the Remediation Agreement.

#### **Site – Specific Guidelines**

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

- **Scheduling:** As part of this RFB, the selected consultant shall provide a clear deadline (e.g. within 30 days of the contract being executed) as to when each of the milestones will be completed. This includes the expected date (e.g. within 90 days of the contract being executed) when the draft deliverables will be submitted to the Solicitor and PAUSTIF for review. All on-site work should be completed during the normal working days and hours of 8 am to 4 pm from Monday through Friday. In addition, the selected consultant will need to coordinate with the Solicitor to complete the work in a manner that will not lead to any interruptions to the facility's operation or limit access to the buildings at the facility. All work must be completed in a timely and orderly fashion. For example, when performing monitoring well installations, all work should be completed on a monitoring well, before moving to a new location. The Solicitor has provided a vendor/contractor information and safety protocols brochure for bidders to review.
- **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, 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.
- **Utilities:** The building that the investigation is being conducted at, serves as the only meal source for the approximately 150 permanent residents. Present in the area of the investigation are multiple subsurface utilities, including high power electric and fiber optic lines. The facility operates 24 hours a day and 365 days per year. Please note that if a utility is damaged during the intrusive activities, the utility must **immediately** be repaired by the consultant at the consultant's expense.
- **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 L represents the base Scope of Work for this RFB solicitation. These milestones have been specifically developed in an effort to complete the characterization of the Site. In addition to the above base Scope of Work, the Optional Cost Adder Milestones (Milestone M through Milestone Q) need to be addressed in your bid response. These cost adders will not be part of your initially approved base contract price. However, if it becomes necessary to complete any of these activities, they will be completed under the Remediation Agreement signed as part of this project. For consideration of PAUSTIF reimbursement, Solicitor and PAUSTIF approval must be obtained prior to completing Optional Cost Adder Milestones.

#### **Site – Specific Milestones**

The following Milestones are to be included in bid responses:

**Milestone A – Sensitive Receptor Survey** – A Sensitive Receptor Survey (SRS) should be conducted for this Site. Sensitive receptors evaluated for this Site should include area water usage, surface water bodies, and subsurface underground utilities and basements. Submitted bids should specify what activities will be included in the SRS activities (i.e. review of tax maps and property assessment records; area canvass; PNDI search, etc.). A 1,000-foot radius water usage survey should be completed as part of the SRS in an effort to document the area water use. As part of the water usage survey, the selected consultant should complete the following:

1. Conduct a private and public well search by obtaining an area specific report;
2. Obtain and review tax maps for the area;
3. Contact the local municipality and water authority to confirm water usage in the area of the Site and any local restrictions on water usage;
4. Review of previously completed sensitive receptor surveys;
5. Review of county property assessment records;
6. Canvass of the area; and
7. Field verification of water supply to surrounding properties.

Results of the SRS are to be taken into consideration during the execution of the project and are to be summarized and included in the summary report to be completed as part of Milestone K.

**Milestone B – Private Utility Markout** - Prior to any intrusive investigation work at the Site (i.e. soil borings, monitoring well drilling), a private markout is to be conducted at the Site by a qualified professional in the utility markout industry 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. The identified features should be included in the site survey described in Milestone G. Bid Responses need to specifically indicate what subcontractor will be utilized, provide the methods of locating to be utilized, and qualification information on the subcontractor.

**Milestone C – Hole Clearing Activities** – Following completion of the private utility markout and prior to any intrusive investigation work at the Site (i.e. soil borings, monitoring well drilling, soil gas point install, etc.), hole clearing activities will be required to be completed due to the presence of utilities in the general area of the proposed SOW. All proposed soil boring, soil gas sampling point and monitoring well locations will need to be cleared to a mandatory minimum depth of 5 ftbg with the exception of 3 locations (SB-15, SB-16, and SB-17) which will need to be cleared to a mandatory minimum depth of 8 ftbg. Please note that the aforementioned 5 ftbg and 8 ftbg are the mandatory minimum holeclearing depths. Consultants may determine to increase the depths in some or all of the locations. Consultants need to include the cost to complete all hole-clearing activities as well as should state it in their proposal how the holeclearing will be completed. 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. Please note that if a utility is damaged during the intrusive activities, the consultant, at the consultant's expense, must immediately repair the utility.

