SITE CHARACTERIZATION ACTIVITIES AND REPORT PREPARATION

BELANY'S MINI MART
200 DIVISION STREET, BEN AVON BOROUGH, PITTSBURGH, ALLEGHENY COUNTY, PENNSYLVANIA 15202

PADEP FACILITY ID #02-36089 PAUSTIF CLAIM #2008-0171(F)

April 9, 2012

The Pennsylvania Underground Storage Tank Indemnification Fund (PAUSTIF or "Fund") has issued this Request for Bid (RFB) on behalf of the Claimant, Mr. Keith Belany, hereafter referred to as the Client or Solicitor. The Solicitor is the owner/operator of the subject facility located at 200 Division Street, in the Borough of Ben Avon, Pittsburgh, PA.

The Solicitor has elected to pursue site closure under the Site Specific Standards (SSS) via a demonstration of pathway elimination or, if necessary, site-specific risk-based numerical goals for only those constituents for which attainment of the Statewide Health Standard (SHS) cannot be readily demonstrated. This RFB references a scope of work (SOW) for completing site characterization activities and preparing a combined Site Characterization Report (SCR) and Remedial Action Completion Report (RACR) [1] .

The goal of this SOW is to complete the corrective action process specified by the Pennsylvania Department of Environmental Protection (PADEP) Act 2 and Chapter 245 regulations and guidelines. The constituents of concern (COCs) at this site are benzene, toluene, ethyl benzene, total xylenes, methyl tertiary butyl ether (MTBE), isopropylbenzene, naphthalene, 1,2,4-trimethylbenzene (1,2,4-TMB), and 1,3,5-trimethylbenzene (1,3,5-TMB).

In October 2008, a confirmed petroleum release was reported for this site, but little information is currently known about its impacts to soil, soil vapor, and/or groundwater, if any, because no site characterization work has been performed. The site characterization SOW awarded to the selected consultant will be reimbursed under the PAUSTIF claim referenced above at 50 percent proration and subject to a $5,000 deductible, i.e., the Solicitor is responsible for paying 50 percent of the incurred cost. This prorated allocation of incurred cost is based on the Solicitor's decision to consider a site closure strategy that assumes demonstrating attainment of: (a) the Statewide Health Standards (SHS) for all constituents of concern that are below the applicable SHS, and (b) the SSS either through pathway elimination, remediation to risk-based numerical goals, and/or post-remediation care monitoring. Consequently, a key objective is to sufficiently characterize the site and equip the Solicitor to execute this site closure strategy. To this end, the Solicitor requests a written approach, schedule, and firm fixed-price bid to complete the tasks specified below, which shall be completed in accordance with all applicable standard industry practices, and all applicable federal, state, and local laws and regulations, PADEP guidance, PADEP directives, and PADEP regulations.

[1] During production of the SCR, if it is determined that remedial action will be required due to excessive risks that cannot be eliminated through institutional or engineering controls (as needed), submitting a combined SCR and Remedial Action Plan (RAP) will be substituted in lieu of submitting a combined SCR/RACR. Therefore, if a RAP must be prepared in lieu of a RACR, this substitution will be considered a "New Condition" under the Fixed-Price Agreement, and work on the SCR deliverable shall be suspended until the Solicitor and PAUSTIF approve a work plan and cost estimate for developing the SCR and companion RAP instead of the RACR. In addition, if a RAP does prove necessary, RAP implementation will be completed separately, i.e., not as an amendment to the agreement resulting from this solicitation.

The SOW (Tasks 1 through 9) will be embodied in a Fixed-Price Agreement (see Attachment 2) executed by the Solicitor and the selected consultant. Although not a party to the Agreement, the Fund will reimburse 50 percent of the reasonable, necessary, and appropriate costs associated with the Milestone Payment Schedule specified in Section 4 below and as incorporated into the signed Agreement. The SOW tasks consist of the following:

Task 1. Additional Background Research
Task 2. Site Survey
Task 3. Geophysical Survey
Task 4. Soil Sampling
Task 5. Groundwater Monitoring Well Installation
Task 6. Groundwater Monitoring and Sampling and Groundwater Level Gauging
Task 7. Aquifer Characterization Testing
Task 8. Soil Vapor Sampling
Task 9. Prepare a Draft and Final Combined SCR & RACR, including a Risk Assessment

The electronic files accompanying this RFB include the following documents:[2]

- Registration of Storage Tanks, 11/1/1993
- Storage System Report Form, Narrative Information, 8/8/1995
- UST System Closure Notification Form, 4/30/1997
- Aboveground and Underground Storage Tank, Tank Handling Activities Report, 7/15/1997
- Underground Storage Tank Facility Operations Inspection, 10/24/1997
- Aboveground and Underground Storage Tank, Tank Handling Activities Report, 9/3/1998
- Tanknology Tank Testing Reports, 2/23/1999, 5/29/1998, 5/1/1998
- Letter from PADEP re potential problems with Technology testing, 1/22/2004
- Storage System Report Form, Narrative Information, 8/29/2001
- Storage System Report Form, Narrative Information, 9/14/2001
- Notification of Reportable Release, 12/21/2001
- Registration/Permitting of Storage Tanks, Tank 006, (undated, but likely 2003)
- Underground Storage Tank Facility Operations Inspection, 9/24/2003
- Storage System Report Form, Narrative Information, 10/10/2003
- Underground Storage Tank Facility Operations Inspection, 4/3/2006
- Report from Professional Enterprises re: Tank 001 wall thickness testing, 9/19/2007
- Storage Tank Release Notification, verbal report, 10/17/2008
- Notification of Reportable Release, 11/5/2008
- UST Closure Report Form, 1/25/09 (NOTE: cover sheet references incorrect year)
- Certified Sanborn Fire Insurance land use maps for 1906, 1926, 1950, and 1965.

By submitting a bid in response to this RFB, each bidder indicates its acceptance of the contractual terms (Attachment 2) and task/milestone requirements of this project, including any stated schedule deadlines, unless explicitly stated to the contrary in its bid. Fixed-prices and unit prices quoted by bidders in response to this RFB shall be inclusive of, but not necessarily limited to, all of the following: the associated specified or implied work; associated planning and preparation activities; associated project management activities; procurement and adherence to associated permits; associated direct and indirect costs; associated transportation and disposal costs; costs associated with

[2] The documents provided are the best scanned-in versions available to the Technical Contact.

specified or implied documentation of the work conducted; costs associated with adherence to federal, state, and local laws and regulations, PADEP guidance, PADEP directives, and PADEP regulations; direct and indirect labor costs, taxes and fees, and associated profit.

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 Fund's third party administrator, ICF International (ICF), to the attention of Deb Cassel, Contracts Administrator.** She 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 firms who attended the mandatory pre-bid site meeting (see Section 6 of this RFB). **The ground address for overnight/next-day deliveries is ICF International, 4000 Vine Street, Middletown, PA 17057, Attention: Deb Cassel. The outside of the shipping package containing the bid response must be clearly marked and labeled with "Bid – Claim #*2008-0171(F)*".** 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 below for submission. Firms mailing bid responses should allow adequate delivery time to ensure timely receipt of their bid package.

