

COMPETITIVE FIXED-PRICE BID SOLICITATION

SUPPLEMENTAL SITE CHARACTERIZATION, INTERIM REMEDIAL MEASURES, EXPOSURE EVALUATION / RISK ASSESSMENT, COMBINED SCRA / RRAP / RACR DOCUMENT PREPARATION, SITE RESTORATION, AND POST REMEDIAL CARE

**HALLER'S SPORTING GOODS
632 ELM STREET
TIONESTA BOROUGH, FOREST COUNTY, PENNSYLVANIA 16353**

PADEP FACILITY ID #27-14099 PAUSTIF CLAIM #2005-0045(S)

July 27, 2012

This Request for Bid (RFB) Solicitation has been issued by the Pennsylvania Underground Storage Tank Indemnification Fund (PAUSTIF or "Fund") on behalf of the Claimant, Mr. Menahem Thalkar, owner of Haller's Sporting, Inc. dba Haller's Sporting Goods ("Haller's facility" or "Haller's property"), who hereafter is referred to as "Solicitor". The Haller's facility is located at 632 Elm Street in the Borough of Tionesta, Forest County, Pennsylvania and currently supports active retail gasoline sales, a convenience / variety store and a restaurant. Figure 1 depicts the location of the Haller's facility on a 7.5-minute USGS topographic quadrangle and Figure 2 presents a current site plan. In general, this RFB solicits a "to-closure" quote for a scope of work (SOW) that involves activities leading up to, and including, a successful demonstration of attaining the Pennsylvania Department of Environmental Protection (PADEP) Site Specific Standards (SSS), securing a PADEP Relief of Liability (ROL) followed by properly closing site monitoring wells, and post remedial care.

More specifically, the Solicitor has elected to pursue site environmental closure under Pennsylvania's storage tank rules and regulations based on attaining the PADEP Act 2 SSS via pathway elimination and/or site-specific risk based standards, as appropriate, for soil and groundwater.¹ The successful bidder will be expected to achieve these site closure objectives and secure a ROL under PADEP Act 2 regulations.

The Solicitor requests a written approach, schedule and firm fixed-price bid for implementing the RFB SOW (Tasks 1 through 9) and for meeting the Act 2 closure objective. All work shall be performed in accordance with applicable PADEP rules, regulations, directives, and guidance. Tasks 1 through 9 will be embodied in a Fixed-Price Agreement (see Attachment 2) to be executed by the Solicitor and the selected consultant. Although not a party to the Agreement, the Fund will reimburse 100 percent of the reasonable, necessary and appropriate costs, referenced in the Milestone Payment Schedule specified in Section 4 below and as incorporated into the signed Fixed-Price Agreement, not to exceed the limit of eligible funding under PAUSTIF Claim #2005-0045(S). The RFB tasks are listed below and are described in Section 3.

¹ Attainment of the SHS for on-property soil appears to have been adequately demonstrated through previous sampling efforts conducted on the Haller's property (see compilation of soil attainment sampling data in Attachment 1). However, additional off-property biased soil sampling to be completed under this RFB (Task 2) is expected to find off-property soils exceeding SHS thereby necessitating soil attainment demonstration via SSS. Regarding groundwater, site closure will be pursued under the SSS for all dissolved compounds analyzed. Note that the Solicitor is amenable to placing an environmental covenant restricting groundwater use and imposing other necessary requirements on his property. The PADEP is expected to grant environmental covenant waivers for groundwater impacts beneath the adjacent roadway and the downgradient cemetery properties provided that applicable UECA conditions are satisfied.

- Task 1. Quarterly Groundwater Monitoring, Sampling and Reporting;
- Task 2. Off-Property Soil Boring Advancement, Soil Sampling and Analyses;
- Task 3. Supplemental Soil Gas Study;
- Task 4. Discretionary Supplemental Site Characterization and Pilot Testing;
- Task 5. Develop and Implement a Plan for Off-Property Interim Remedial Measures;
- Task 6. Exposure Pathway Evaluation and Quantitative Risk Assessment;
- Task 7. Prepare and Submit a Draft and Final Combined SCRA / RRAP / RACR;
- Task 8. Site Restoration; and
- Task 9. Post-Remedial Care Monitoring.

Please note that a bidder's response to this RFB Solicitation Package means **bidder has accepted all the contractual terms and SOW requirements** (for example, but not limited to, any report submittal deadlines) **unless explicitly stated to the contrary in the bid response**. However, each bidder is still expected to describe its approach to completing the SOW in full and in detail.

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). 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 #2005-0045 (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 Friday, August 31, 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 Fund's third party administrator, ICF's 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. The Fund's third party administrator, 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.**

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 web site (see <http://www.insurance.pa.gov>). Among other factors, the bid evaluation will consider total bid cost, schedule, discussion of technical approach, qualifications, and contract terms and conditions. Technical approach and total bid costs will be the most heavily weighted criteria in the evaluation. Key technical considerations for the bid evaluation are expected to include, but are not necessarily limited to, indications of how well the bidder has:

- Reviewed and understood the historical site documentation.
- Considered, developed and proposed a reasonable, necessary and appropriate plan for additional interim remedial measures to stabilize dissolved contaminant levels in the area of monitoring well MW-14 on the adjacent cemetery property to support the SSS closure for groundwater and that the plan is sensitive to the cemetery's concerns.

- Described its understanding of site-specific potentially complete exposure pathways, and the process, methods, and personnel it will use to complete the exposure pathway evaluation / quantitative risk assessment.
- Instilled confidence that it will be able to demonstrate attainment of a combined SHS / SSS cleanup and obtaining a PADEP ROL for this site.
- Addressed all requirements of Tasks 1 through 9, including the requirement to prepare, submit and gain PADEP approval of a combined SCRA / RRAP / RACR.
- Designed a project approach and schedule that continually keeps the project goal in mind throughout.

While the Technical Contact will assist ICF, PAUSTIF, and the Solicitor in evaluating the bid responses, it is up to the Solicitor to select his consultant from those bid responses deemed acceptable to PAUSTIF as reasonable, necessary, and appropriate. Bidders will be informed of the Solicitor's consultant selection via e-mail within approximately six (6) weeks after receiving the bid responses.

1. ICF, SOLICITOR, AND TECHNICAL CONTACT INFORMATION

<u>ICF International</u>	<u>Solicitor</u>	<u>Technical Contact</u>
Mr. Jerry Hawk ICF International 4000 Vine Street Middletown, PA 17057	Mr. Menahem Thalkar Haller's Sporting Goods 632 Elm Street Tionesta, PA 16353	Mr. Robert D. Breakwell, P.G. Excalibur Group, LLC 1193 State Road Monessen, PA 15062 rbreakwell@excaliburgrp LLC.com

Please note that there is a single point of contact regarding this RFB Solicitation. All questions regarding this RFB Solicitation and the site conditions must be directed **in written form only** to the Technical Contact and must be received no later than five (5) calendar days prior to the due date for the bid response. To help ensure that all bidders are basing their bids on the same information, bidders must neither contact nor discuss this RFB Solicitation with the Solicitor, PADEP,² PAUSTIF, or ICF unless approved by the Technical Contact. This RFB Solicitation may be discussed with subcontractors and vendors to the extent required for preparing the bid response.

Please note that unless a question is demonstrated to be proprietary in nature, all submitted questions and responses, both during and after the pre-bid site visit, will be shared with all bidders on a non-attributable basis. A bidder shall specify any questions it regards as proprietary upon submitting 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

General Site Features and Site History

² If a bidder has specific questions it wishes to discuss with the PADEP, please provide these questions to the Technical Contact who will forward them to the PADEP. However, the PADEP may elect not to reply to any questions it receives.

The Haller's facility is located at 632 Elm Street (SR 62) in the Borough of Tionesta, Forest County, Pennsylvania (Figure 1) and currently supports active gasoline storage and retail sales, a convenience / variety store and a Subway® restaurant. Existing features on this approximate one-acre parcel consist of a single-story store and restaurant building located in the central portion of the property, and a UST field and canopy-covered dispenser island with two product dispensers located near the northwest property corner. The UST field contains one 10,000-gallon and one 4,000-gallon double-walled steel unleaded gasoline tanks positioned within a common cavity. These USTs were installed in March 2005. The traffic areas of the property to the north, west and south of the store / restaurant building are covered with concrete and the additional parking area east of the building is covered with gravel. Ten groundwater monitoring wells (MW-1 through MW-6, MW-7R, MW-8, MW-9, and MW-10), six soil vapor monitoring points (VP-1 through VP-6), and four soil vapor extraction points (SVP-1 through SVP-4) exist on the property and were installed during several phases of site characterization and remediation work beginning in May 2006. Also during that work, eleven groundwater monitoring wells (MW-12 through MW-22), eleven bionutrient injection / remedial assessment wells (MW-AA through MW-KK), and six soil vapor monitoring points (VP-7 through VP-12) were completed on the downgradient Riverside Cemetery property. Key on-and off-property features are depicted in Figure 2.

The property is serviced by sanitary sewer, natural gas and public water as are the other residential and commercial properties in the vicinity of the Haller's facility.³ These utilities are buried along Elm Street at the facility's western property boundary. The on-property locations of the subsurface laterals that connect these utilities to the store / restaurant building are not known. Additionally, overhead utilities including telephone enter the property near the northwest and southwest property corners and along the southern property boundary. A storm sewer catch basin is present immediately beyond the southwest corner of the property from which a storm sewer line extends to the south along Elm Street and then to the west beneath the street. The locations of buried and overhead utilities are depicted in Figure 2.

In general, the area surrounding the Haller's facility is moderately developed and includes both residential and commercial properties. Parcels contiguous to the Haller's facility consist of residential properties to the north and south, the Riverside Cemetery to the west across Elm Street, and vacant land to the east.

Sanborn Fire Insurance (Sanborn) maps indicate that the Haller's property most likely supported gasoline storage and sales beginning sometime prior to January 1930. Specifically, the January 1930 Sanborn map depicts three gasoline tanks ("GT" designation) at the western side of what is currently the store / restaurant building with two additional tanks possibly located at the eastern side of the building.⁴ Additional information regarding site history prior to 1982 when the Solicitor purchased the property is unavailable except that the property supported gasoline storage and retail sales at the time of purchase when two 4,000-gallon USTs were already in operation.

