

Request for Bid

Fixed-Price Defined Scope of Work

Performance of Additional Site Characterization Activities and Preparation and Submission of a Site Characterization Report

Solicitor

Amerada Hess Corporation

Hess #38517/Merit Oil 749 Bethlehem Pike

Montgomeryville, PA 18936

PADEP Facility ID #: 46-14499 PAUSTIF Claim #: 1997-0171(M)

Date of Issuance

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The Pennsylvania Underground Storage Tank Indemnification Fund (PAUSTIF), on behalf of the claimant who hereafter is referred to as the Client or Solicitor, is providing this Request for Bid (RFB) to prepare and submit a bid to complete the Scope of Work (SOW) for the referenced site. The Solicitor has an open claim with the PAUSTIF and the corrective action work will be completed under this claim. Reimbursement of Solicitor-approved, reasonable and necessary costs up to claim limits for the corrective action work described in this RFB will be provided by PAUSTIF. Solicitor is responsible to pay any applicable deductible and/or proration.

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

Calendar of Events

Activity	Date and Time
Notification of Intent to Attend Site Visit	October 3, 2013 by 5 p.m.
Mandatory Pre-Bid Site Visit	October 7, 2013 at 11 a.m.
Deadline to Submit Questions	October 18, 2013 by 5 p.m.
Bid Due Date and Time	October 25, 2013 by 3 p.m.

Contact Information

ICF International	Solicitor	Technical Contacts
<p>Patricia Condran 4000 Vine Street Middletown, PA 17057 Phone: (717) 838-5918 patricia.condran@icfi.com</p>	<p>John Engdahl Amerada Hess Corp 1 Hess Plaza Woodbridge, NJ 07095 Phone: (732) 750-6934 JEngdahl@Hess.com</p>	<p>Lawrence F. Roach, P.G. Scott Morgan Groundwater Sciences Corp 2601 Market Place Street Suite 310 Harrisburg, PA 17110 Phone: (717) 909-8462 smorgan@groundwatersciences.com</p>

All questions regarding this Request for Bid (RFB) and the subject site conditions must be directed via e-mail to Technical Contact Scott Morgan identified above with the understanding that all questions and answers will be provided to all bidders. The email subject line must be **“Hess #38517/Merit Oil – RFB QUESTION”**. Bidders must neither contact nor discuss this RFB with the Solicitor, PAUSTIF, the Pennsylvania Department of Environmental Protection (PADEP), or ICF International (ICF) unless approved by the Technical Contact Scott Morgan. Bidders may discuss this RFB with subcontractors and vendors to the extent required for preparing the bid response.

Requirements

Mandatory Pre-Bid Site Meeting

The Solicitor, the Technical Contact, or their designee will hold a mandatory site visit on the date and time listed in the calendar of events to answer questions and conduct a site tour for one participant per bidding company. This meeting is mandatory for all bidders, no exceptions. This meeting will allow each bidding company to inspect the site and evaluate site conditions. **A notice of the bidder's intent to attend this meeting is requested to be provided to the Technical Contact Scott Morgan via email by the date listed in the calendar of events with the subject "Hess #38517/Merit Oil – SITE MEETING ATTENDANCE NOTIFICATION".** The name and contact information of the company participant should be included in the body of the e-mail.

Submission of Bids

To be considered for selection, **one hard copy of the signed bid package and one electronic copy (one PDF file on a compact disk (CD) included with the hard copy) must be provided directly to the PAUSTIF's third party administrator, ICF, to the attention of the Contracts Administrator.** The Contracts Administrator will be responsible for opening the bids and providing copies to the Technical Contact and the Solicitor. Bid responses will only be accepted from those companies that attended the mandatory pre-bid site meeting. **The ground address for overnight/next-day deliveries is ICF International, 4000 Vine Street, Middletown, PA 17057, Attention: Contracts Administrator. The outside of the shipping package containing the bid must be clearly marked and labeled with "Bid – Claim # 1997-0171(M)".** Please note that the use of U.S. Mail, FedEx, UPS, or other delivery method does not guarantee delivery to this address by the due date and time listed in the Calendar of Events for submission. Companies mailing bids should allow adequate delivery time to ensure timely receipt of their bid.

The bid must be received by 3 p.m., on the due date shown in the Calendar of Events. Bids will be opened immediately after the 3 p.m. deadline on the due date. Any bids received after this due date and time will be time-stamped and returned. If, due to inclement weather, natural disaster, or any other cause, the PAUSTIF's third party administrator, ICF's office is closed on the bid due date, the deadline for submission will automatically be extended to the next business day on which the office is open. The PAUSTIF's third party administrator, ICF, may notify all companies that attended the mandatory site meeting of an extended due date.

The hour for submission of bids shall remain the same. Submitted bid responses are subject to Pennsylvania Right-to-Know Law.