The bid response must be received by 3:00 PM, on May 14, 2012. Bids will be opened immediately after the 3:00 PM deadline on the due date. Any bid packages 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 ICF office is closed on the bid response due date, the deadline for submission will automatically be extended to the next business day on which the office is open. ICF may notify all firms who attended the mandatory site meeting of an extended due date. The hour for submission of bid responses shall remain the same. Submitted bid responses are subject to Pennsylvania Right-to-Know Law.

Bids will be considered individually in a manner consistent with the evaluation process described in the PAUSTIF Competitive Bidding Fact Sheet, which can be downloaded from the PAUSTIF web site.[3] While the Technical Contact will assist ICF, PAUSTIF, and the Solicitor in evaluating the bids, it is up to the Solicitor to select the bidder from those bids deemed acceptable to PAUSTIF as reasonable, necessary, and appropriate. The Technical Contact will also assist the Solicitor in communicating its choice of the successful bidder. Notification of bid award will likely occur within six weeks after receiving the bids.

1. ICF, SOLICITOR, AND TECHNICAL CONTACT INFORMATION

ICF International	**Solicitor**	**Technical Contact**
Ms. Bethany Smith ICF International 4000 Vine Street Middletown, PA 17057	Mr. Keith Belany 200 Division St Pittsburgh, PA 15202	Mr. Jim Ackerman, P.G. Excalibur Group, LLC 276 Park Entrance Dr Pittsburgh, PA 15228 jimackerman@excaliburgrpllc.com

Please note that the Technical Contact is the single point of contact regarding this RFB. Questions regarding this RFB and the associated site conditions must be directed **in writing** to the Technical Contact only, i.e., not to the Solicitor or PAUSTIF. Bidder questions must be received no later than seven (7) calendar days prior to the due date for the bid. Bidders shall not contact or discuss this RFB with the

[3] http://www.portal.state.pa.us/portal/server.pt/community/offices___organizational_charts/9304/ustif_-_underground_storage_tank_indemnification_fund/606627

Solicitor, USTIF, ICF, or the PADEP unless approved by the Technical Contact. However, discussing this RFB with subcontractors and vendors is permissible to the extent required for preparing a responsive bid. If a bidder has specific questions for the PADEP, such questions shall be submitted only to the Technical Contact, who will forward the questions to PADEP. The PADEP may choose not to reply to questions it receives, or may not reply in time for its response to be beneficial.

Please note that unless a bidder successfully demonstrates its question is proprietary in nature, all questions and responses exchanged before, during, and after the mandatory pre-bid site meeting will be provided to all bidders on a non-attributable basis. A bidder must specify any questions it regards as proprietary at the time it submits these questions to the Technical Contact. If said question(s) is (are) determined to be non-proprietary by the Solicitor and the Technical Contact, the bidder will be given the option of withdrawing its question(s) before it is answered and a response distributed.

2. GENERAL SITE BACKGROUND AND DESCRIPTION

The current understanding of this site has been drawn from various sources, including (a) documents in the publicly available case file held by the Southwest Regional Office of the PADEP (PADEP-SWRO); (b) documents and statements provided by the Solicitor in support of his PAUSTIF claim; and (c) available historical Sanborn Fire Insurance land use maps.[4] Unfortunately, the available background information for this site does not include a professional site survey or maps that accurately depict past and present site features. However, Figure 1 (see the accompanying electronic files posted on the PAUSTIF web site), which was prepared for this RFB, depicts selected current site features in their estimated locations.

First, the available historical Sanborn Fire Insurance land use maps suggest this property has been developed with a "filling station" since at least 1926. Furthermore these maps suggest (but do not necessarily prove) that the locations of the former station buildings and underground storage tanks (USTs) may have varied on the parcel through time. For example, the 1926 Sanborn map depicts a "filling station" situated in the southeast quadrant of the parcel with four gasoline tanks (designated by the symbol "GT") positioned between the station building and an "auto repair" business apparently co-located on this same parcel. In contrast, the 1950 Sanborn map depicts what appears to be a different "filling station" building situated closer to the center of the parcel along with four gasoline tanks located between the building and the Division Avenue/Brighton Road intersection. Finally, the 1965 Sanborn map appears to depict a "filling station" location consistent with the current building in the north-central portion of the parcel, but does not show the location of the gasoline tanks in place at that time. Whether these former gasoline tanks remain on or were removed from this property, or whether there may be multiple potential residual source areas influencing site conditions and affecting achievement of an Act 2 closure of this site, is currently not known.

The Solicitor was affiliated with this facility as an Atlantic Richfield Company (ARCO) franchisee operator in the late 1970s. The Solicitor reports that he purchased the property, station, and UST systems from ARCO in 1983. PADEP-SWRO records indicate that there were five (5) registered USTs in operation at that time. These USTs were a 4,000-gallon, unprotected steel, gasoline UST (Tank #001); three, 3,000-gallon, unprotected steel, gasoline USTs (Tanks #002, #003, and #004),[5] and an 8,000-gallon, single-wall fiberglass, gasoline UST (Tank #005). Tanks #001 through #004 were reportedly installed in 1972; Tank #005 was reportedly installed in 1980.

[4] If there is any conflict between the information provided in this RFB and the source documents, bidders shall defer to the source documents.

[5] The Solicitor indicates that the three, 3,000-gallon, USTs were used by ARCO to store leaded gasoline originally. He also believes there may have been a fourth, 3,000-gallon, leaded gasoline UST located in the same area, but PADEP-SWRO records do not reference this additional 3,000-gallon tank.

Records indicate that a sixth tank (Tank #006) was installed at this facility in October 2003 after Tank #005 was removed. Tank #006 is reported to be a 10,000-gallon, cathodically-protected, single-wall steel, gasoline tank, and is the only UST known to be still present and is believed to be still in service at the facility. Figure 1 shows the estimated location of Tanks #001 through #006.

Tanks #002 through #004 were removed in 1997,[6] but the condition of these three USTs upon their removal is not known nor is there documentation as to whether any visual, olfactory, or analytical indications of contamination were noted. However, while this release event is not referenced in the PADEP-SWRO case file, the Solicitor recalls a release occurring on this property prior to 1983 that was believed to be associated with one or more of these three gasoline tanks. According to the Solicitor, an unknown, but apparently significant volume of leaded gasoline product was released into the storm sewer system south of the property, although how the product entered the storm sewer is unclear. Gasoline and gasoline vapors were subsequently reported in the basement of a house adjacent to the facility's western boundary. According to the Solicitor, ARCO, who owned the facility at this time, cleaned up the spill and addressed damages to the adjoining residence, but additional details regarding this cleanup are not known.