On March 22, 2005, the Solicitor retained an excavation contractor to remove the two 4,000-gallon single-wall steel gasoline USTs, one dispenser island and associated product piping. During the removal of these UST systems, "obvious localized" impacts to soil and groundwater were noted. On March 23, 2005, the former UST systems were replaced with one 10,000-gallon and one 4,000-gallon cathodically-protected double-walled steel gasoline USTs, apparently within the same tank cavity located near the northwest property corner. A Notification of Reportable Release form was submitted to the PADEP on March 24, 2005.

³ Note, however, that some residential properties located within the Tionesta Borough limits continue to utilize private potable drinking water wells.

⁴ One unregistered UST was encountered near well MW-8 during source soil excavation work in the southern portion of the Haller's property in November 2009 that may have represented one of these earlier tanks. The UST was not removed.

During removal of the UST systems in March 2005, the excavation contractor evacuated water that accumulated in the tank cavity and approximately 833.1 tons of impacted soil was excavated and disposed off-property. Analytical results for the post-excavation water samples collected from the tank cavity indicated that benzene was detected at a concentration of 14 micrograms per liter (ug/l) which slightly exceeded the PADEP residential SHS MSC of 5 ug/l. Analytical results for all post-excavation soil samples were below the applicable SHS MSCs indicating that impacted soil was adequately removed. The excavation contractor submitted a UST Closure Report to the PADEP on May 2, 2005.⁵

In May 2006, the Solicitor retained the services of the former consultant of record, Onesky Engineering, Inc. (Onesky), to develop and implement plans for site characterization, interim remedial measures, remedial feasibility pilot testing and remedial action. Onesky initiated site characterization activities in late May 2006 that primarily included several rounds of soil sampling and analyses (organic, inorganic and geotechnical); the installation of numerous on-and off-property groundwater monitoring wells; on-and off-property soil vapor studies; numerous rounds of quarterly groundwater sampling and analyses; aquifer characterization testing; contaminant fate and transport modeling; a contaminant migration / exposure pathway assessment and ecological screening. Interim remedial actions completed by Onesky included significant additional soil excavation in the southern portion of the Haller's property, periodic dual-phase extraction (DPE) treatments on select on-and off-property wells and vacuum extraction within the impacted backfill materials of the utilities trench extending along the eastern side of Elm Street. The site remedy as proposed by Onesky in a PADEP-approved RAP generally consisted of a series of bionutrient injections in conjunction with periodic spot DPE treatments in select impacted wells. The site characterization work, interim remedial actions and site remedy were documented in numerous reports produced by Onesky which included the following:

- Site Characterization Report (SCR), October 2006. The PADEP verbally **disapproved** this report on January 8, 2007 citing the need for a vapor intrusion assessment and additional groundwater characterization.
- Supplemental SCR (SSCR) / Remedial Action Plan (RAP), January 2008 (DPE site remedy). The PADEP **disapproved** this report in a letter dated April 2, 2008 citing contaminant delineation, vapor intrusion, ecological risk assessment and environmental covenant deficiencies.
- Revised SSCR (rSSCR), March 2009. The PADEP **disapproved** this report in a letter dated June 29, 2009 citing deficiencies related to the human health and ecological risk assessment portions of the report. Also note that on July 15, 2009, the PADEP issued a letter to Onesky indicating the need to reevaluate the proposed remedial standard selection of SSS on-property and SHS off-property.
- Second rSSCR, October 2009. The PADEP *approved* this report with modifications in a letter dated June 2, 2010.
- Revised RAP (RRAP), April 2010 (bioremediation site remedy). The PADEP *approved* this report with modifications in a letter dated June 2, 2010.
- RRAP Addendum, August 2010. This report addressed the requested modifications outlined in the PADEP's June 2, 2010 RRAP approval letter. In general, the PADEP requests included: i) investigation of a potential new release (none was confirmed); ii) identification of key monitoring and compliance wells and updated locations for injection and extraction wells; iii) clarification for the design of the oxygen dispersion portion of the bioremediation plan; and iv) the possible need

⁵ Aside from this UST field gasoline release near the northwest corner of the property, soil impacts in the southern portion of the Haller's property were most likely the result of prior undocumented petroleum releases from older unregistered USTs.

to submit PAG 5 National Pollutant Discharge Elimination System permit application for the spot DPE treatments.

- In addition to the above reports, several quarterly Remedial Action Progress Reports (RAPR) were prepared by Onesky and submitted to the PADEP.

A brief summary of key information from these reports is provided in the following sections. Bidders are referred to the documents listed in Attachment 1 (and which are posted on the PAUSTIF website) for additional information.

Overview of Site Geology and Hydrogeology

The site overburden reportedly consists primarily of silty to sandy clay deposits with some gravel derived from a combination of alluvial and colluvial processes. Bedrock was not encountered within any of the environmental borings completed by Onesky and the approximate depth to bedrock beneath the site is unknown. Bedrock in the area reportedly consists of the Devonian Age Corry Sandstone through Riceville Formation, undivided, and primarily consists of sandstone, siltstone and shale.

Overall, the depth to groundwater generally increases away from the Haller's property toward the Allegheny River located about 550 to 600 feet west of the property. Generally, groundwater is encountered at an average depth of about 7 feet below grade on the Haller's property and about 12 feet below grade on the cemetery property. Groundwater movement within the shallow water table aquifer is toward the west-northwest in the direction of the river with a horizontal hydraulic gradient generally around 0.05 ft/ft to 0.09 ft/ft. Onesky estimated the average overburden hydraulic conductivity to be 5.76 ft/day (based on slug tests).

Soil Quality

Four soil sampling events for characterization and attainment purposes⁶ have been completed on the Haller's property. These events included the following:

- In March 2005, following removal of the UST systems and subsequent excavation of impacted soil from the tank cavity, nine post-excavation confirmatory soil samples were collected and analyzed. As mentioned earlier, analytical results for all samples were below the residential SHS MSCs (rSHS) indicating that the soil excavation was effective at removing source material in this area.
- In late February 2009, twelve soil borings (SB-1 through SB-12) were advanced and sampled in the UST field and dispenser island area at the request of the PADEP to verify results from the March 2005 confirmation soil sampling. Also at that time, two additional borings (SB-13 and SB-14) were completed near monitoring well MW-7 (abandoned) to assess residual source soil in the southern portion of the Haller's facility prompted by elevated dissolved impacts in that well. Unleaded gasoline impacts exceeding the rSHS were identified in only one unsaturated soil sample collected from boring SB-14 (benzene at 1,600 ug/kg). Soil samples in the zone of permanent saturation collected from borings SB-13 and SB-14 also exceeded the rSHS for benzene, toluene, ethylbenzene, xylenes and naphthalene (SB-13 only). These soil impacts were successfully removed through excavation efforts later completed in November 2009 as confirmed by attainment demonstration sampling.

⁶ In addition to the analyses of unleaded gasoline parameters, other soil samples have historically been analyzed for inorganic parameters to evaluate the feasibility of an ISCO and/or bioremediation site remedy and geotechnical / organic carbon analyses were completed to support contaminant fate and transport modeling. These analytical data are provided in the October 2009 second rSSCR and April 2010 RRAP.

- On September 21 and 22, 2009, soil samples were collected from eleven soil borings (SB-15 through SB-18 and SB-20 through SB-26) and analyzed to determine the extent and magnitude of impacted soil in the southern portion of the Haller's property and to estimate the volume of impacted soil potentially requiring excavation. The only constituents exceeding the rSHS in unsaturated soil were benzene and toluene identified in the sample from SB-18 (boring nearest former well MW-7) at concentrations of 1,500 and 190,000 ug/kg, respectively. In addition, the soil sample from the zone of permanent saturation collected from boring SB-21, also in the area of former well MW-7, contained benzene at a concentration exceeding the rSHS. These impacts were also successfully excavated in November 2009 as confirmed by attainment demonstration sampling.
- In November 2009, following interim remedial soil excavation activities conducted in the southern part of the Haller's property, twelve post-excavation confirmation soil samples (SA-1 through SA-12) were collected via systematic random sampling methods and analyzed. Only benzene (2,500 ug/kg) and toluene (190,000 ug/kg) in soil sample SA-2 exceeded the rSHS.⁷ Therefore, via the 75% / 10x rule, it appears a demonstration of **attainment of the soil SHS can be made** for the excavation area.

While soil impacts appear to have been adequately characterized and remediated on the Haller's property, it is reasonable to expect there may be some residual off-property smear zone impacts (e.g., along Elm Street and where the dissolved plume core is located within ~10 feet of grade on the cemetery property). Since historical site investigation work has not included laboratory analysis of off-property soil samples, this RFB includes limited off-property biased soil sampling for risk assessment purposes (Task 2). If the biased soil samples collected above the zone of permanent saturation in these off-property areas under Task 2 exceed SHS, these residual off-property soil impacts will need to be accounted for in the site-specific risk assessment (Task 6).

Groundwater Quality

Groundwater quality is currently monitored by a network of ten on-property wells (MW-1 through MW-6, MW-7R, and MW-8 through MW-10), eleven off-property wells (MW-12 through MW-22), and seven off-property remedial assessment wells (MW-AA, -BB, -CC, -DD, -HH, -II and -JJ). Off-property remedial assessment wells MW-EE, -FF, -GG and -KK have been gauged but never sampled.⁸ Boring logs and well construction details are contained in the reports provided in Attachment 1 of this RFB.