**Milestone D – Soil Boring Investigation** – In an effort to fully investigate the impact to the soil media, a series of soil borings is being proposed. Specifically, the activities include the completion of seven soil borings (SB-15 through SB-21) utilizing appropriate equipment. Please note that consultants need to utilize appropriate equipment that is capable of reaching depths required to appropriately terminate the boring. Boring investigations noting shallow refusal will not be reimbursed. Consultants should review the available soil boring logs and monitoring well logs included in Attachment 3 in order to determine the appropriate equipment needed to complete the investigation. Bids should specifically discuss how the borings will be advanced at the Site. Specifics on the proposed investigation are provided below:

- The proposed locations of the seven soil borings (SB-15 through SB-21) are provided on the Figures included in Attachment 3. All soil boring locations will be advanced in the locations proposed in the RFB, unless the presence of utilities, obstructions, or safety concerns requires a change in the location. If the locations of the proposed borings need to be altered from the locations provided on the attached figure due to valid concerns, then the selected consultant will be required to contact the technical contact, discuss the need for the changes, and provide a revised soil boring location map.
- Prior to the advancement of the soil borings, the selected consultant will be required to complete a private markout at the Site to identify the location of obstructions and underground utilities as part of Milestone B, as well as hole-clearing activities as part of Milestone C before advancing the borings.
- Soil borings will be advanced to either groundwater or bedrock, whichever is encountered first. However, in the event that there is no evidence of petroleum hydrocarbon impact (includes olfactory, visual, and field instrument detections) for more than 40 feet, then the boring maybe terminated. Soil samples will be collected and logged continuously by an on-site geologist for soil classification and structure, odor, soil moisture, soil texture, color, visual petroleum impacts and screened with an appropriate field-screening instrument. Soils should be described using the Unified Soil Classification System.
- A total of 14 soil samples (two (2) soil samples per boring) shall be collected and submitted to an accredited laboratory for analysis. One (1) sample from each boring should be collected from the soil interval exhibiting the highest field-screening reading or evidence of petroleum impacts (i.e., staining, free product, etc.) in each borehole. The second soil sample will be collected at the bedrock interface or just above groundwater (if encountered) in an effort to delineate the soil impacts. Please note that if no elevated field-screening readings or other indicators of impact are observed, two (2) soil samples should still be collected from each boring with one sample to still be collected at the bedrock interface or just above groundwater (if encountered). The depth of the other sample (if no elevated field-screening readings or other indicators of impact are observed) should be determined based on the selected consultant's professional opinion.

- A total of 14 soil samples are proposed to be collected both in laboratory-sterilized sample jars and using a PADEP approved soil sampling method. The samples will then be placed on ice and delivered to an accredited laboratory for chemical analysis. Soil samples will be collected and analyzed for benzene, toluene, ethylbenzene, MTBE, naphthalene, isopropylbenzene, 135-TMB, and 124-TMB. The analytical data, field results, boring logs, and sampling map from the event will be summarized and included in the Summary Report to be completed as part of Milestone K.
- 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.
- 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 E - Installation of Monitoring Wells** – A total of four monitoring wells (MW-7 through MW-10) are proposed for installation to delineate groundwater at the Site. The proposed locations of the monitoring wells are provided on the figures attached in Attachment 3. As part of the installation of the wells, the selected consultant should consider the following:

- All monitoring well locations will be advanced in the locations proposed in the RFB, unless instructed otherwise by the Technical Contact or the presence of utilities, obstructions, or safety concerns requires a change in the location. If due to valid concerns prior to drilling, the general locations of the proposed monitoring wells need to be altered from the locations provided on the attached figure, then the selected consultant will be required to contact the Technical Contact, discuss the need for the changes, and provide the Technical Contact with a revised well location map.

- Prior to the advancement of the monitoring wells, the selected consultant will be required to complete a private markout at the Site to identify the location of obstructions and underground utilities as part of Milestone B, as well as hole-clearing activities as part of Milestone C before drilling begins at the Site.
- Drilling is to be conducted under the supervision of a Pennsylvania-licensed Professional Geologist and the construction specifications will be determined by the Professional Geologist and dictated by actual site conditions (i.e. actual depth to groundwater, etc.). The wells should be drilled and constructed in accordance with generally accepted practices as outlined in the PADEP Groundwater Monitoring Guidance Manual, dated January 1, 1999 (Document # 383-3000-001).
- Please note, the first set of monitoring wells were installed at the Site (Monitoring wells MW-1 through MW-3) in November 2012 to depths ranging from 37 ftbg to 48 ftbg with the top 5 feet to 7 feet of each well constructed of solid 4-inch PVC well casing and then PVC well screen installed below the casing to the final well depth. The second set of monitoring well (Monitoring wells MW-4 through MW-6) were installed in March 2013 to depths ranging from 37 to 44 ftbg and were constructed of solid 4-inch PVC casing lengths ranged from 17 feet to 20 feet and PVC screen lengths ranged from 20 to 25 feet long. The selected consultant will need to review the available well logs, consider the discrepancies in the logs between the two installation events, and determine how best to construct the monitoring wells with the understanding that final construction specifications will be determined by the actual site conditions documented by the selected consultant. Bid responses need to provide discussion on how a consultant is planning on constructing each of the monitoring wells. In addition, B&B will remind the selected consulting firm that careful consideration needs to be taken when installing the proposed monitoring wells. Specifically, the wells should not be over drilled, under screened, or screened across the multiple water bearing zones. Shallow refusal due to underscoping of equipment is not acceptable and will not be reimbursed. The selected consultant is responsible for appropriately installing the well.
- A flush-mounted manhole shall be cemented into place to complete the well at grade level. A locking, pressure fit, watertight cap will be used to prevent the infiltration of surface runoff and rainwater and to restrict access by unauthorized individuals.
- The newly installed monitoring wells should be developed to promote adequate hydraulic connection between the aquifer and the well. Depending on the depth and amount of sediment in the well, development should be completed via mechanical surging using either a bailer or an electric submersible pump, or by airlift techniques.