Reportedly, Tank #005 was periodically out of service as early as 1990 due to the presence of water in the tank. Tank #005 was eventually removed from the property in October 2003 (see below). A 6/22/95 reference in the PADEP-SWRO file mentions Tank #005 and states "an 8,000-gallon gasoline UST at this facility has been out of use for approximately 5 years because of a leak" and "when a stick reading was done, there was water in the tank." Records pertaining to an 8/8/95 PADEP visit to the facility indicate Tank #005 was not in service at that time. PADEP-SWRO records also reference a "fail" result for a 5/1/98 tightness test performed on Tank #005, although a 5/29/98 follow-up test performed on this same tank generated a "pass" result, as did tests performed on the steel lines associated with Tanks #005 and #001. However, another tightness test performed on Tank #005 on 2/23/99 generated a "fail" result, as did a tightness test conducted on 6/8/01.

When Tank #005 was exposed and opened for inspection on 8/30/01, "numerous holes" were reportedly observed in the lower third of the tank. On 12/21/01, a Notification of Reportable Release (NORR) Form was filed with the PADEP-SWRO indicating that the "release was discovered through tightness testing activities and the presence of water in the tank." This form also references a "tank leak" and plans to excavate contaminated soil. However, documentation shows that Tank #005 was not removed from the ground until October 2003. This tank removal was witnessed by a PADEP representative and documented in a 10/10/03 site visit report. In this report, the PADEP representative indicated, "The tank was being removed because an internal inspection (prompted by water accumulation) had revealed fine white lines believed to be cracks." He added, "As the excavation proceeded, there appeared to be localized contamination, especially around the submersible turbine pump sump," and "there appeared to be some more localized contamination on the side of the tank closest to the building" (presumed to be Tank #005).

The release that is the subject of Claim #2008-0171 was reported verbally to the PADEP-SWRO on 10/17/08 and was discovered during the removal of Tank #001. The NORR Form indicates a confirmed release of an unknown quantity of unleaded gasoline, with the source/cause indicated as Tank #001. The release was identified as affecting soil only (product-stained or product-saturated soil and backfill was observed). The NORR Form indicates that the source of the contamination appeared to be related to the failure of the epoxy lining, which exposed holes in the shell of the tank. Records do indicate that on 5/24/97, Tank #001 was relined with an epoxy resin and a striker plate was reportedly installed below the fill riser. On 5/24/07, the PADEP reminded the tank owner/operator that the epoxy resin lining applied to the interior of Tank #001 in 1997 had to be re-inspected to determine whether the tank remained

[6] UST System Closure Notification Form dated 4/30/97 indicates a proposed closure date of 6/1/97.

structurally sound. Professional Enterprises, Inc. (PEI) was retained to conduct this lining inspection, and in its report dated 9/19/07, PEI indicated that Tank #001 had not passed the metal or lining thickness tests or the Barcol hardness test. Furthermore, PEI reported, "Holidays[7] were found throughout the liner due to the liner being too thin and there was no striker plate under the fill riser." PEI also noted that the in-place boiler plugs had "failed" and were not covered by the epoxy resin liner. PEI concluded that since the metal shell of the tank was too thin, it could not be re-lined and would have to be taken out of service and removed. It is noted that PEI's report does not comment on whether visible or olfactory indications of a tank leak or release were noted.

Currently, the only information available regarding soil quality are the six samples collected on 10/20/2008 during Tank #001 UST closure work, which indicate benzene in soil at concentrations up to 7.351 mg/kg. This value exceeds the used aquifer Statewide Health Standard (SHS) Medium-Specific Concentrations (MSC) for soil of 0.5 mg/kg. Groundwater elevation, gradient, and quality is unknown. No groundwater was allegedly observed in the Tank #001 excavation during UST closure, but there are references in the PADEP-SWRO files to groundwater being observed in a tank cavity during tank testing and water was measured at times in Tank #005.

3. SCOPE OF WORK OBJECTIVES

This Solicitor seeks competitive, fixed-price bids to complete the nine tasks specified below. **To be deemed responsive, each bid must respond in detail to each of the SOW tasks**, describe the bidder's understanding of the conceptual site model, and explain how its conceptual site model relates to the bidder's proposed approach to executing the SOW. In other words, bidders shall respond to the tasks specified herein to enable as much of an *"apples-to-apples"* comparison of the bids as possible. Recommendations for changes/additions to the SOW shall be discussed, quantified, and priced separately; however, **failure to bid the SOW "as is" may result in a bid not being considered**.

Any "new conditions" arising during the scope of work for any of the following nine tasks may result in termination of or amendments to the executed Fixed-Price Agreement. All necessary modifications to the selected consultant's SOW will require the prior written approval of **the Solicitor and PAUSTIF** (through its third-party administrator). PADEP pre-approval may also be required.

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 necessarily limited to, meeting the 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 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.

[7] In this context, the term "holiday" refers to an unintentional gap left on a plated, coated, or painted surface.

Each bid must provide the Solicitor and PAUSTIF with a schedule that begins with execution of the Fixed-Price Agreement with the Solicitor and ends with completion of Task 9. Schedules must also indicate the approximate start and end of each of the tasks/milestones specified below, and indicate the timing of all proposed key milestone activities. Per the Solicitor's request, the SOW addressed by **Tasks 1 through 9 must be completed within six** (**6) months** following contract award. **Each bidder's proposed project schedule must meet this requirement clearly and unambiguously.** The project schedule must also specify no less than two (2) weeks for the Solicitor and PAUSTIF to review and comment on the draft SCR & RACR before the report is submitted for PADEP review and comment.

During completion of the task/milestone objectives specified below and throughout implementation of the project, the selected consultant shall:[8]

- Conduct necessary, reasonable, and appropriate project planning and management activities until the project (i.e., Fixed-Price 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, etc.). 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 may be required by regulations or that may be 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.[9] As appropriate, project management costs shall be included in each bidder's pricing to complete the tasks/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 and purge water shall be disposed of in accordance with standard industry practices and applicable laws, regulations, guidance, and PADEP directives; **check with the PADEP-SWRO for current regional requirements.** Waste characterization and disposal documentation (e.g., manifests) shall be maintained and provided to the Solicitor upon request.

- 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 prompted by a failure to make the necessary logistical arrangements in advance will **not** constitute a change in the selected consultant's SOW or compensation under the Fixed-Price Agreement.

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

[9] Pennsylvania's Underground Utility Line Protection Law requires anyone who engages in any type of excavation or demolition, (see the Act for definition of excavation), to provide advance notice. The Act requires, "*Notice in the design or planning phase of every work operation that involves the movement of earth with powered equipment…not less than 10 nor more than 90 business days before final design approval, and notice in the construction phase of a work operation involving movement of earth with powered equipment or explosives…is required at least 3 business days but not more than 10 business days prior to actual excavation.*" The Pennsylvania One Call website is www.paonecall.org.