A review of the groundwater analytical database and contaminant time trend plots contained in Attachment 1 reveals that groundwater quality has generally improved from the interim remedial actions, the enhanced bioremediation program and natural attenuation. Through the fourth quarter 2011 (most recent data available), dissolved impacts beneath the Haller's facility are limited to relatively low level exceedances of the rSHS for benzene in wells MW-4 and MW-7R located near the western property boundary (along Elm Street). The benzene exceedances in MW-4 have been infrequent / sporadic and the benzene levels in MW-7R continue to exhibit a decreasing trend. With on-property remediation work completed, the bulk of the residual dissolved-phase contaminant mass is off-property, most notably present beneath the downgradient Riverside Cemetery property in the area of wells MW-14 and MW-15. Groundwater contaminant transport appears to have impacted smear zone and saturated soils beneath Elm Street and the cemetery property adjacent to Elm Street and these residually impacted soils appear to be sustaining dissolved impacts in cemetery wells MW-14 and MW-15. Well MW-14 has recently had increasing benzene, toluene, ethylbenzene and naphthalene concentrations and benzene concentrations are near "flat-lined" in MW-15. To reduce and stabilize contaminant concentrations in these off-property wells such that a successful risk assessment and SSS closure for groundwater can be achieved, interim

⁷ Sample SA-2 was collected at the base of the excavation's western sidewall along Elm Street.

⁸ Wells MW-7 and MW-11 on the Haller's property were destroyed during the November 2009 soil excavation work. These two wells were replaced with only one well - MW-7R.

remedial measures addressing residually impacted off-property smear & saturated zone soils are to be implemented under this RFB (Task 5).

A continuation of the quarterly groundwater monitoring program is included in this RFB (Task 1).

Soil Gas

Soil gas studies have previously been conducted on the Haller's property and Riverside Cemetery property. Six soil gas monitoring points (VP-1 through VP-6) exist on the Haller's property and were sampled in January and April 2007 (VP-1 through VP-4) and in July and November 2008 (VP-1 through VP-6). Six soil gas monitoring points are also present on the Riverside Cemetery property (VP-7 through VP-12) that were sampled only once in November 2008.

Soil gas analytical results for January and April 2007 indicated that the PA Defaults Residential Volatilization to Indoor Air Screen soil gas screening values (IAQ_{SG}) had been exceeded for benzene (6.7 and 14 mg/m³), toluene (56 and 130 mg/m³), ethylbenzene (3.1 and 2.6 mg/m³) and naphthalene (0.45 and 2.3 mg/m³) in monitoring point VP-3 located near the southwest corner of the Haller's property. No IAQ_{SG} exceedances were reported for this monitoring point during the subsequent July and November 2008 events, or historically for any of the other soil gas monitoring points located on the Haller's property including VP-5 and VP-6 adjacent to the store / restaurant building. On the Riverside Cemetery property, benzene exceeded the IAQ_{SG} in monitoring point VP-9 (0.57 mg/m³) during the single November 2008 sampling event. Monitoring point VP-9 is positioned between impacted wells MW-14 and MW-15.

This RFB includes post-remedial soil gas sampling in areas where previous soil gas exceedances were found (Task 3). The results of the additional soil gas sampling will be used in the risk assessment to determine whether any deed restrictions may be needed for the Haller's property (e.g., future building vapor barrier) and whether an environmental covenant waiver will need to address this topic for the cemetery property.

Separate-Phase Hydrocarbons

Measureable thicknesses of separate-phase hydrocarbons (SPH) have been reported only for well MW-13 (0.01 ft) during the November 2008 gauging event and for well MW-14 (0.01 ft) during the July 2008 gauging event. Both of these wells are located on the Riverside Cemetery property.

Exposure Pathway Assessment

A preliminary exposure pathway evaluation was completed by Onesky in the October 2009 second rSSCR. Since that preliminary evaluation was completed, source soil has been excavated on the Haller's property and soil attainment achieved, dual-phase extraction (DPE) high-intensity targeted (HIT) events have been conducted in select on and off-property wells, limited soil vapor extraction (SVE) has been completed in the utility trench backfill materials and several rounds of bionutrient injections have been completed. Additionally, two more years of groundwater quality data are now available. Consequently, subsurface conditions have improved and an updated and more complete exposure pathway evaluation is needed.

As part of this RFB SOW, the selected consultant will be required to develop an updated exposure pathway evaluation and a quantitative risk assessment to support the SSS site closure inclusive of the additional data gathered over the past two years and results from the additional studies / interim remedial measures included in this RFB SOW (Task 6).

Site Cleanup Efforts and Remediation Goal

Interim remedial measures conducted to date have included the following:

- Two soil excavation events - One event was completed in March 2005 to remove residual soil impacts encountered during UST systems decommissioning in the northern portion of the Haller's property, and the second event was conducted in November 2009 to alleviate residual soil impacts in the southern part of the property.
- DPE events – Former on-property well MW-7 was subject to DPE treatments in October 2008 as requested by the PADEP to retard migration of the dissolved phase contaminant plume.⁹ DPE was later performed on well MW-3, located near the UST field and dispenser island, to mitigate a contaminant spike of unknown origin observed in early 2010. More recently, DPE HIT events were performed in Riverside Cemetery wells MW-13 and MW-14 from August 2010 through April 2011 to reduce dissolved contaminant levels at those locations in support of the bioremediation site remedy.
- SVE was completed within the impacted utilities trench backfill materials that extend along the western property boundary of the Haller's facility. In November 2010, one SVE event was completed using the four existing soil vapor extraction points (SVP-1 through SVP-4).
- Following PADEP approval of the RRAP in June 2010, a series of six nutrient injections were completed in October 2010 (2 events) and in July, August, September, and October 2011. The bio-injection remedial approach was discontinued after October 2011 because site data indicated that cleanup to the SHS would not have been completed within a reasonable timeframe or within the remaining claim funds via this remedy. Consequently, the Solicitor decided to pursue site closure using a risk-based approach under a SSS as discussed under the tasks contained in Section 3 below.

Riverside Cemetery Considerations

Bidders should be aware that the primary concern of the Riverside Cemetery Association (RCA) is maintaining the aesthetic appeal of the cemetery property and minimizing disruption to cemetery visitors. As such, the RCA is not amenable to staging remedial equipment on the property or to long-duration remedial events.¹⁰ Based on recent discussions with the RCA, it understands Solicitor's decision to pursue a risk-based site closure leaving residual impacts on the cemetery property. Furthermore, the RCA is aware that additional, but limited, remediation / site restoration work (Task 5) will need to be conducted on the cemetery property to support the SSS site closure. However, given the RCA's concerns for preserving the cemetery's aesthetic appeal, it is imperative that the selected consultant engage the RCA when planning any activity for the cemetery property and provide the RCA with at least one week advance notification before implementing any work on the property. Additional details are provided under applicable task descriptions provided in Section 3 below.

As mentioned earlier, additional information on the site and surrounding area is included in the documents listed in Attachment 1, which is posted with this solicitation on the PAUSTIF web site.¹¹ Each bidder should review this historical information carefully along with the information contained in this section. If there is any conflict between the information provided in this RFB and the source documents, the bidder should defer to the source documents. The Solicitor does not represent nor provide any warranty that the information provided with and in this RFB Solicitation is necessarily complete or sufficient for completing the identified scope of work. Therefore, **each bidder should rely and base its bid upon its own evaluation of the information provided.** Each bid must include and describe the bidder's conceptual site model as it pertains and applies to the proposed scope of work.

⁹ These treatments also served for remedial feasibility testing purposes to support the DPE site remedy being considered by Onesky at that time.

¹⁰ A DPE site remedy was originally proposed by Onesky but was rejected by the RCA because of the need for semi-permanent staging of remedial equipment on the cemetery property. This prompted the need for lower profile site remedies (e.g., short term extraction events and the bioremediation approach proposed in the April 2010 RRAP).

¹¹ The best scanned-in version of each document available has been provided.

3. SCOPE OF WORK OBJECTIVES

The Solicitor seeks competitive, fixed-price bids to complete the 9 tasks outlined below. To be deemed responsive, each bid must respond in detail to each of the scope of work tasks, as well as describe and apply the bidder's conceptual site model interpretation as it pertains to conduct of the proposed SOW. In other words, bidders shall respond to the SOW as stated herein to enable as much of an "apples-to-apples" comparison of the bids as possible. Recommendations for changes to the SOW should be discussed and quantified separately. **Failure to bid the SOW "as is" may result in a bid not being considered.**

Once the Fixed-Price Agreement is signed, any modification to the selected consultant's SOW for Tasks 1 through 9 will require prior written approval by the Solicitor **and PAUSTIF** through its third-party administrator, and may require PADEP pre-approval as well. Bidders should also note that this RFB SOW was provided to the PADEP-NWRO case manager for review and comment.

The selected consultant's approach to completing the SOW shall be in accordance with generally accepted industry standards / practices and all applicable federal, state, and local rules, guidance, directives, and regulations, including (but not limited to) satisfying the requirements of the Storage Tank and Spill Prevention Act (Act 32 of 1989, as amended), Pa. Code, Title 25, Chapter 245, and meeting / demonstrating attainment of the standards established under the Land Recycling and Environmental Remediation Standards Act (Act 2 of 1995) and Pa. Code, Chapter 250 (Administration of Land Recycling Program). The selected consultant shall also adhere to Pennsylvania's Underground Utility Line Protection Law (Act 287 of 1974, as amended by Act 121 of 2008).

Bidders should note that the Solicitor issued a letter to the PADEP on March 16, 2012 notifying the Department of his intent to modify the April 2010 RRAP (bioremediation remedy / SHS closure goal to a risk-based site closure). The letter further indicated that a modified RAP would be submitted on or before November 30, 2012. However, this RFB anticipates that a combined SCRA / RRAP / RACR can be prepared in lieu of a modified RAP and that the report issuance date of November 30, 2012 will probably be too soon to allow completion of the RFB tasks through report submittal (Tasks 1 through 7) based on the sample milestone completion / payment schedule (Table 2) contained in Section 4. Consequently, bidders shall include in their bid a level of effort and associated cost for preparing / issuing an extension request to the PADEP for submitting the combined SCRA / RRAP / RACR in accordance with the successful bidder's schedule. The project schedule must specify no less than two (2) weeks for the Solicitor and PAUSTIF to review and comment on the draft combined SCRA / RRAP / RACR before the report is finalized and submitted to the PADEP for review and comment. Because Tasks 8 and 9 would be performed following PADEP approval of the combined SCRA / RRAP / RACR, bids shall include time to address any PADEP comments received on the combined SCRA / RRAP / RACR.