Bid Requirements

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

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

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

The bidder shall provide its bid cost using the Bid Cost Spreadsheet (included as Attachment 2) with descriptions for each task provided in the body of the bid document. Please note if costs are provided within the text of the submitted bid and there is a discrepancy between costs listed in the Bid Cost Spreadsheet and in the text, the costs listed within the Bid Cost Spreadsheet will be used in the evaluation of the bid and in the Environmental Consulting Services Agreement with the selected consultant. Bidders are responsible to ensure spreadsheet calculations are accurate.

In addition, the bidder shall provide:

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

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

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

Each bid response document must include at least the following:

1. Demonstration of the bidder's understanding of the site information provided in this RFB, standard industry practices, and objectives of the project.
2. A clear description, specific details, and original language of how the proposed work scope will be completed for each milestone. The bid should specifically discuss all tasks that will be completed under the Environmental Consulting Services Agreement and what is included (e.g., explain groundwater purging/sampling methods, which guidance documents will be followed, what will be completed as part of the site specific work scope/SCR/RAP implementation). Recommendations for changes/additions to the Scope of Work proposed in this RFB shall be discussed, quantified, and priced separately; however, failure to bid the SOW "as is" may result in a bid not being considered.
3. A copy of an insurance certificate that shows the bidder's level of insurance consistent with the requirements of the Environmental Consulting Services Agreement. Note: The selected consultant shall submit evidence to the Solicitor before beginning work that they have procured and will maintain Workers Compensation; commercial general and

contractual liability; commercial automobile liability; and professional liability insurance commensurate with the level stated in the Environmental Consulting Services Agreement and for the work to be performed.

4. The names and brief resumes/qualifications of the proposed project team including the proposed Professional Geologist and Professional Engineer (if applicable) who will be responsible for overseeing the work and applying a professional seal to the project deliverables (including any major subcontractor(s)).
5. Responses to the following specific questions:
 - a. Does your company employ a Pennsylvania-licensed Professional Geologist that is designated as the proposed project manager? How many years of experience does this person have?
 - b. How many Pennsylvania Chapter 245 projects is your company currently the consultant for in the PADEP Region where the site is located? Please list up to ten.
 - c. How many Pennsylvania Chapter 245 Corrective Action projects involving an approved SCR, RAP and RACR has your company and/or the Pennsylvania-licensed Professional Geologist closed (i.e., obtained Relief from Liability from the PADEP) using any standard?
 - d. Has your firm ever been a party to a terminated PAUSTIF-funded Fixed-Price (FP) or Pay-for-Performance (PFP) contract without attaining all of the Milestones? If so, please explain.
6. A description of subcontractor involvement by task. Identify and describe the involvement and provide actual cost quotations/bids/proposals from all significant specialized subcontracted service (e.g., drilling/well installations, laboratory, etc.). If a bidder chooses to prepare its bid without securing bids for specialty subcontract services, it does so at its own risk. Added costs resulting from bid errors, omissions, or faulty assumptions will not be considered for PAUSTIF reimbursement.
7. A detailed schedule of activities for completing the proposed SOW including reasonable assumptions regarding the timing and duration of Solicitor reviews (if any) needed to complete the SOW. Each bid must provide a schedule that begins with execution of the Environmental Consulting Services Agreement with the Solicitor and ends with completion of the final Milestone proposed in this RFB. Schedules must also indicate the approximate start and end of each of the tasks/milestones specified in the Scope of Work, and indicate the timing of all proposed key milestone activities.
8. A description of how the Solicitor, ICF and the PAUSTIF will be kept informed as to project progress and developments, and how the Solicitor (or designee) will be informed of and participate in evaluating technical issues that may arise during this project.

9. A description of your approach to working with the PADEP. Describe how the PADEP would be involved proactively in the resolution of technical issues and how the PADEP case team will be kept informed of activities at the site.

10. Key exceptions, assumptions, or special conditions applicable to the proposed SOW and/or used in formulating the proposed cost estimate. Please note that referencing extremely narrow or unreasonable assumptions, special conditions and exceptions may result in the bid response being deemed “unresponsive”.

General Site Background and Description

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

Site Name / Address / Location:

Hess #38517/Merit Oil, 749 Bethlehem Pike, Montgomeryville, Montgomery Township, Montgomery County, Pennsylvania. The approximate latitude and longitude of the site are: 40d 14m 41.69s / 75d 14m 35.07s.

Site Use Description:

The site is currently operated as an active Hess retail gasoline dispensing station.

Site Description

The site is situated on approximately 0.58 acres on the east side of Bethlehem Pike in Montgomery Township, Montgomery County (Figure 1, Attachment 3) at an elevation of approximately 475 feet above mean sea level. A small kiosk-type store, located within the dispenser island area and a storage building are found on the property. The site has operated as a retail petroleum dispensing facility since 1983. Prior to 1983, the property was the location of the Montgomeryville Farmer's Market. The site is served by public water and sewer.