- Be responsible for keeping all site monitoring wells in good condition, with each well properly sealed and locked in between each monitoring/sampling event. The selected consultant is responsible for repairing any seals or locks that become defective during the period of the Fixed-Price Agreement at its expense. If, during the mandatory pre-bid site meeting, any well(s) is (are) identified to be in need of repair or replacement, each bidder shall provide its estimated cost to repair/replace said well(s) in its bid. NOTE: Any request for Fund reimbursement of the reasonable costs to repair or replace a well will be considered on a case-by-case basis.

Task 1 – Additional Background Research. Bidders are strongly encouraged to review the information summarized in Section 2 of this RFB and the additional site background information included in the electronic files posted on the PAUSTIF web site. While a review of the PADEP-SWRO case file has been completed (and relevant information from the file has been provided in the accompanying electronic files posted on the PAUSTIF web site), additional background research is necessary to support the site characterization. Therefore, bids for this task are to cover the following activities:

- Determine regional and local geology, hydrogeology, and hydrology;
- Evaluate the potential for contributing offsite sources of contamination (e.g., leaking UST sites);
- Investigate whether a local groundwater use ordinance exists;
- Identify potential sensitive receptors;
- Research local groundwater use and identify the nature/location of any public and private water supplies within a ½-mile radius of the site;
- Identify buried utilities at the facility and on surrounding parcels that may serve as preferential contaminant migration pathways;
- Evaluate potential ecological receptors (if any); and
- Develop a preliminary conceptual site model.

Findings from the work completed under Task 1 shall be summarized in the SCR & RACR (Task 9).

Task 2 – Professional Site Survey. Under this task, bidders shall provide a firm, fixed-price quote for completion of a survey of the subject property and appropriate surrounding features by a professional surveyor licensed in the Commonwealth of Pennsylvania. This task shall include preparation of a scaled base map of the site, including, at a minimum, property boundaries, buildings, existing UST locations, dispenser islands, canopies, utility manholes, sanitary sewer lines, storm sewer catch basins, storm water lines, water supply lines, natural gas lines, electric utility poles, and overhead electric/telephone/cable lines. Work under this task shall also include:

- Obtaining tax maps of the subject property and surrounding adjoining & adjacent properties;

- Surveying in locations and ground surface elevations for the soil borings completed under Task 4 below; and

- Surveying in the ground surface (top of surface cover) and the top-of-casing (PVC riser pipe) elevations and locations for groundwater monitoring wells completed under Task 5.

Monitoring well and soil boring locations should include northing and easting coordinates. All elevations should be relative to the North American Vertical Datum of 1988 (NAVD 88) and recorded to the nearest

0.01 foot. Results of the professional survey should be displayed on an appropriately scaled site plan to be included in the SCR & RACR (Task 9).

Task 3 – On-Property Geophysical Survey. Under this task, each bidder's firm, fixed-price quote shall include a geophysical survey encompassing the specified portion of the subject property depicted in Figure 2 (see accompanying electronic files posted on the PAUSTIF web site). Ground penetrating radar (GPR) and electromagnetic imaging surveys shall be conducted to delineate the approximate boundaries of subsurface features such as former foundations, former UST fields, and piping and utility trenches, and/or to determine whether any unknown USTs may be present. The survey results shall inform the final placement of soil boring locations that can be attempted safely under Tasks 4 and 5 below (along with the required PA One Call notification and manual borehole clearing). Features identified through the surveys shall be marked with paint on the ground surface for subsequent positioning of the final soil boring locations on a revised site plan. Results of the geophysical surveys shall be described in the SCR & RACR (Task 9). Historical land use research and geophysical testing results shall be used to present a site plan overlay in the SCR depicting current and historical land use features.

Task 4 – Soil Sampling. Under this task, bidders shall provide a firm fixed-price quote for completing 12 soil borings plus one background soil boring (see below for details on the background soil boring). Each bidder shall depict its proposed boring locations on a site map that address the following general objectives: (i) delineation of the extent and magnitude of soil contamination associated with former USTs 001, 002, 003, 004, and 005; and (ii) identification of any potential impacts to soils associated with product lines and/or dispensers. The selected consultant shall consider the possibility that final boring locations may need to be adjusted to avoid subsurface obstacles based on information gained from Tasks 1 and 3 and the utility location work. If a bidder believes that additional borings (beyond 12) should be placed elsewhere, the bidder shall identify the location(s), and provide its supporting rationale. However, all bidders shall base their bids on completing exactly 12 borings in the contaminated area and 1 background boring plus the requisite sampling and laboratory analyses.

Each of the 13 soil borings shall achieve a depth that ensures vertical delineation of unsaturated and periodically saturated soils. For costing purposes, bidders shall assume that each boring will be completed to an average depth of 15 feet below grade. Bidders should note that a substantial amount of off-site fill was reportedly placed on the western side of the property to provide more surface area for facility operations. This fill may contain rock or other material that may or may not complicate reaching the necessary depths. Responsive bidders shall specify their proposed technique for soil boring advancement and sampling at this site along with rationale.

In addition to contacting PA One Call and completing the Task 3 geophysical survey, bidders shall take appropriate measures to ensure the initial five (5) feet of each boring location is clear of utilities. Continuous soil samples shall be collected beginning immediately beneath the asphalt/concrete surface cover (if present) for description of lithologic characteristics, groundwater occurrence, and staining/odor indicative of petroleum impacts. Samples shall be screened in the field using an appropriately calibrated photoionization device (PID) and standard headspace methods. One soil sample per boring shall be submitted for laboratory analysis for PADEP's short list parameters (13 total samples). This soil sample shall be collected from the depth interval exhibiting the highest organic vapor concentration based on PID headspace screening, or, if no elevated organic vapor levels are measured along the length of a boring and no staining and/or odor are evident, samples shall be obtained from immediately above the water table surface. If the water table (i.e., saturated soil) is not encountered during the installation of the boring, the analysis shall be performed on one soil sample from the portion of the unsaturated zone with highest hydrocarbon impact potential based on the judgment of the selected consultant.

Soil samples shall be analyzed for the **post**-March 2008 (i.e., current) PADEP short list of unleaded gasoline parameters inclusive of 1,2,4- and 1,3,5-trimethylbenzene (TMB). Appropriate quality

assurance/quality control (QA/QC) samples shall also be obtained for laboratory analysis. Based on the analytical results, the dimensions and volume of remaining source materials, if any, shall be estimated.

In addition to the 12 soil borings described above, one additional boring shall be completed at a background location. One saturated or intermittently saturated soil sample shall be collected from this boring for fraction organic carbon (foc) analysis to assist with the fate-and-transport modeling effort. The sample shall also be analyzed for the current PADEP short list of unleaded gasoline parameters to verify background conditions. In addition, one Shelby tube sample shall be obtained from this boring to be analyzed by an accredited geotechnical laboratory for total porosity and soil bulk density.