In addition to the SOW tasks specified below, the selected consultant shall also:

- Complete necessary, reasonable, and appropriate project planning and management activities until the SOW specified in the executed contract has been completed. Such activities would be expected to include, but not necessarily limited to, client communications/updates, meetings, record keeping, subcontracting, personnel and subcontractor management, quality assurance/quality control, scheduling, and other activities (e.g., utility location, etc.).¹² Project planning and management activities will also include preparing and implementing plans for

¹² In accordance with 25 PA Code §245.309, the selected consultant shall be responsible for contacting Pennsylvania One Call prior to conducting any intrusive field work.

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.¹³ Project management costs shall be included in the fixed-price quoted for all tasks, as appropriate.

- Be responsible for coordinating, managing and completing the proper management, characterization, handling, treatment, and/or disposal of all impacted soil, water, and derivative wastes generated during the implementation of this SOW 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 upon request. Waste disposal costs shall be included in the fixed-price quoted for all tasks, as appropriate.
- Be responsible for providing the Solicitor and RCA with adequate advance notice prior to each visit to the site (minimum one week advance notice). The purpose of this notification is to coordinate with the Solicitor and RCA to ensure that appropriate areas of the properties 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 total project cost for all tasks, as applicable.
- 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 this Fixed-Price Agreement at its expense. 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 – Quarterly Groundwater Monitoring, Sampling and Reporting. Under this task, the program of quarterly groundwater monitoring, sampling and reporting shall be resumed and shall continue until the combined SCRA / RRAP / RACR (Task 7) has been approved by the PADEP.¹⁴ Considering the scope of work described in this RFB, it is anticipated that the completion of eleven (11) quarterly events will be necessary through PADEP review and approval of the combined SCRA / RRAP / RACR. Therefore, bidders shall assume and provide a firm fixed-price to complete eleven (11) quarters of groundwater monitoring, sampling and reporting.

For the purpose of this bid solicitation, and consistent with the previous quarterly groundwater monitoring / sampling program, bidders shall assume the fixed-price cost for this task will include collecting and analyzing groundwater samples from 28 on-and off-property monitoring and remedial assessment wells including MW-1 through MW-6, MW-7R, MW-8 through MW-10, MW-12 through MW-22, MW-AA through MW-DD, and MW-HH through MW-JJ. During each quarterly groundwater monitoring and sampling event, the depth to groundwater and any potential separate-phase hydrocarbons (SPH) shall be gauged in all 32 existing monitoring and remedial assessment wells and prior to purging any of the 28 wells designated for sample collection. Groundwater level measurements obtained from the monitoring wells shall be converted to groundwater elevations for assessing groundwater flow direction and hydraulic gradient. The conduct and results of each quarterly event shall be documented in quarterly RAPRs.¹⁵ Bidders shall provide a comprehensive fixed unit cost per quarterly monitoring, sampling and reporting

¹³ Access agreements will need to be negotiated with the Riverside Cemetery and with PennDOT for the Elm Street (SR 62) right-of-way. We envision that the access agreement with the cemetery will need to incorporate, at a minimum, the work restrictions specified in this RFB.

¹⁴ The quarterly groundwater monitoring, sampling and reporting program was suspended following the fourth quarter 2011 event (November 2011) because the most recent consultant of record terminated its contract with the Solicitor in December 2011.

¹⁵ PADEP suggests that Groundwater Monitoring Reports (GMR) be referred to as Remedial Action Progress Reports (RAPR) which are due to the PADEP on January 30, April 30, July 30, and October 30.

event should more or less than eleven events be needed. Since quarterly groundwater monitoring / sampling has not been completed since November 2011, the first quarterly event conducted under this task shall be completed as soon as reasonably possible following contract execution to provide an updated assessment of groundwater quality and assist with developing additional interim remedial measures (Task 5) and the risk assessment (Task 6).

Before conducting the second quarterly event, however, the selected consultant shall discuss reducing the number of wells gauged and sampled with the PADEP to include only those locations necessary for adequately establishing groundwater movement and assessing plume extent and stability. Because active remediation has been discontinued, we expect that a number of remedial assessment wells could possibly be eliminated from the quarterly sampling program. Also, the PADEP may be amenable to eliminating quarterly sampling for several existing monitoring wells with a lengthy history of non-detections. Additionally, groundwater flow direction has been firmly established through historical well gauging activities. Bidders shall identify the subset of wells that it will recommend to PADEP that should continue to be monitored subsequent to the initial quarterly event and on the bid form, separately identify the quarterly costs for the reduced number of wells assuming PADEP accepts.

Each of the monitoring wells designated for sample collection shall be purged and sampled in accordance with the PADEP Groundwater Monitoring Guidance Manual and standard industry practices. Any well exhibiting a measurable thickness of SPH shall not be purged and sampled.¹⁶ 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.

Groundwater samples collected during the quarterly events shall be analyzed for the **pre**-March 2008 PADEP short-list of unleaded gasoline parameters (excluding 1,2,4- and 1,3,5-trimethylbenzenes) by a PADEP-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, each event shall include measurements for these field parameters: pH, temperature, specific conductance, dissolved oxygen (measured in-situ), and oxidation/reduction potential.¹⁷

RAPRs describing the sampling methods and results shall be provided to the PADEP on a quarterly basis consistent with the Department's timetable for RAPR submittals. At a minimum, each RAPR shall contain the following: a) a narrative description of the sampling procedures and results; b) tabulated data from the current quarterly event and all historical data; c) maps depicting groundwater flow direction and groundwater analytical data; d) for each well exceeding the SHS, a graphical depiction of recent key contaminant concentration trends; and e) a discussion / evaluation of the data to offer an updated assessment of contaminant trends and whether these data are consistent with a stable, shrinking, or expanding plume. Each RAPR shall be sealed by a Professional Geologist or Professional Engineer registered in the Commonwealth of Pennsylvania. Methods and results from these quarterly groundwater monitoring and sampling events shall also be summarized in the combined SCRA / RRAP / RACR (Task 7).

Task 2 – Off-Property Soil Boring Advancement, Soil Sampling and Analyses. As noted earlier, with on-property remediation having been completed, the bulk of the residual dissolved-phase contaminant mass is now off-property, manifested in Riverside Cemetery monitoring wells MW-14 and

¹⁶ Should SPH in recoverable quantities be observed, the SPH shall be removed as an interim remedial measure. If necessary, SPH recovery efforts will be subject to the "New Conditions" provision of the Fixed-Price Agreement.

¹⁷ Each bidder's approach to implementing Task 1 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.

MW-15. Groundwater contaminant transport appears to have impacted smear zone and saturated soils beneath Elm Street and the cemetery property adjacent to Elm Street and these residually impacted soils appear to be sustaining dissolved impacts in these cemetery wells. The exposure evaluation / risk assessment completed under Task 6 is anticipated to find potentially complete exposure pathways to the off-property smear zone and permanently saturated soils (e.g., utility and construction worker exposures). Since the concentration of smear zone and permanently saturated soil contaminants has never been determined off-property, limited biased soil sampling & analyses will be completed under Task 2.

In order to characterize the concentrations of residually impacted off-property smear & permanently saturated soil for the risk assessment, bidders shall provide a firm fixed-price cost for implementing a supplemental soil characterization program. Data provided from the soil investigation shall be used by the selected consultant primarily for the Task 6 risk assessment, but also, as necessary, to refine its recommendation for additional interim remedial measures under Task 5.

For the purpose of this RFB solicitation, each bidder shall assume advancing six (6) off-property soil borings: 3 in the right-of-way on the Haller's side of Elm Street and 3 in the area of wells MW-14 and MW-15. Each bidder shall indicate its proposed locations for the assumed six (6) soil borings on the site plan (Figure 2 attached to this RFB) for inclusion with its bid response with the understanding that slight adjustments to the proposed locations may be necessary based on actual field conditions or that additional borings may be needed. Possible locations for the three soil borings on the cemetery property are indicated in Figure 3. Bidders shall provide a comprehensive fixed unit cost per soil boring such that when multiplied by 6 equals the bid total for Task 2. The unit cost per boring must include borehole advancement, logging, screening, sample collection / analysis and borehole sealing.

Each soil boring shall achieve a depth that ensures vertical delineation of smear zone soil (i.e., advanced to a depth equivalent to the seasonal low water table). For the purpose of this RFB solicitation, bidders shall assume that each soil boring along the Haller's side of Elm Street will be advanced to a depth of 7 feet below grade (ft-bg) and those on the cemetery property will be advanced to a depth of 13 ft-bg based on the average seasonal low water table in the area of wells MW-14 and MW-15.¹⁸

In addition to contacting PA One Call, bidders shall assume clearing and sampling the initial five (5) feet of each boring location using a hand auger. Below five feet, each soil boring shall be advanced using direct-push sampling methods. Continuous soil samples shall be collected beginning immediately at the ground surface for description of lithologic characteristics, groundwater occurrence, and staining / odor indicative of potential petroleum impacts. Hand auger and direct-push soil core samples shall be screened in the field according to standard headspace methods using a photoionization detector (PID) that shall be calibrated daily before beginning field activities (and more frequently if necessary). For the purpose of this RFB solicitation, bidders shall assume that one biased soil sample per boring will be submitted for laboratory analysis (6 total). This biased soil sample shall be collected from the depth interval exhibiting the highest organic vapor concentration based on PID headspace screening. If no elevated organic vapor levels are measured along the length of a boring and no staining and/or odors are evident, the one biased sample shall be obtained from the depth interval immediately above the water table surface.

Biased soil samples shall be collected according to USEPA Method 5035 and analyzed for the **pre-March 2008 PADEP short list of unleaded gasoline parameters, excluding 1,2,4- and 1,3,5-trimethylbenzenes.**¹⁹ Appropriate quality assurance/quality control (QA/QC) samples shall also be obtained for laboratory

¹⁸ Prior to initiating field activities, the selected consultant shall be responsible for reviewing the historical groundwater gauging data in Attachment 1 to identify the lowest depth to groundwater recorded for the well closest to each of the proposed soil boring locations.