- Compile the field findings into comprehensive monitoring well construction diagrams and logs.
- Drilling should be conducted under the supervision of a Pennsylvania-licensed Professional Geologist, although a field supervisor may be used in the field on a day-to-day basis. The field supervisor should visually inspect subsurface materials encountered during drilling, screen cuttings with an appropriate field-screening instrument, and complete field well construction logs. When encountered, soils should be described using the Unified Soil Classification System. Bedrock should be described using USGS descriptive protocol, with the identification of the depth of and size of potential fractures and/or other subsurface anomalies.
- **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 – Soil Gas Point Installation and Sampling** – As part of this milestone, one additional soil gas sampling point (SG-2) is to be installed and samples are to be collected from both the one existing soil gas point (SG-1) and the one proposed soil gas point (SG-2) during two separate soil gas sampling events. For this RFB, please assume that a total of two rounds of samples will be collected from each of the two soil gas sampling points, for a total of four soil gas samples. Please note that PAUSTIF will only pay the selected firm for the actual number of events conducted (i.e. if a firm includes the costs to complete 1 event, but no event is conducted; then the firm will not be paid for the milestone). The selected consultant should be prepared to conduct the first soil gas sampling event at the Site within two weeks of the installation of SG-2 and conduct the second event approximately six (6) weeks after the first event. As part of the soil gas investigation, the selected consultant should consider the following:

- Soil gas point (SG-2) will be advanced in the location proposed in the RFB, unless the presence of utilities, obstructions, or safety concerns requires a change in the location. The proposed location of the aforementioned soil gas point is provided on the figures attached in Attachment 3.
- The vapor intrusion investigation should be completed in a manner consistent with the Land Recycling Technical Guidance Manual – Section IV.A.4 Vapor Intrusion Into Buildings from Groundwater and Soil under the Act 2 Statewide Health Standards, Document 253-0330-100, dated January 24, 2004. Bid responses should specifically indicate how the consultant anticipates constructing the proposed soil gas point and completing the proposed sampling events.

- Samples should be collected in laboratory provided Summa canisters equipped with laboratory calibrated flow regulators and analyzed for benzene, toluene, ethylbenzene, MTBE, naphthalene, isopropylbenzene, 135-TMB, and 124-TMB 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).

Results from soil gas point installation and sampling activities should be summarized and presented in the summary report to be completed as part of Milestone K.

**Milestone G – Site Survey** – Following the completion of Milestone B, Milestone C, Milestone D, Milestone E, and Milestone F, a professional survey of the Site by a Pennsylvania-licensed surveyor including all current site features (i.e., buildings, property boundaries, monitoring wells, utilities, etc.) shall be completed. All monitoring wells, soil borings, soil gas points, the Site building, sanitary and storm sewer lines, property boundaries and other important Site features are to be surveyed with the purpose of placing their horizontal coordinates on a scaled site map. In addition, the vertical coordinates of the new monitoring well top of casings and surface grade are to be surveyed. The benchmark elevation shall be obtained by referencing the approximate ground surface elevation of the property or from an available benchmark from a USGS topographic map or benchmark elevation marker located at the Site. In conjunction with collecting depth to groundwater readings during sampling events and in an effort to establish groundwater flow at the Site, tops of casing for the existing monitoring wells are to be surveyed to facilitate the construction of a Site wide groundwater flow map. In addition, the presence of SPL (if detected) needs to be taken into consideration when calculating the static water levels in the wells and constructing a Site wide groundwater flow map. Groundwater elevation data collected following the installation of the additional monitoring wells along with data from the site survey will be utilized to produce a series of summary figures which will provide additional information as to the groundwater flow direction in each of the monitored water bearing zones.