All bidders shall also quote comprehensive unit prices as listed on the bid form including:

- Price per each additional 15-foot soil boring ($/boring);
- Price per each additional foot of soil boring beyond the total contract footage amount ($/foot);
- Price per each additional soil sample collection & laboratory analysis for PADEP short list parameters ($/sample);

Activities under Task 4 shall also consist of: (i) contacting the PA One Call System, Inc.; (ii) clearing each soil boring location using a hand auger;[10] (iii) sealing each boring with bentonite and asphalt surface patch after completion; and (iv) management of drilling and personal protective equipment wastes (**Check with the PADEP-SWRO for current regional requirements**)**.** Methods and results shall be detailed in the SCR & RACR to be prepared under Task 9.

Task 5 - Groundwater Monitoring Well Installation. Under this task, bidders shall provide a firm fixed-price unit cost quote for installing four (4) groundwater monitoring wells on the property[11]. Bidders shall propose well locations on a site map, while addressing the following general objectives: groundwater quality and elevation shall be evaluated at: (i) a background, presumed upgradient location; (ii) two wells in the immediate vicinity of the former tank field and current dispenser islands; and (iii) one well at the presumed down-gradient property line. The selected consultant will be able to adjust the final well locations to avoid subsurface obstacles based on information gained from Tasks 1 and 3 and the utility location work.

For the purpose of the bid, bidders shall assume an average total well depth of 25 feet below grade and that hollow-stem auger drilling methods will be sufficient to install the wells. However, since it is not known whether the wells will intercept only unconsolidated materials (or a combination of unconsolidated materials and underlying bedrock), bidders shall assume a multi-purpose drill rig capable of hollow-stem auger drilling and air rotary/hammer-rotary drilling methods will be required. Bidders shall include mobilization costs for this type of rig and necessary ancillary equipment (compressor, etc.) in the total fixed price for this task.

The monitoring wells shall intersect the water table aquifer.[12] Although well depths may vary based on actual conditions encountered at each location, the final well construction must ensure that the screened interval intersects the water table surface and accounts for seasonal groundwater fluctuations. Any well that is installed with a submerged screen will be replaced at the selected consultant's sole expense when reasonable interpretation of available and well boring data could have avoided this construction

[10] Use of vacuum excavation methods shall be permissible only if hand augering proves infeasible.
[11] Should it later be determined that additional wells are required by PADEP to complete the site characterization, this will be considered a "New Condition" under the Fixed-Price Agreement, and will require Solicitor and PAUSTIF approval of a work plan and cost estimate before beginning the work.
[12] The shallowest saturated zone.

Each well shall be constructed of 2-inch diameter Schedule 40 PVC casing and well screen (10 feet). Annulus materials shall consist of a filter-pack of silica sand extended to a height of approximately two feet above the top of the screen section overlain by a minimum three-foot thick seal of hydrated bentonite pellets. The remaining annulus shall be filled with a cement/bentonite grout mixture. Surface finishing shall consist of a flush-mounted traffic-rated manhole with a bolt-on lid set into a concrete pad. Additionally, an expandable locking cap shall be fitted to the top of the PVC riser.

Drilling and construction of the groundwater monitoring wells shall be in accordance with the PADEP Groundwater Monitoring Guidance Manual. During auger drilling, continuous split-spoon samples shall be collected for the purpose of lithologic description and noting groundwater occurrence. Additionally, soil samples from the well borings shall be screened with a PID in the field and one soil sample per well boring shall be selected for laboratory analysis as previously defined under Task 4.

Bidders shall also provide the following unit costs on the bid form:

- **Excess Hollow-stem Drilling/Well Installation Footage**. Bidders shall provide a unit cost per lineal foot ($/foot) for **excess hollow-stem drilling/well installation** (i.e., the total lineal well footage installed in excess of the 25-foot x 4 = 100-foot quantity assumed in the bid). This unit cost shall include borehole advancement using hollow-stem augers, logging and screening, well construction materials, and well installation labor in the event that additional well footage is required.
- **Substituting Air Rotary Drilling.** Bidders shall quote the differential/added cost per foot ($/foot) for **substituting air rotary drilling** for hollow stem auger drilling during the well installation (assuming total drilling footage is within the total quantity assumed – 25 feet x 4 = 100 feet).
- **Excess Air Rotary Drilling**. Bidders shall quote the cost per foot ($/foot) for excess air rotary drilling and well installation if bedrock drilling is necessary and total overburden drilling footage has exceeded 25 feet x 4 = 100 feet.

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The bidder's fixed-price cost for this task shall also account for: (i) identifying subsurface utilities and other buried features of concern (including, but not limited to, contacting PA One Call and clearing each borehole location to a minimum depth of 5 feet);[13] (ii) well development activities; and (iii) management of investigation-derived wastes (**check with the PADEP-SWRO for current regional requirements)**. Well drilling/installation and development activities along with supporting documentation (e.g., waste manifests, boring logs and construction details, etc.) shall be documented in the SCR & RACR.[14]

Task 6 – Groundwater Monitoring and Sampling and Groundwater Level Gauging. Under this task, bidders shall provide a firm fixed-price to complete two (2) groundwater monitoring and sampling events (an initial and a confirmation event) to establish groundwater quality conditions in the newly installed monitoring wells. The conduct and results of these two events shall be documented in the SCR & RACR.

The initial monitoring and sampling event shall be performed within two (2) weeks of installing and developing the new wells from the initial four-well well installation mobilization, but no sooner than one (1) week after the wells have been developed. The subsequent confirmation event shall be conducted no less than four and no more than six weeks after the initial event.

During each groundwater monitoring and sampling event, the depth to groundwater and any potential separate-phase liquid (SPH) shall be gauged in each of the new monitoring wells before purging and

[13] Use vacuum excavation methods only if hand augering proves infeasible.
[14] Should the site characterization data indicate that a deeper vertical delineation well is needed based on PADEP requirements, this will be considered a "New Condition" under the Fixed-Price Agreement, which will require Solicitor and PAUSTIF approval of a work plan and cost estimate before beginning the work.

sampling activities are initiated. Each well shall be purged and sampled utilizing standard low-flow techniques and in accordance with the PADEP Groundwater Monitoring Guidance Manual. Any well exhibiting more than a sheen of SPH shall not be purged and sampled. Bidders shall provide a unit price for a single set of sample analyses (for unleaded parameters) in the event laboratory analysis is not performed due to the presence of SPH in a well. Bidders shall manage equipment decontamination fluids and groundwater generated by the well purging and sampling activities in accordance with standard industry practices and applicable laws, regulations, guidance, and PADEP directives (**check with the PADEP-SWRO for current regional requirements**).