¹⁹ Soil bulk density, porosity and organic matter content to support the contaminant fate and transport modeling under Task 6 were previously analyzed and the results are provided in the Attachment 1 reports.

analysis. The analytical results shall be reviewed by the risk assessor and used to assess exposure risks for potentially complete off-property soil contaminant exposure pathways. For the purpose of this RFB, it shall be assumed that the risk assessment will find that the residual soil impacts will not pose an unacceptable level of risk.²⁰

Activities under this task shall also include: (i) contacting the PA One Call System, Inc.; (ii) field survey of the soil boring locations for inclusion on the site plan; (iii) sealing each completed cemetery boring with bentonite to within six-inches of ground surface followed by topsoil / seeding or sod placement to grade (at the cemetery's discretion) and sealing the other borings with bentonite and an asphalt or concrete surface patch; (iv) repairing any other surface disturbance on the cemetery property to the RCA's satisfaction (e.g., ruts left by drilling equipment); and (v) managing the drilling and personal protective equipment wastes in accordance with standard industry practices and applicable laws, regulations, guidance, and PADEP directives. The soil boring program methods and results shall be detailed in the combined SCRA / RRAP / RACR to be prepared under Task 7.

In addition to the minimum one week notification provided to the Solicitor and RCA prior to beginning fieldwork, the soil investigation program must be discussed with the RCA during the planning stage to solicit their input. At a minimum, we anticipate that should the intrusive work not be completed within one day, the RCA will request that the drilling rig and ancillary equipment be staged on the Haller's property overnight and that all drilling wastes be removed and staged on the Haller's property at the end of each work day.

Task 3 – Supplemental Soil Gas Study. As discussed in Section 2, soil vapor studies have previously been conducted on the Haller's and Riverside Cemetery properties utilizing twelve soil vapor monitoring points (VP-1 through VP-12). During those studies, vapor samples collected from monitoring point VP-3 near the southwest corner of the Haller's property contained several unleaded gasoline compounds that exceeded the IAQ_{SG} standards including benzene, toluene, ethylbenzene and naphthalene. Also, the vapor sample collected from monitoring point VP-9 on the cemetery property contained benzene at a concentration slightly exceeding the IAQ_{SG}. Considering the improvements in soil and groundwater quality achieved through remedial activities completed on the Haller's and cemetery properties since the vapor monitoring points were last sampled in November 2008, a reassessment of soil vapor characteristics at select locations is necessary in support of the site closure.

Under this task, bidders shall provide a firm fixed-price cost for conducting post-remedial soil vapor sampling utilizing four (4) of the existing vapor monitoring points.²¹ Post-remedial soil vapor sampling procedures shall be consistent with applicable requirements and guidance specified in the *Land Recycling Program Technical Guidance Manual – Section IV.A.4, Vapor Intrusion into Buildings from Soil and Groundwater*²². Based on the number of previous soil vapor sampling events, the historical soil vapor data and site conditions, bidders shall assume collecting the post-remedial vapor samples only from monitoring point VP-3 located on the Haller's property and from monitoring points VP-7, VP-8 and VP-9 on the cemetery property. These soil vapor monitoring points shall be sampled twice over a period of two months with each sampling event separated by a period of at least four (4) weeks. Additionally, bidders shall quote a comprehensive unit price per soil vapor monitoring point inclusive of sampling, analysis and reporting should sample collection from more or fewer monitoring points become necessary.

²⁰ Should the risk assessment find the off-property soil contamination poses an excessive level of risk that cannot be eliminated through institutional controls, this will constitute a "Changed Condition" with respect to the contract.

²¹ Since the vapor monitoring points have already been installed and previously sampled, developing and submitting a Soil Vapor Sampling Plan to the PADEP for review and approval will not be necessary.

²² Note: the Act 2 Vapor Intrusion (VI) Guidance (PADEP 2004) was developed for use at sites being remediated under the SHS, not the Site-Specific Standard (SSS). Therefore, the VI Guidance shall not be used in the risk assessment (Task 6). USEPA Regional Screening Levels (RSLs) shall be used to identify COPCs in the risk assessment.

Each post-remedial soil vapor sample shall be collected in pre-certified Summa canisters supplied by the analytical laboratory. Bidders shall use 6L 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. All soil vapor samples shall be submitted to a PADEP-accredited laboratory for analysis of the PADEP pre-March 2008 short-list of unleaded gasoline parameters using Method TO-15 and appropriate detection levels. Appropriate QA/QC samples shall also be collected and analyzed for the same unleaded gasoline compounds. The post remedial soil vapor study shall be described in a concurrent quarterly RAPR along with any recommendations regarding the necessity for supplemental vapor intrusion assessment (e.g., indoor air quality sampling) or institutional / engineering controls in order to achieve the SSS closure. The soil vapor study shall also be described in the combined SCRA / RRAP / RACR.

Task 4 – Discretionary Supplemental Site Characterization and Pilot Testing. Under this task, bidders shall provide a firm fixed-price for conducting discretionary supplemental site characterization and pilot testing activities if deemed necessary in support of developing a plan for interim remedial measures (IRM) under Task 5. Should a bidder elect not to conduct any activities under Task 4, a fixed-price of \$0.00 shall be entered into the appropriate location of the Standardized Bid Form (Attachment 3). Bidders that elect not to propose discretionary site characterization and pilot testing activities to assist with evaluating possible IRMs under Task 5 **must** provide the technical rationale (basis) for this decision within their bid, along with supporting examples (as appropriate). In addition, bidders that do not believe supplemental activities under this task are necessary to efficiently close the Site under Act 2 **must** explicitly state within their bid that they accept the inherent risk in relying almost entirely or exclusively on data collected by others.

Work that may be conducted under this milestone is discretionary and the scope thereof will vary by bid according to each bidder's interpretation of the existing site characterization and pilot testing data, the results provided from Tasks 1, 2 and 3 of this RFB, and the IRM objective as specified under Task 5. More specifically, Task 4 shall be used by each bidder to collect data that is needed to assess or finalize the design for the IRM(s) it plans to use at the Haller's site to achieve stable to decreasing groundwater contaminant trends in the vicinity of Riverside Cemetery well MW-14. The work proposed and conducted under this task (if any), as well as the fixed- or unit-price(s) associated therewith shall be formulated independently by each bidder at their sole discretion. Task activity breakdowns (if any) and their associated pricing entered into the Standardized Bid Form (Attachment 3) will vary by bid.

Should a bidder believe that it is reasonable, appropriate, and necessary to conduct additional site characterization work and/or pilot testing / feasibility studies to assess or finalize the design of the IRM(s) it plans to use to address groundwater concerns in the area of well MW-14, such additional activities and their associated bid pricing shall be included under Task 4. Potential considerations regarding the need for Task 4 activities include perceived data gaps in the existing site characterization work (including the activities to be completed under Tasks 1, 2 and 3 of this RFB) and/or the lack of feasibility / pilot testing data for the IRM(s) under consideration.

Although not an endorsement to implement (or not to implement) any such work, potential activities for bidders to consider may include, but not be limited to the following:

- In-situ pneumatic or hydraulic permeability studies.
- Feasibility studies and/or pilot testing activities to assess the effectiveness of a specific remedial technology or approach.
- Remedial design calculations, technology information, equipment specifications, and materials specifications as appropriate to support implementation of the IRMs proposed.

Any and all Task 4 activities that are proposed with your firm's bid shall be accompanied by the following:

- The purpose and need for each Task 4 activity and an appropriate breakdown (Milestones D1, D2, etc.).
- A detailed scope description of each activity, including the use of and incorporation of pre-existing site data.
- The timing and schedule of each activity relative to the overall project schedule.
- A description of the anticipated results of each activity and how such results may affect your proposed conceptual IRM(s).
- For activities involving the evaluation of a remedial technology, such as a feasibility study or pilot test, bids shall describe in detail the likelihood that the resulting data will dictate a change in the conceptual IRM(s) proposed in your bid.
- Firm fixed-pricing and any appropriate unit pricing for each Task 4 activity (Milestones D1, D2, etc.) within each bidder's completed Standardized Bid Form (Attachment 3).

Additional, discretionary site characterization and/or feasibility / pilot testing activities (if any) conducted under Task 4 shall be documented in the concurrent quarterly RAPR and in the combined SCRA / RRAP / RACR.

Bidders shall specify within their bids the critical criteria (if any) that will be used to evaluate data obtained through Task 4 activities. These critical criteria shall be used by the successful bidder to assess whether or not their proposed conceptual IRMs are feasible. As such, and as applicable, **bids shall list an upper and lower limit for each critical criterion that will define the range of acceptable results (i.e., feasibility study or pilot testing results). These criteria must be tightly controlled measurements or calculations that could be independently measured or verified by others during testing.** Based on these criteria, Exhibit A of the Fixed-Price Agreement (Attachment 2) will contain a provision for cancellation of the Agreement if results from the additional site characterization and/or the testing data (i.e., the information generated during the implementation of Task 4) do not meet certain bidder-defined criteria bounds (ranges). Each bidder, therefore, shall explicitly specify any and all critical criteria and their associated acceptable ranges for key design elements on which their proposed IRMs depend (i.e., the critical criteria and quantified ranges of values that will make the proposed conceptual plan for IRMs technically feasible, cost-effective, and timely).

For example, and only if a bidder proposes to conduct activities under discretionary Task 4, bids shall include language like, "For our conceptual plan for IRMs to be successful and for the technology(ies) used to operate as planned and meet our proposed clean-up schedule, our proposed recovery well extraction testing must demonstrate the following:

1. The long-term, sustainable groundwater and vapor extraction rates must be assessed to be greater than 2 gpm and 200 scfm, respectively per recovery well,
2. Recovery well capture zones at the minimum sustainable groundwater and vapor recovery rates will require no more than two recovery wells to address smear zone soil and residual groundwater impacts."

End of Example bid language. Actual bid language, if any, and the associated critical criteria will vary by bidder.