**Milestone H – Product Recovery Efforts** – The previous consultant installed a passive skimmer in monitoring well MW-1 during the 4<sup>th</sup> quarter of 2013 following other product recovery efforts on monitoring well MW-1 since December 2012. Available information indicates that through June 2014, a total of 59.52 gallons of free product have been recovered from monitoring well, MW-1. The selected consultant will conduct product recovery visits to the Site every 2 weeks to empty all accumulated product from the canister into a drum stored on site. 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-1 and should include enough product recovery events (conducted every two weeks) through the completion of the Feasible Remedial Alternatives Analysis Report noted in Milestone L2. 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 H1* - The cost provided should be to complete product recovery visits every two weeks from the time of contract execution through the completion of the Feasible Remedial Alternatives Analysis Report 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. Please indicate in the bid at what frequency Milestone H1 will be billed (quarterly or monthly).

*Milestone H2* - The cost provided should be to dispose of a 55-gallon drum full of product recovered from the Site. The provided cost would be to cover all labor, equipment, subcontractor costs, waste, etc. Please include one Milestone H2 event in the bid. If any additional Milestone H2 events are warranted, then the additional events will be treated as a cost adder milestone and will require prior approval.

**Milestone I – Groundwater Monitoring and Sampling** – Following the installation and development of the additional monitoring wells, the selected consultant will gauge and sample the entire expanded monitoring well network. For this RFB, please assume the total number of groundwater monitoring and sampling events that will be needed is two (2) events. 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 installation of the proposed monitoring wells and conduct the second event approximately four (4) weeks after the first event. 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 benzene, toluene, ethylbenzene, MTBE, naphthalene, isopropylbenzene, 135-TMB, and 124-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). Following collection of

the second round of groundwater monitoring and sampling data, a determination will be made whether additional characterization efforts will be needed or if the completed efforts have fully characterized and delineated the groundwater and soil at the Site. The selected consultant will keep PAUSTIF updated on the progress of the investigation.

- **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 J – Supply Well Sampling** – A total of two supply wells (No.2/Main Well/ and No.4/Springhouse/) are sampled on a monthly basis and analyzed via EPA Method 524.2. Upon receipt of the laboratory analytical report the bidder shall prepare and submit a letter summarizing the results and providing a copy of the laboratory data package to the solicitor and PAUSTIF. For purposes of preparing this bid, the bidders should include costs to complete enough monthly sampling events to continue the monthly supply well sampling through the completion of the Feasible Remedial Alternatives Analysis Report noted in Milestone L2. The events should be specifically noted in the schedule to be provided in each bidder’s bid response. In addition, bidders should coordinate the monthly supply well sampling event to occur during the mobilization to the Site for another event such as the quarterly groundwater sampling and/or the product recovery efforts to be conducted at the Site every 2 weeks. The cost provided should be to sample two supply wells during another sampling event or investigation (as in collecting the supply well samples while already at the Site to conduct an event like groundwater sampling or product recovery visits). 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). Please indicate in the bid at what frequency Milestone J will be billed (monthly or quarterly).

**Milestone K – Site Summary Report** - Following the completion of the activities proposed in Milestone A through Milestone J, the selected consultant will prepare a comprehensive Site Summary Report for the Site. With the understanding that the site is not governed under 245 and as such a no SCR is required to be submitted to the PADEP, the requested Site Summary Report should still comply with the general requirements of a SCR as established under the Chapter 245 regulations. 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, discussion on the completed remediation efforts, and a series of summary tables, appendices, and figures illustrating the information provided in the report.

As discussed, the Site Summary 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 Site Characterization Report. The selected consultant will also present significant conclusions and make recommendations for future work at the Site in the Site Summary Report. Although not being submitted to the PADEP, the report will still need to be appropriately signed and sealed by a licensed Professional Geologist.

The draft Site Summary Report 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, modeling results and analysis, and sensitive receptor information) shall be submitted electronically (in Adobe PDF format) to the Solicitor and PAUSTIF for review / comment prior to finalizing. Once the selected consultant has addressed comments on the draft, the selected consultant shall finalize and issue the finalized report to all parties. The draft report is to be submitted no later than the date specified in the schedule presented by the selected consultant.