Groundwater samples collected during these two events shall be analyzed for the current (i.e., post-March 2008) PADEP short-list of unleaded gasoline UST parameters (including TMBs) by an accredited laboratory using appropriate analytical methods and detection levels. Appropriate QA/QC samples shall also be collected during each event and analyzed for the same parameters. In addition, field measurements and laboratory analyses for natural attenuation parameters shall be performed during the initial and confirmation events. Field parameters to be measured for each of the new wells shall consist of pH, temperature, specific conductance, dissolved oxygen, and oxidation/reduction potential (measured in-situ). Laboratory analysis of the following natural attenuation parameters shall be conducted on three wells: manganese (total and dissolved), ferrous iron, nitrate nitrogen, total phosphorus, sulfate, total organic carbon, alkalinity, and microbial plate counts (heterotrophic and gasoline degraders). Absent analytical data for the proposed wells, it is difficult to identify the three wells that shall be sampled for these natural attenuation parameters during each event, but bidders shall assume analyzing samples from one well located upgradient of the contaminant plume, one well located within the core of any potential plume, and one well located downgradient of the plume. Bidders shall also identify a per-well sampling/analytical cost should it be necessary to select more or fewer wells for natural attenuation parameters sampling.

Groundwater level measurements obtained from the new wells shall be converted to groundwater elevations for assessing groundwater flow direction and hydraulic gradient. Two additional rounds of groundwater level measurements shall be collected during the course of the site characterization activities and used to assess natural fluctuations in groundwater elevation and potential variation in groundwater flow direction over time. The additional rounds of groundwater level measurements shall be performed prior to completing the draft SCR & RACR. The two rounds shall be separated by an interval of at least four weeks.

The bidder's approach to implementing Task 6 shall clearly identify the number of sampling events, number of wells/samples per event, well purging and sampling method(s), QA/QC measures, analytes, and other key assumptions affecting the bid price.

Task 7 – Aquifer Characterization Testing. In order to establish hydraulic parameters for the shallow water table aquifer, support the contaminant fate-and-transport modeling, and assist with developing a conceptual site model, bidders shall propose completing single-well aquifer characterization tests (rising and falling head slug tests) within the four (4) newly installed wells. The slug tests will be performed according to accepted industry standards and the data will be reduced/evaluated using appropriate methods (e.g., Bouwer and Rice slug test solution for determining the hydraulic conductivity of unconfined aquifers with completely or partially penetrating wells [1976]).

Bidders shall provide a firm fixed-price cost to conduct the slug tests and reduce/evaluate the data along with a detailed description of the proposed slug test procedures and the planned techniques for reducing the data. Documentation of the slug testing methods, results, and conclusions shall be provided in the SCR & RACR (Task 9) and the slug testing results shall be utilized in the fate-and-transport modeling described under Task 9.

Task 8 – Soil Vapor Sampling. Under this task, bidders shall provide a fixed-price cost for conducting a soil vapor study on the property. This task shall only be performed if warranted by the soil and groundwater analytical data (Tasks 4 and 6) or as dictated by other factors such as the location/depth of utility trenching. Should soil and groundwater results indicate that a soil vapor assessment is not necessary, the fixed-price bid for this task will be deducted from the Total Fixed Price referenced in the Fixed-Price Agreement. If the soil vapor study is implemented, PADEP concurrence on the need for and scope of the study shall be secured by submitting a Soil Vapor Sampling Plan for PADEP review and approval.

This task shall be conducted in a manner consistent with the requirements, guidance, and decision matrices in the *Land Recycling Program Technical Guidance Manual – Section IV.A.4, Vapor Intrusion into Buildings from Soil and Groundwater*. For the purpose of this bid, bidders shall assume installing two (2) soil vapor monitoring points and completing two sampling/analysis events separated by a period of at least four weeks. The selected consultant shall position the soil vapor sampling points appropriately based on the information gained in the conduct of Tasks 1 through 4 and the initial phase of groundwater monitoring. PADEP has indicated that soil vapor monitoring is not necessary within any identified contaminant source areas. Bidders shall identify unit prices per monitoring point advancement/installation and sampling should more or fewer soil vapor monitoring points be needed based on actual soil and groundwater results.

Bidders are to use 6-liter Summa canisters for the soil gas samples with sampling rates not to exceed 200 ml/min. Bidders shall base their bids on the required canister size, sample flow rates below 200 ml/min and other PADEP guidance on soil gas sampling methodology. Soil vapor samples shall be submitted to an accredited laboratory for analysis of unleaded gasoline short-list constituents using appropriate analytical methods and detection levels. Appropriate QA/QC samples shall also be collected and analyzed for the same constituents. The methods and results for the soil vapor study, if conducted, shall be described the SCR & RACR along with any recommendations regarding the necessity for an expanded vapor intrusion assessment inclusive of indoor air quality sampling, as appropriate.

Task 9 – Prepare a Draft and Final SCR with Risk Assessment Combined with RACR. Upon completing the tasks described above, the selected consultant shall prepare a combined SCR & RACR in draft form for review and comment by the Solicitor and PAUSTIF. This combined SCR & RACR shall contain all necessary information required under 25 PA Code §§245.309, 245.310, 245.311 and 245.313. Each bidder's project schedule shall provide two weeks for Solicitor and PAUSTIF review of the draft document. The final SCR & RACR shall address comments received from the Solicitor and PAUSTIF on the draft report before it is submitted to the PADEP for its review.

The SCR shall describe the methods and findings for the work performed under Tasks 1 through 8 and shall incorporate any relevant findings from the previous site documentation along with the necessary figures, tabulated data, and appendices.[15] The document shall be signed and sealed by a Professional Geologist and a Professional Engineer registered in the Commonwealth of Pennsylvania.

Under this task, bidders shall also develop a quantitative contaminant fate-and-transport model inclusive of all dissolved-phase constituents exceeding the PADEP Act 2 SHS-MSCs (used aquifer/residential). Although subsurface stratigraphic and hydrogeologic relationships are currently unknown or poorly defined, bidders shall assume use of the PADEP's New Quick Domenico (QD) model will be

[15] "New conditions" may prompt adjustments to the scopes of work specified herein for any of the preceding eight tasks or additional site characterization may prove necessary. Should this occur, the selected consultant should assume that: (a) the schedule for completing Task 9 will need to be adjusted (assuming the PADEP grants the necessary extensions), and (b) any added cost involved in documenting the additional activities in the SCR & RACR shall be incorporated into the costs for the adjusted/added scope of work under the specific task.

appropriate.[16] Bidders shall provide a firm fixed-price cost for developing a calibrated QD contaminant fate-and-transport model utilizing data generated from the site characterization tasks previously defined. Documentation shall consist of model input/output along with a thorough explanation of model construction, justification for all input parameters, and a detailed discussion of the modeling results, relevant model predictions, and conclusions regarding plume stability. The limited amount of environmental data currently available for the site suggest that surface water modeling applications such as SWLOAD5B and PENTOXSD should not be necessary.[17]

Isoconcentration maps shall show the configuration and concentrations of the contaminant plumes and a characterization of the plume stability. The model output shall be compared to actual field data to demonstrate calibration.