The critical criteria identified in each bid and their associated acceptable range of testing results will be evaluated by the bid evaluation committee as part of the technical review. Unrealistic criteria or criteria that are unreasonably narrow will reduce the favorability of the bid as viewed by the bid review committee. The selected bidder will prepare a Pilot / Feasibility Test Report and submit it to the Solicitor with a copy to USTIF (or its representative). The Pilot / Feasibility Test Report shall document that the

testing was conducted according to the bid specifications and shall constitute documentation for payments on Task 4 activities regardless of the results. If results from the pilot / feasibility testing indicate that the proposed IRM is feasible based on the specified criteria and ranges, the selected consultant shall move forward on the project. However, if the results of the pilot testing show that the testing is outside of the pre-determined critical criteria range needed for timely achievement of the remedial goals, then either party may pursue the cancellation clause of the associated Fixed-Price Agreement (see paragraph 11.b.vii of the example Fixed-Price Agreement provided as Attachment 2).

This stage of the project is referred to as the "Pilot Test Off-Ramp" and is intended to protect the selected consultant and the Solicitor from being obligated to move forward with an IRM that is expected to be far from optimal or expected to fail. However, the selected bidder is under no obligation to cancel the Fixed-Price Agreement if the pilot / feasibility testing results are outside the criteria or range specified in the RFB Solicitation response, and may proceed with implementing IRMs using the criteria defined by the pilot / feasibility testing even if the IRM varies somewhat from that proposed in the RFB solicitation if the Solicitor agrees and elects not to cancel the Fixed-Price Agreement. If either party elects to cancel the Fixed-Price Agreement, then USTIF will have complete discretion with regard to the use of the information in the Pilot / Feasibility Test Report. USTIF may use this information as the basis for rebidding the project or may provide it to one or more of the previously unsuccessful bidders and request revised RFB solicitations. However, it will be specified that any use that a third party makes of the Pilot / Feasibility Test Report will be at the sole risk of the Third Party.

Task 4 activities (if any), shall be conducted as soon as possible following the completion of Tasks 1 (initial sampling event), 2 and 3, or performed concurrently with these tasks, if possible.

Task 5 – Develop and Implement a Plan for Off-Property Interim Remedial Measures. As previously mentioned, groundwater contaminant transport appears to have impacted smear zone and saturated soils beneath Elm Street and the cemetery property adjacent to Elm Street. These residually impacted soils appear to be sustaining dissolved impacts in cemetery wells MW-14 and MW-15: MW-14 has recently had increasing benzene, toluene, ethylbenzene and naphthalene concentrations; and benzene concentrations are near "flat-lined" in MW-15. It is assumed that PADEP will not accept a risk assessment or attainment demonstration until dissolved contaminant concentrations in MW-14 have stabilized and / or begin to decrease like the other wells associated with the Haller's site. **Bids for this task shall include all IRM efforts and costs needed to demonstrate to PADEP's satisfaction that contaminant levels in MW-14 and MW-15 are stable or decreasing.** For the purposes of this RFB, bidders shall assume this demonstration shall be accomplished through conducting eight (8) quarters of post-IRM groundwater monitoring, sampling and reporting. **Note that these eight post-IRM quarterly events are included in the eleven events previously specified under Task 1.**

Interim remedial measures²³ shall be completed under Task 5 to address residually impacted off-property smear & saturated zone soils around and upgradient of cemetery well MW-14. In support of the risk assessment and SSS site closure, each bidder shall develop a detailed plan for conducting an additional interim remedial action designed to reduce dissolved-phase contaminant levels and achieve stable to decreasing contaminant trends in the area of cemetery wells MW-14 and MW-15. The plan for additional interim remedial action and a firm fixed-price cost for plan implementation shall be included in the bid response. Selection and development of the recommended interim remedial action shall take into consideration all relevant historical information. All work under this task shall be completed and the results evaluated in advance of preparing the risk assessment under Task 6.

Various IRM alternatives have previously been considered by RCA and found to generally be acceptable. Two of these candidate IRMs for stabilizing dissolved contaminant levels on the cemetery property are

²³ Proposed interim remedial measures shall **not** be substantive enough to require significant remedial design (e.g., needing a professional engineer) whereby a formal RAP would need to be submitted for PADEP review.

identified below. However, each bidder shall propose the IRM approach it believes will accomplish the stabilization objective. When considering IRMs for the cemetery property, it is important that bidders recognize the restrictions that apply to the conduct of any environmental activity on the cemetery property.

Bidders may wish to consider a less obtrusive in-situ remedial technology, such as conducting a series of short-term DPE HIT events similar to those previously completed by Onesky. Alternatively, bidders may conclude that limited soil excavation would be the most expedient and effective means for decreasing contaminant levels or turning around groundwater concentration trends in MW-14 and MW-15. Note that any proposed excavation or other remedial activities on the RCA property would be limited to the area outlined in red on Figure 3.²⁴ The RCA's approval would need to be secured for any significant variation. Also, for any interim remedial action taken on the cemetery property, bidders must recognize the following constraints that will be strictly imposed by the RCA:

- If soil excavation is proposed in the MW-14 vicinity, the dimensions of the excavation shall not exceed the boundary shown in red on Figure 3 as mentioned above. (Note: only excessively impacted smear zone and saturated soils shall be transported and disposed off-site. "Clean" shallow excavated soil shall be reused for backfill).
- If soil excavation is proposed, all work through surface restoration must be completed within five (5) working days.
- If soil excavation is proposed, **the fixed price bid for Task 5 shall only exclude the costs for (1) contaminated soil transportation and disposal; and (2) clean fill importation.** Excavation bids shall include unit price rates (\$/ton) for (1) and (2).
- If MW-14 is destroyed during remediation activities, it will need to be replaced as original and surveyed under the fixed price for Task 5.
- For any remedial approach, all heavy / remediation equipment and ancillary equipment must be staged on the Haller's property during off-hours in an area to be designated by the Solicitor.
- For any remedial approach, any surface disturbance (e.g., excavation, boring, equipment rut) must be restored as close as possible to the pre-existing surface conditions using top soil and fresh sod.
- For any remedial approach, no liquid or solid wastes can be staged on the cemetery property. Limited volume wastes (e.g., solids and liquids drums) can be temporarily staged on the Haller's property in an area designated by the Solicitor, but must not interfere with Haller's business operations. For larger volume wastes such as excessively impacted soil derived from a possible excavation, bidders may wish to consider direct loading of these soils. One exception is that segregated "clean" soils to be used for backfilling the excavation can be temporarily staged on the cemetery property adjacent to the excavation if covered with plastic sheeting.

As mentioned earlier, because of the RCA's concerns for maintaining the aesthetic appeal of the cemetery property, the selected consultant shall confer with the RCA and seek its approval when planning the additional interim remedial activities, maintain open and ongoing communication with RCA personnel during these activities, and provide the RCA with at least one week advance notification before implementing this work.

It is mandatory that bids **shall include eight quarters of post-IRM monitoring, sampling and reporting (included under Task 1) and an evaluation of post-IRM plume stability at MW14 and**

²⁴ Figure 3 was provided to the President of the RCA for review to assist with alleviating their concerns regarding potential intrusive activities that might be needed to complete the risk-based site closure. After reviewing the figure, the RCA's President responded that "In this communication, you requested that I let you know whether the RCA would allow proposed drilling and excavation to be done on the RCA property. I have talked to each Director of the RCA board. Most, but not all of the Directors agree to allow the work to be done. But, the selected consultant must first secure RCA approval for any work proposed on the RCA property."

MW15. Payment for the IRM fixed price amount may be made incrementally and proportionally based on work actually performed with a frequency of no greater than monthly. Bidders shall propose payment schedule / milestones for the proposed IRM approach.

To provide added incentive to the successful bidder for implementing an IRM that achieves the plume stability demonstration objective as expeditiously and cost effectively as possible, **10% of each Task 5 incremental payment will be withheld and accumulated pending a reasonable technical demonstration of IRM performance and of subsequent plume stability.** When these conditions have been met, the accumulation of 10% holdback payments will be reimbursed in one lump sum to the successful bidder. If the successful bidder is unable to reasonably demonstrate plume stability during the life of the contract, bidder will forgo payment of the 10% hold back. Note: the 10% hold back provision will not apply to reimbursement of soil transportation & disposal and clean fill importation unit costs should excavation be the proposed / bid IRM approach.

For any proposed interim remedial action, the bid response must provide:

- A detailed description of, and technical justification for, the selected interim remedial action. Information provided should be of sufficient content and detail to allow an adequate technical evaluation of the proposed remedial approach. Such details may include, but are not necessarily limited to, information regarding: equipment type and specifications, number of remedial events, identification and nature of any extraction / injection points, nature of injectants, estimated pumping / recovery rates, applied vacuum, excavation methods, soil screening and segregation techniques, waste management and profiling, plans for soil staging, post-excavation soil sampling, type of backfill, backfilling / compaction methods, plans for surface restoration, records keeping, etc.
- A discussion regarding the feasibility and expected effectiveness of the proposed interim remedial action.
- Acknowledgement of the RCA's constraints as identified above.
- A work scope inclusive of eight quarters of post-IRM monitoring and stability evaluation.
- Acknowledgement of the 10% hold-back provision.
- A detailed implementation schedule.
- An all-inclusive fixed-price cost for implementing the selected interim remedial action (with the exception of soil T&D and clean fill importation for the excavation alternative).

Uncertainties with the selected interim remedial action can be listed as site-specific assumptions in the fixed-price Agreement and linked to the changed conditions provision of the Agreement.

The methods and results for the interim remedial action shall be described in the combined SCRA / RRAP / RACR.