### **Milestone L - Feasible Remedial Alternatives Analysis –**

*Milestone L1 – Remedial Alternatives Analysis –* A Remedial Alternatives Analysis should be completed for the Site to compare cleanup alternatives and evaluate which remedial action is most appropriate for the Site. The evaluation should specifically focus on eight (8) key considerations including cost-effectiveness, proven performance, public and environment protectiveness, regulatory compliance, reliability, practical implementation, health & safety and effects on public health and the environment. The findings of the Remedial Alternatives Analysis will be summarized and presented as part of the Feasible Remedial Alternatives Analysis Report. Information/data generated during the interim remedial activities conducted at the Site should be taken into consideration.

*Milestone L2 – Feasible Remedial Alternatives Analysis Report -* Following the completion of the proposed Remedial Alternatives Analysis, a Feasible Remedial Alternatives Analysis Report should be prepared for the Site. The report should detail the procedures and findings from the activities completed in Milestone A through Milestone J and describe the calculations and resultant estimate of the amount of hydrocarbon mass present in the Site's subsurface. Figures and appendices

supporting the findings of the report should be attached to further illustrate the current condition of the Site. The report should appropriately evaluate the Site and assess the risks as well as provide a proper closure strategy and remedial alternative for the Site. Information/data generated during the interim remedial activities conducted at the Site should be incorporated into this milestone.

All AutoCAD maps / plans included in the report (e.g., site plan / base map, proposed remediation location map, dissolved plume maps, soil contaminant distribution maps, etc.) and appendices (e.g., boring logs, tables, remediation technology information, fate and transport modeling, risk assessment and sensitive receptor information) shall also be submitted electronically to Solicitor and PAUSTIF for review / comment prior to finalizing it. Once the selected consultant has addressed comments on the draft, the selected consultant shall finalize and issue the report to all parties. The draft report is to be submitted no later than the date specified in the schedule presented by the selected consultant.

**Milestone M – Additional Groundwater Monitoring and Sampling (Cost Adder Milestone)**

– Provide a Unit Cost to complete an additional groundwater monitoring and sampling event. The scope of work for this cost adder should follow Milestone I.

*Milestone M1* - The cost provided should be to complete only one (1) event with all the monitoring wells (existing and proposed).

*Milestone M2* - The cost provided should be to sample one (1) additional monitoring well during a groundwater sampling event. The provided cost would be to cover all labor, equipment, laboratory, waste, etc.

**Milestone N – Additional Supply Well Sampling Event (Cost Adder Milestone)** – Provide a Unit Cost to complete an additional supply well sampling event. The scope of work for this cost adder should follow Milestone J with two supply wells to be sampled during each event.

*Milestone N1* - The cost provided should be to complete only one (1) additional supply well sampling event during a separate mobilization event (as in going to site to only complete the sampling of the supply wells). The provided cost would be to cover all labor, equipment, laboratory, waste, etc.

*Milestone N2* - The cost provided should be to sample one (1) additional supply well sampling event during another sampling event or investigation (as in collecting the

supply well samples while already at the Site to conduct an event like groundwater sampling or soil sampling. The provided cost would be to cover all labor, equipment, laboratory, waste, etc.

**Milestone O – Preparation of Semi-Annual Progress Report (Cost Adder Milestone)** – Provide a Unit Cost to Prepare a Semi-Annual Progress Report for submittal to the Solicitor and PAUSTIF. The Progress Report 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), provide copies of laboratory data packages, and provide additional scheduling details for upcoming events. Once the report is finalized, the report should be submitted to the Solicitor and PAUSTIF.

**Milestone P – Installation of Additional Monitoring Wells (Cost Adder Milestone)** – Provide a Unit Cost to install one (1) additional monitoring well. The scope of work for this cost adder should follow Milestone E construction guidelines. Please provide costs for the following:

**Milestone P1** – Installation of one (1) additional monitoring well during a separate mobilization event. The provided cost would be to cover all labor, equipment, subcontractors, waste, etc.

**Milestone P2** - Installation of one (1) additional monitoring well as an add-on to a drilling investigation where mobilization costs has already been included. The provided cost would be to cover all labor, equipment, subcontractors, waste, etc.

**Milestone Q – Update Survey (Cost Adder Milestone)** – Provide a Unit Cost to update the Site’s survey to include any additional monitoring well location(s). The scope of work for this cost adder should follow Milestone G.

#### **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 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. Figure 1 - Site Plan Map
  - b. Figure 2 – Proposed Soil Boring Map
  - c. Figure 3 – Proposed Monitoring Well Location Map ‘
  - d. Devereux Vendor/Contractor Information and Safety Protocols Brochure
  - e. January 31, 2014 Remedial Action Progress Report
  - f. May 2014 Site Characterization Report
  - g. July 31, 2014 Remedial Action Progress Report