This task shall also include development of a complete conceptual site model (CSM) for the site and vicinity based on an evaluation of historical site characterization data and the results from the site characterization tasks outlined above. Information considered in developing the CSM shall consist of, but not necessarily be limited to, stratigraphic and lithologic characteristics/relationships, groundwater elevations and flow direction, hydrogeologic controls on groundwater movement and contaminant transport, intrinsic aquifer parameters, and the distribution of hydrocarbon contaminants in soil and groundwater. The conceptual hydrogeologic/contaminant model shall be presented in the SCR.

The SCR shall also identify potentially complete on- and off-site exposure pathways associated with known site contamination. These pathways shall be identified with the understanding that Solicitor is willing to have the following restrictions potentially placed on his property:

1. No residential land use;
2. No potable water wells;
3. Vapor barrier on future building construction; and
4. Soil management plan for future digging on excessively contaminated portions of property.

Bidders shall also assume that the PADEP will provide groundwater use covenant waivers for roadways adjoining the property. Additionally, bidders shall assume that post-remedial care monitoring (PRCM) is an option to address future potentially complete pathways for off-site properties.

Should potentially complete pathways still exist despite the above, the SCR shall use appropriate and standardized risk assessment methodologies and reporting consistent with 250.409 to calculate current and future potential risks associated with those potentially complete pathways. If the exposure evaluation and risk assessment determines that the institutional controls identified above (if necessary to implement) are sufficient to render the site contamination safe under current and future site use conditions (restricted as necessary), the SCR shall be accompanied by a RACR that includes/meets the requirements of 250.411 (c) – (f). The SCR & RACR shall include, as needed, the deed restriction language, petition to PADEP for roadway EC waiver, and post-remedial care plan (PRCP).[18]

[16] Should subsurface data gathered during the site characterization indicate otherwise, the selected consultant should consider an alternative modeling application (with PADEP consultation) subject to the "New Conditions" section of the Fixed-Price Agreement.

[17] Should the site characterization data indicate determining contaminant loading to surface water and resulting concentrations is required, the conduct of such modeling would be subject to the "New Conditions" section of the Fixed-Price Agreement.

[18] Should it be determined that remedial action will likely be required for elimination of all pathways during production of the SCR, then a combined SCR and Remedial Action Plan (RAP) will be submitted in lieu of submitting a combined SCR & RACR as a "New Condition" under the fixed-price Agreement.

4. TYPE OF CONTRACT/PRICING

The Solicitor wishes to execute a mutually agreeable, firm, Fixed-Price Agreement for the work addressed by Task 1 through 9. The ceiling for this Fixed-Price Agreement is increased or decreased only through applying the applicable and appropriate unit prices consistent with the selected consultant's bid response and as incorporated into the Fixed-Price Agreement. A sample Fixed-Price Agreement is included as Attachment 1.[19] As noted earlier, **a bidder's response to this RFB means it has accepted all the contractual terms unless explicitly stated to the contrary in the bid response.** Therefore, any requested changes to the Fixed-Price Agreement shall be explicitly specified in submitted bids. Please note that these changes will need to be reviewed and agreed upon by both the Solicitor and PAUSTIF.

Each bid shall clearly identify the basis of all unit prices within the bid (e.g., rates for labor, other direct costs, and equipment, as well as proposed mark-ups on other direct costs and subcontracted services for Tasks 1 through 9). Task and subtask prices shall be entered into the Standardized Bid Form that is included as Table 1 (provided as Attachment 1 with the accompanying electronic files) of this RFB. As stated above, all fixed-prices and unit prices shall include all associated direct and indirect costs (etc.), including those costs that the bidder may regard as "variable." **Such variable costs will not be handled outside of the total fixed price quoted for the SOW**. Finally, please note that referencing extremely narrow or unreasonable assumptions, special conditions, and exemptions may make the bid response too difficult to evaluate and may result in the bid response being deemed "unresponsive."

Payment Milestones. Table 2 below illustrates the approximate timing expected for completion of respective milestone tasks and milestone payouts. Actual milestone payments will occur only after successful and documented completion of the work defined for each milestone. Payment milestones under the Fixed-Price Agreement shall be broken out as follows:

- Milestone A – Additional Background Research (Task 1).
- Milestone B – Professional Site Survey (Task 2).
- Milestone C – On-Property Geophysical Survey (Task 3).
- Milestone D – Soil Sampling (Task 4).
- Milestone E – Groundwater Monitoring Well Installation (Task 5).
- Milestone F – Groundwater Monitoring and Sampling and Groundwater Level Gauging (Task 6). Note that the schedule assumes four (4) monthly Milestone F payments (F1 and F2 for the groundwater monitoring and sampling events, and F3 and F4 for the additional groundwater level gauging events.
- Milestone G – Aquifer Characterization Testing (Task 7).
- Milestone H – Soil Vapor Study (Task 8). Note that the schedule assumes two (2) monthly Milestone H payments (H1 and H2).
- Milestone I – Prepare a Draft and Final SCR with Risk Assessment Combined with a RACR (Task 9).
- Unit Cost J1 – comprehensive unit cost per additional lineal foot of soil boring over and above contract footage amount (advancement/logging/screening/documentation)

[19] The selected consultant will be provided an electronic copy (template) of the Fixed-Price Agreement in Word format to allow agreement-specific information to be added.

- Unit Cost J2 – comprehensive unit cost per additional 15-foot soil boring (advancement/logging/screening/sampling/documentation)
- Unit Cost J3 – unit cost per additional soil laboratory analysis, PADEP shortlist for unleaded gasoline
- Unit Cost J4 – unit cost per lineal foot for excess hollow-stem auger drilling, split-spoon sampling, and well installation beyond the 100-ft well installation footage assumed under Task 5.
- Unit Cost J5 – differential unit cost for substituting air rotary drilling for hollow-stem augering during the well installation (bedrock drilling is required but total cumulative footage of hollow-stem drilling has not yet reached 100 feet).
- Unit Cost J6 – comprehensive unit cost per foot ($/foot) for excess air rotary drilling and well installation if bedrock drilling is necessary and total drilling footage has exceeded the 25 feet x 4 = 100 feet assumed under Task 5
- Unit Cost J7 – per sample unit cost for sample collection and analysis of natural attenuation parameters, including manganese (total and dissolved), ferrous iron, nitrate nitrogen, total phosphorus, sulfate, total organic carbon, alkalinity, and microbial plate counts (heterotrophic and gasoline degraders)
- Unit Cost J8 – unit price per laboratory analysis of aqueous samples for the post-March 2008 PADEP short list of unleaded gasoline parameters
- Unit Cost J9 – comprehensive unit price per additional soil vapor monitoring point advancement/installation.
- Unit Cost J10 – comprehensive unit cost for collection and analysis of two soil gas samples from an additional soil gas probe (J9) for VI assessment. Each set/round shall be separated by at least 4 weeks.