Task 6 – Exposure Pathway Evaluation and Quantitative Risk Assessment. Under this task, bidders shall provide a fixed-price cost for completing an exposure pathway evaluation and risk assessment. It is anticipated that some or most of the Task 6 activities may be initiated ahead of the Task 5 IRM work, however, **it may not be possible to complete Task 6 until after post-IRM plume stability is demonstrated at MW-14.** The exposure pathway evaluation shall determine complete, partially complete, or incomplete exposure pathways followed by a risk assessment to calculate risk-based numerical SSS for soils and/or groundwater with respect to any complete exposure pathway that cannot be eliminated by means of reasonable environmental covenants (e.g., limiting the Haller's property to commercial use, excluding future groundwater use, etc.). Solicitor will accept environmental covenants (ECs) for his property but ECs are not expected to be imposed on the roadway or on the cemetery properties. More specifically, given the intended period of post remedial care monitoring (Task 9), **the PADEP has indicated that if applicable conditions noted in the UECA Frequently Asked Questions**

are satisfied (as posted on the PADEP website), the Department would review and consider approving requests for groundwater use restriction covenant waivers for Elm Street and the downgradient Riverside Cemetery property.

As input for the exposure pathway evaluation and risk assessment, a revised contaminant fate and transport model shall be developed, a residential / commercial well use survey and evaluation of local groundwater ordinances shall be performed, and zoning ordinances, flood zones, and future land use plans for the properties in the area of concern shall be researched. The exposure pathway evaluation and risk assessment shall also consider all relevant historical information and the results provided from Tasks 1 through 5 of this RFB.

Initially, the selected consultant will be required to develop a revised quantitative contaminant fate and transport model given the significant amount of data gathered and remedial work conducted since the previous model was developed by Onesky in December 2008. The calibrated contaminant fate and transport model shall address all dissolved-phase constituents whose concentrations exceed the relevant PADEP SHS-MSCs for groundwater. It is expected that contaminant modeling will be conducted using groundwater analytical data collected after implementing the interim remedial action under Task 5 so that the effects of this action are accounted for in the model. Bidders shall assume that the shallow unconsolidated water table aquifer beneath the Haller's and cemetery properties shall be modeled using the new Quick Domenico (QD) application consistent with the previous site modeling effort. Additionally, model input shall incorporate the site-specific values for hydraulic conductivity, hydraulic gradient, porosity, bulk density and organic carbon that were previously determined through the characterization work conducted by Onesky. Results from the revised contaminant fate and transport modeling shall be presented in the combined SCRA / RRAP / RACR and shall: (i) describe all model input / output; (ii) include an explanation of model construction along with identification and justification of all input parameter values and sources; and (iii) provide a discussion of the modeling results and conclusions at a level of detail appropriate to demonstrate the reliability and veracity of the model.²⁵

The risk assessment shall encompass an exposure assessment, toxicity assessment, and risk characterization. The identification of exposure pathways for the site shall be based upon guidance from the American Society for Testing and Materials (ASTM) and the United States Environmental Protection Agency (USEPA), as required by Act 2, Section 250.404. The exposure pathway analysis shall consider these four pathway elements:²⁶

- A source and mechanism of release;
- A retention or transport medium (e.g., groundwater);
- A point where a receptor can contact the impacted medium (e.g., a drinking water well); and
- A mechanism (exposure route) by which the receptor contacts the impacted medium (e.g., ingestion).

Post-remedial soil and groundwater data shall be the primary source of input to the risk assessment. The chemicals of potential concern (COPCs) will be those constituents whose maximum concentrations in soil

²⁵ Because of the distance to the Allegheny River, located about 550 to 600 feet west of the Haller's property, and considering the current dissolved-phase concentrations, surface water modeling applications such as SWLOAD5B and PENTOXSD are probably not necessary to assess potential impacts to the river. However, should these modeling applications become necessary, such modeling will be subject to the "New Conditions" provision of the Fixed-Price Agreement.

²⁶ All four elements are necessary for an exposure pathway to be deemed complete; otherwise, the pathway is not complete and there is no risk.

and groundwater do not screen out when compared to the USEPA RSLs, i.e., if a maximum chemical constituent concentration is less than the respective risk-based screening level, it is not a COPC.²⁷ Exposure point concentrations (EPCs) shall be determined for the COPCs that do not screen out. Note that EPCs do not need to be maximum detections and can be derived by statistical analysis.

Exposure pathways for the identified COPCs shall then be evaluated to determine if the pathway is complete or can be rendered incomplete through the application of pathway elimination measures (i.e., reasonable and conventional environmental covenants established under Task 7). For any exposure pathways that cannot be eliminated by means of institutional and/or engineering controls to be codified via environmental covenants, a toxicity assessment and risk characterization shall be performed. The determination of whether exposure to a COPC will cause adverse health effects in exposed individuals shall be evaluated based on available toxicity information and regulatory limits, and, if required, risk-based numeric Site-Specific Standards shall be developed.

For carcinogenic substances, cancer slope factors developed by the USEPA shall be used to assess the increased probability of developing cancer following exposure to a chemical. For non-carcinogenic (or systemic) substances, reference doses developed by the USEPA shall be used to estimate potential for adverse effects other than cancer. The COPCs that yield an adverse risk level shall be further evaluated during the risk characterization step, which shall combine the components of exposure (i.e., estimate of intake) and toxicity to estimate potential risk for the completed exposure pathways.

For those COPCs that cannot be screened during pathway analysis, an ecological screening assessment shall be conducted to determine if the site poses an unacceptable risk to ecological receptors. The screening assessment shall be conducted in accordance with Chapter H of the Pennsylvania Land Recycling Program's Technical Guidance Manual and USEPA RSL screening criteria insofar as is necessary for determining any potential ecological risk.

After completing the exposure analysis and risk assessment, the selected consultant will present its findings to the Solicitor and PAUSTIF for review and comment within the draft combined SCRA / RRAP / RACR.

Regarding assessment of the groundwater contaminant migration / exposure pathway, the selected bidder shall complete a PAGWIS database search for private and public water supplies, public water supply network maps shall be acquired for the site vicinity, and any local groundwater use ordinances shall be researched in the event of any updates since this work was previously completed by Onesky. Searches of any other available public and private water supply databases shall also be conducted. Because the contaminant plume extends beneath a cemetery with the Allegheny River beyond, other groundwater assessment activities, such as a door-to-door water supply survey and private water supply sampling, is not anticipated.

The risk assessment shall identify those institutional or engineering controls needed for the Solicitor's property such that the residual contamination will not present an excessive level of risk under current or future land use. Additionally, for Elm Street, the risk assessment shall determine whether a groundwater use prohibition EC waiver will adequately protect human health now and in the future. Finally, the risk assessment shall determine whether a groundwater use prohibition EC waiver for the cemetery property will adequately protect human health now and in the future.

²⁷ Constituent concentrations are to be screened against the USEPA RSLs and not against the PADEP Statewide Health Standards (SHS). Only those constituents that do not screen out against the risk-based screening levels remain as COPCs for the exposure pathway analysis and/or demonstrating attainment of the PADEP SHS or a risk-based numeric SSS.

Task 7 – Prepare and Submit a Draft and Final Combined SCRA / RRAP / RACR. For the purpose of this bid solicitation, bidders shall assume that the historical site data and results from the additional characterization work, interim remedial action and risk assessment completed under this RFB will be sufficient to support preparation and submittal of a combined SCRA / RRAP / RACR for a risk-based site closure.²⁸ Therefore, under this task, bidders shall provide a firm fixed-price cost to prepare a draft and final combined SCRA / RRAP / RACR following the completion of Tasks 1 through 6 above. At a minimum, the SCRA shall provide an overview of historical site characterization efforts, interim remedial actions and site remediation efforts, describe in detail the conduct and results of Tasks 1 through 6 and provide all necessary figures, tabulated data and appendices. The RRAP shall identify, fully describe and substantiate the revised SSS site closure objective and shall present the proposed Post-Remedial Care Plan (PRCP) measures²⁹ with supporting figures, tabulated data and appendices. The accompanying RACR shall: (a) discuss the revised closure criteria for the site with conclusions of how the data support the SSS closure; (b) provide a demonstration of attainment; (c) request permanent closure for the site for the current release under an Act 2 Relief of Liability; and (d) provide a schedule for implementation of site restoration activities and post remedial care. The RACR shall incorporate any historical information that the selected consultant deems appropriate for supporting the site closure objectives along with all necessary figures, tabulated data and appendices.

The RACR shall also include a draft environmental covenant for the Haller's property and a request for groundwater use restriction covenant waivers for Elm Street and the Riverside Cemetery provided that applicable UECA conditions are satisfied. Note that following PADEP review and approval of the draft environmental covenant for the Haller's property, the selected consultant shall assist the Solicitor with finalizing and submitting the signed and notarized covenant. Therefore, the fixed-price cost for this task will need to include the \$500 PADEP fee for filing the final covenant. Note also that the Solicitor will retain counsel to address legal aspects of preparing the environmental covenant outside of the contract that will be executed for this RFB solicitation (i.e., the successful bidder will not be expected to subcontract legal services).

Based on existing information, the environmental covenant for the Haller's property would be expected to restrict the property to commercial use only and preclude future installation of wells for potable use in order to eliminate the groundwater ingestion and related potentially complete pathways. To the extent that vapor intrusion sampling indicates this to be a complete pathway presenting unacceptable risks, the covenant may also need to include a requirement for vapor barriers to be installed in future building construction.

The RACR shall provide a thorough discussion of the on-property attainment and biased off-property soil sampling locations, sample selection criteria, sampling methods and analytical results provided from the March 2005 and February, September and November 2009 and more recent soil sampling events. A compilation of the existing on-property soil analytical data and sampling locations is provided in Attachment 1 of this RFB.

The combined SCRA / RRAP / RACR shall be of sufficient content and quality to reasonably expect PADEP approval. The project schedule shall allow two (2) weeks for Solicitor and PAUSTIF review of the draft SCRA / RRAP / RACR before a final version is submitted to the PADEP. Following Solicitor / PAUSTIF review of the draft document, the selected consultant shall address any comments and submit the final SCRA / RRAP / RACR to the PADEP in accordance with Section 245.313. The SCRA / RRAP / RACR shall be signed and sealed by a Professional Geologist **and** a Professional Engineer registered in

²⁸ In the event that the data / risk assessment are not favorable for supporting a risk-based site closure, and additional site remediation requiring preparation of a Revised Remedial Action Plan for active remediation is needed, such work would be subject to the changed conditions provision of the fixed-price Agreement.

²⁹ Post-remedial care inspections will substitute for placing environmental covenants on the roadway and cemetery properties. See Task 9 for expected post-remedial care requirements.

the Commonwealth of Pennsylvania. Also, as mentioned earlier, bids shall include time to address any PADEP comments received on the SCRA / RRAP / RACR since Tasks 8 and 9 will be performed following PADEP approval of the report.

Task 8 – Site Restoration. Under this task, bidders shall provide a fixed-price cost for properly closing the site, including: (a) abandonment of all existing groundwater monitoring and remedial injection / assessment wells (32 wells); (b) well head removals; (c) any re-grading that may be needed on the Haller's and cemetery properties due to conduct of the well closures (e.g., repairing ruts); and (d) asphalt / concrete repairs on the Haller's property and placement of fresh sod on the cemetery property, as necessary. This task shall also include photo-documenting the site restoration work and completion of well abandonment forms.

The site wells shall be properly abandoned in a manner consistent with the PADEP's 2001 Groundwater Monitoring Guidance Manual. Following well abandonment, copies of the completed Groundwater Monitoring Well Abandonment Forms shall be forwarded to the PADEP so that the Department can close its files on the Haller's facility. Copies of the well abandonment forms shall also be forwarded to the Pennsylvania Bureau of Topographic and Geologic Survey. Additionally, the Solicitor shall be provided with copies of the forms and photo-documentation to complete his file. Site restoration activities shall commence within 30 days of receiving a PADEP Relief of Liability for the site.

Task 9 – Post-Remedial Care Monitoring. Bidders shall provide a firm fixed-price cost for implementing the PRCP. According to recent discussions with the PADEP case manager, post-remedial care monitoring shall consist of periodic site inspections to verify that land use / use limitations remain consistent with the environmental covenant for the Haller's property and to confirm that no drinking / agricultural water supply wells have been installed on the cemetery property. The PADEP case manager also noted that post-remedial care groundwater sampling / analysis will not be necessary provided that the groundwater quality data contained in the RACR indicates stable to decreasing trends for all constituents of concern at all monitoring locations.

For the purpose of this RFB solicitation, bidders shall assume conducting two (2) post-remedial care inspection events on a triannual frequency following PADEP approval of the RACR, i.e., the initial inspection event shall be completed three years after RACR approval and the second event shall be completed six years after RACR approval. Following each inspection event, a brief update report shall be prepared and submitted to the PADEP. Although not expected, should the scope and/or frequency of the post-remedial care inspection events differ from the above description and result in increased costs, such an increase would be subject to the changed conditions provision of the fixed-price Agreement.

4. TYPE OF CONTRACT / PRICING

The Solicitor wishes to execute a mutually agreeable, fixed-price, not-to-exceed contract for the SOW addressed by Tasks 1 through 9. A sample Fixed-Price Agreement is included as Attachment 2.³⁰ The Fund will facilitate negotiations between the Solicitor and the selected consultant toward executing this Fixed-Price Agreement.

As noted earlier, **a bidder's response to this RFB Solicitation Package 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 must be specified in the bid response. Please note that these changes will need to be reviewed and agreed upon by both the Solicitor and the Fund.

³⁰ The selected consultant will be provided an electronic copy of the sample contract in Word format to allow contract-specific information to be added.

Each bid is to clearly identify unit cost rates for labor, other direct costs, and equipment, as well as proposed mark-ups on other direct costs and subcontracted services for all SOW Tasks 1 through 9. The by-task and by-subtask quotes are to be entered into the Cost Tabulation Spreadsheet / Standardized Bid Format included as Table 1 in Attachment 3 to this RFB. Please note that the total fixed-price bid must include all costs, including those cost items that the bidder may regard as "variable," i.e., these variable cost items 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:

- Milestones A1 through A11 – Quarterly Groundwater Monitoring, Sampling and Reporting (Task 1). Note that the schedule assumes eleven Milestone A payments.
- Milestone B – Off-Property Soil Boring Advancement, Soil Sampling and Analyses (Task 2).
- Milestones C1 and C2 – Supplemental Soil Gas Study (Task 3). Note that the schedule assumes two Milestone C payments.
- Milestone D - Discretionary Supplemental Site Characterization and Pilot Testing (Task 4).
- Milestone E – Develop and Implement a Plan for Off-Property Interim Remedial Measures (Task 5).
- Milestone F – Exposure Pathway Evaluation and Quantitative Risk Assessment (Task 6).
- Milestone G – Prepare and Submit a Draft and Final Combined SCRA / RRAP / RACR (Task 7).
- Milestone H – Site Restoration (Task 8).
- Milestones I1 and I2 – Post-Remedial Care Monitoring (Task 9). Note that the schedule assumes two Milestone I payments.

TABLE 2 – SAMPLE MILESTONE COMPLETION / PAYMENT SCHEDULE

Estimated Milestone Timing Month After Contract Award	SOW Activities Anticipated / Completed for that Month	Milestone ¹
1	Quarterly Groundwater Monitoring, Sampling and Reporting; Supplemental Soil Gas Study (first sampling event)	A1, C1
2	Off-Property Soil Boring Advancement, Soil Sampling and Analyses; Supplemental Soil Gas Study (second sampling event);	B, C2
4	Discretionary Supplemental Site Characterization and Pilot Testing; Quarterly Groundwater Monitoring, Sampling and Reporting	D, A2

Estimated Milestone Timing Month After Contract Award	SOW Activities Anticipated / Completed for that Month	Milestone ¹
7	Develop and Implement a Plan for Off-Property Interim Remedial Measures; Quarterly Groundwater Monitoring, Sampling and Reporting (post-IRM)	A3, E
10	Quarterly Groundwater Monitoring, Sampling and Reporting (post-IRM)	A4
13	Quarterly Groundwater Monitoring, Sampling and Reporting (post-IRM)	A5
16	Quarterly Groundwater Monitoring, Sampling and Reporting (post-IRM)	A6
19	Quarterly Groundwater Monitoring, Sampling and Reporting (post-IRM)	A7
22	Quarterly Groundwater Monitoring, Sampling and Reporting (post-IRM)	A8
25	Quarterly Groundwater Monitoring, Sampling and Reporting (post-IRM)	A9
28	Quarterly Groundwater Monitoring, Sampling and Reporting (post-IRM)	A10
30	Exposure Pathway Evaluation and Quantitative Risk Assessment; Prepare and Submit a Draft and Final Combined SCRA / RRAP / RACR	F, G
31	Quarterly Groundwater Monitoring, Sampling and Reporting (post-IRM)	A11
33	Site Restoration	H
69	Post-Remedial Care Monitoring	I1
105	Post Remedial Care Monitoring	I2

- Each bidder should modify this sample Milestone Completion / Payment Schedule for Tasks 1 through 9 to reflect its proposed task schedule, as long as the proposed schedule meets the criteria specified in Section 3 of this RFB.

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 selected bidder's bid response. 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 unit costs quoted in the bid will be assumed to 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 (*do not include UST removals / closures*)?
 - 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 Relief of Liability from the PADEP) under either the SHS and/or the Site Specific Standard (*do not include UST removals / closures*)? [NOTE: The Solicitor requires the work described herein to be completed under the responsible care and directly supervised by a P.G. and / or 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, 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 3 (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 (Tasks 1 through 9), 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 submittal of the combined SCRA / RRAP / RACR. 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.

6. MANDATORY PRE-BID SITE VISIT

On **Tuesday, August 14, 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 **11:00 AM**. 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.**

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 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. 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." 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 response.³¹

³¹ 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 certain assumptions, special conditions, or exemptions that are likely to generate change orders may be the financial responsibility of the Solicitor if the change order involves non-reimbursable activities.

*Request for Bid
PAUSTIF #2005-0045(S)
Haller's Sporting Goods
Tionesta Borough, PA
July 27, 2012*

FIGURE 1
SITE LOCATION MAP

FIGURE 2
SITE PLAN

FIGURE 3

LIMITS FOR POTENTIAL EXCAVATION OR OTHER REMEDIAL ACTIVITIES ON THE RCA PROPERTY

ATTACHMENT 1

Relevant Project Documents

<u>Filename:</u>	<u>Document:</u>
Haller's Site Photos 121108	Site Photographs obtained 12/11/08
HistGWData.xls	Historical groundwater gauging / analytical database and constituent concentration time trend plots through November 2011
SCR_Oct06.pdf	SCR, Onesky, October 2006
SSCR-RAP_Jan08.pdf	SSCR / RAP, Onesky, January 2008
PADEPlet_Apr08.pdf	April 2, 2008 PADEP SSCR / RAP disapproval letter
rSSCR_Mar09.pdf	Revised SSCR, Onesky, March 2009
PADEPlet_Jun09.pdf	June 29, 2009 PADEP Revised SSCR disapproval letter
SecrSSCR_Oct09.pdf	Second Revised SSCR, Onesky, October 2009
RRAP_Apr10.pdf	Revised RAP, Onesky, April 2010
PADEPlet_Jun10.pdf	June 2, 2010 PADEP letter approving the Second Revised SSCR and Revised RAP
RRAPA_Aug10.pdf	Addendum to Revised RAP, Onesky, August 2010
QMR_3Q08.pdf	Quarterly Monitoring Report, Onesky, third quarter 2008
RAPR_2Q10.pdf	Remedial Action Progress Report, Onesky, second quarter 2010
RAPR_4Q10.pdf	Remedial Action Progress Report, Onesky, fourth quarter 2010
RAPR_1Q11.pdf	Remedial Action Progress Report, Onesky, first quarter 2011
RAPR_2Q11.pdf	Remedial Action Progress Report, Onesky, second quarter 2011
RAPR_3Q11.pdf	Remedial Action Progress Report, Onesky, third quarter 2011
RAPR_4Q11.pdf	Remedial Action Progress Report, Onesky, fourth quarter 2011
Soil Data.pdf	Historical soil sampling location and analytical data

ATTACHMENT 2

Fixed-Price Agreement

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

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Haller's Sporting Goods
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ATTACHMENT 3

Standardized Bid Format