TABLE 2 – SAMPLE MILESTONE COMPLETION/PAYMENT SCHEDULE

Estimated Milestone Timing Month After Contract Award	**SOW Activities Anticipated/Completed for that Month**	**Milestone**[1]
1	Additional Background Research; Site Survey, Geophysical Survey	A, B, C
2	Soil Sampling	D
3	Groundwater Monitoring Well Installation; Groundwater Monitoring and Sampling; Aquifer Characterization Testing	E, F1, G
4	Groundwater Monitoring and Sampling; Soil Gas Sampling	F2, H1
5	Groundwater Level Monitoring Only; Soil Gas Sampling	F3, F4, H2
6	Prepare a Draft and Final SCR with Risk Assessment Combined with a RACR.[2] (includes contaminant fate-and-transport modeling, conceptual site model, and risk assessment)	I

1. Each bidder should modify this sample Milestone Completion/Payment Schedule to reflect its proposed task schedule, as long as the proposed schedule meets the deliverable deadlines specified in Section 3 of this RFB.
2. The SCR & RACR must be submitted in final form to the PADEP within six (6) months of contract award.

Please note that the selected consultant's work may be subject to ongoing review by the PAUSTIF or its representatives to assess whether the proposed and completed work and the associated costs are reasonable, necessary, and appropriate. In order to facilitate review and reimbursement of submitted invoices by PAUSTIF, project costs shall be invoiced following the task structure specified in the bid response submitted by the selected consultant. Tracking incremental and cumulative costs by task will also be required to facilitate invoice review.

Unless otherwise noted by the bidder, each bid response received is required to be good for a period of up to 120 days after its receipt. The quoted unit costs will be good for the duration of the period of performance cited in the Fixed-Price Agreement.

5. ADDITIONAL BID PACKAGE REQUIREMENTS

Each submitted bid response must include the following:

- A reasonable demonstration that the bidder: (i) understands the objectives of the project, (ii) offers a reasonable approach for achieving those objectives efficiently, and (iii) has reviewed the existing site information provided in or attached to this RFB Solicitation Package.
- Provide an answer to the following questions regarding the bidder's qualifications and experience:
  - How many Chapter 245/250 sites has your company closed (i.e., obtained a Release of Liability under Act 2) in Pennsylvania?
  - How many Chapter 245/250 sites has your company or the proposed PA-licensed Professional Geologist (P.G.) and Professional Engineer (P.E.) closed (i.e., obtained a Release of Liability from the PADEP) under either the SHS and/or the Site Specific Standard? [*NOTE: The Solicitor requires the work described herein to be completed under the responsible care and directly supervised by a P.G. and P.E. consistent with applicable regulations and licensing standards.*]
  - Whether there were or were not circumstances consistent with the cancellation provision of a signed contractual agreement, and has your firm ever terminated work under a fixed-price or pay-for-performance contract before attaining all of the project objectives and milestones? If yes, please list and explain the circumstances of each such occurrence.
- A complete firm fixed-price cost bid for Tasks 1 through 9 by completing the bid cost tabulation spreadsheet provided in Attachment 1 (included among the accompanying electronic files) following the SOW task structure specified herein.
- A description and discussion of all level-of-effort and costing assumptions.
- Indicate whether the bidder accepts the proposed contract/terms and conditions (see Attachment 2) or has provided a list of requested changes to the Fixed-Price Agreement.
- Provide a statement of applicable/pertinent qualifications, including the qualifications of any proposed subcontractors (relevant project descriptions are encouraged).
- Identify the proposed project team and provide resumes for the key project staff, including the proposed Professional Geologist and Professional Engineer of Record who

will be responsible for endorsing work products prepared for PADEP review and approval.

- Provide a task-by-task description of the proposed technical approach. **If this task-by-task description fails to address a specific requirement of this RFB, it will be assumed that the bidder has accepted all the requirements specified herein by task.**
- Identify and sufficiently describe subcontractor involvement by task (if any).
- Provide a detailed schedule complete with specific by-month dates for completing the proposed SOW, inclusive of reasonable assumptions regarding the timing and duration of client, PAUSTIF, and PADEP reviews needed to complete the SOW. Details on such items as proposed meetings and work product submittals shall also be reflected in the schedule of activities.
- Describe your approach to working with the PADEP from project inception to site closure. Describe how the PADEP would be involved proactively in the resolution of technical issues and how the PADEP case team will be kept informed as to project status.
- Describe how the Solicitor and ICF/PAUSTIF will be kept informed as to project progress and developments and how the Solicitor will be informed of, and participate in, evaluating potential alternatives/tradeoffs with regard to the SOW addressed by Tasks 1 through 9.

6. MANDATORY PRE-BID SITE VISIT

ON APRIL 23, 2012, THE TECHNICAL CONTACT WILL CONDUCT A ***MANDATORY PRE-BID SITE TOUR*** for a limited number of participants per firm at this property starting at 10AM. Please inform the Technical Contact at least three (3) business days in advance of this date as to the number of participants attending from your firm. Again, **any firm that does not attend this mandatory pre-bid site tour will not be eligible to submit a bid response.**

A CONFIRMATION OF YOUR INTENT TO ATTEND THIS PRE-BID SITE MEETING IS REQUESTED and shall be provided to the Technical Contact via e-mail at least three business days in advance of this date with the subject header "Belany's Mini Mart, Claim #2008-0171, Site Meeting Attendance Confirmation." This e-mail is to indicate the number and names of the participants (no more than two) attending from your firm. Each attending firm will be asked to enter the contact information for the individual at the firm who is to receive all subsequent RFB-related communications to help ensure the receipt of this information (e.g., responses to bidder questions).

Questions will be entertained as part of the pre-bid site tour and every attempt will be made to answer questions at that time. However, all questions and the responses provided during the site visit will also be distributed in writing to the attendees after the tour, as will the answers to any non-proprietary questions submitted in writing after the pre-bid site tour has been concluded. Consequently, bidders are strongly encouraged to ask clarifying questions sufficient to minimize the number of assumptions, special conditions, and exemptions referenced in the submitted bid.[20] Questions will be accepted up to seven (7) days before the bid response due date. Again, please note that referencing extremely narrow or unreasonable assumptions, special conditions, and exemptions in a bid response may make the bid response too difficult to evaluate and may result in the bid response being deemed "unresponsive."

[20] The list of assumptions, special conditions, or exemptions will be discussed with the Solicitor. As part of that discussion, the PAUSTIF may advise the Solicitor that some or all of the assumptions, special conditions, or exemptions that are likely to generate change orders may be the financial responsibility of the Solicitor.

ATTACHMENT 1

Standardized Bid Format

ATTACHMENT 2

Fixed-Price Agreement

(This agreement has been provided in an electronic form that does not permit modifying the agreement. An electronic version of the agreement that will allow for tracking modifications will be provided to the selected consultant at the appropriate time.)