Nature of Confirmed Release and Subsequent Activities:

On August 23, 1994, an incident at the site occurred that involved the release of petroleum hydrocarbons. Due to a rain event, the water table beneath the station rose. The groundwater flowed from the area of the site's USTs to the north and across Bethlehem Pike. The discharged groundwater reportedly had a petroleum sheen and odor. Republic Environmental Systems of Pennsylvania, Inc. contained the water for disposal.

On September 21, 1995, monitoring wells MW-1 through MW-4 were installed on the site by B.L. Myers Bros, Inc. under the supervision of GHR Consulting Services, Inc. (GHR) of Horsham, Pennsylvania. Monitoring wells MW-1 and MW-4 were installed to a depth of approximately 40 feet below grade (fbg) with 35 feet of well screen and monitoring wells MW-2 and MW-3 were installed to a depth of approximately 23 fbg with 20 feet of well screen. Soil samples were collected from MW-1 and MW-3 at the time of installation (rock fragments and an inadequate quantity of soil reportedly prevented the collection of soil samples from the borings of MW-2 and MW-4). The soil samples were analyzed for benzene, toluene, ethylbenzene, total xylenes, Diesel Range Organics (DRO), Gasoline Range Organics (GRO), and total lead. Groundwater sampling events conducted following the installation of the monitoring wells showed detections of unleaded gasoline substances, including benzene and MTBE above the

PADEP's Residential Used Aquifer (RUA) Medium Specific Concentration (MSC) in groundwater.

In early 1996, water was detected in the three regular gasoline USTs and the three USTs underwent tank tightness testing in May 1996. Two of the three regular gasoline USTs failed the tightness testing and were subsequently removed from service (but left in place).

In April 1997, GHR submitted an Initial Site Characterization Report (SCR) to the PADEP. The Initial SCR presented the characterization information discussed above. The Initial SCR referenced "scheduled major renovations in the Spring of 1997".

Between April and May of 1997 renovation activities were conducted at the site. Site renovations included the replacement of the existing twelve UST systems with new UST systems in a new location. Crompton & Seitz of Feasterville, Pennsylvania excavated and removed the twelve USTs (eleven 4,000-gallon single-walled steel USTs (eight gasoline, two diesel fuel, and one kerosene) and one 550-gallon single-walled steel wastewater UST). The associated single-walled steel product piping and the product dispensers were also closed by removal. ABC Tank Company, Inc. of Clayton, New Jersey removed residual product from the USTs, cleaned the USTs, and transported the USTs to Republic Environmental Recycling, Inc. in Clayton, New Jersey.

According to the UST Closure Report prepared by GHR, dated January 1998, obvious extensive soil and groundwater contamination was identified during the UST closure as a result of "remote fills and associated piping and overfills". Based on field observations, the tank pit was over excavated to the west and to approximately 9 fbg. Approximately 3,041 tons of contaminated soil was removed and disposed of at the TPS Soil Recycling Facility located in Baltimore, Maryland. The closure report states that "GHR and Merit discovered the presence of a former remote fill in the northern section of the excavation" (presumably between the USTs and the northern property line). Although FID measurements above 6,000 ppm were noted in the area of the newly discovered remote fill (higher than any other documented measurement), "it was decided that the soils in this area would be excavated at a later date". Technical Contact correspondence with the current consultant (EMS Environmental (EMS)) and the PADEP file review conducted by the Technical Contact as part of the preparation of this RFB suggests that this soil was not investigated further and remains in place.

The UST Closure Report states that "no compounds were detected in excess of their respective PADEP Soil to Groundwater Pathway Standards in any of the twelve soil samples collected as part of the UST closure activities". The laboratory report that accompanied the UST Closure Report showed that the dispenser and piping samples were analyzed for a full suite of volatile organic compounds (VOCs) (the laboratory report for the sidewall samples could not be located to review the analytical list). It should be noted that concentrations of 1,2,4-trimethylbenzene (1,2,4-TMB) and 1,3,5-trimethylbenzene (1,3,5-TMB) were detected in one dispenser and one piping sample collected as part of the UST closure.

Due to the presence of groundwater (observed at approximately 4 fbg) throughout the UST closure process, a sump pump was used to dewater the excavation. Approximately 109,200 gallons of groundwater was treated and discharged to an adjacent storm sewer. Groundwater treatment consisted of a frac tank connected to an oil/water separator followed by a 1,500

pound granular activated carbon vessel. The treated groundwater was discharged in accordance with a PADEP permit dated March 14, 1997. Approximately 25 gallons of free product were recovered from the water contained in the former USTs.

Following the closure of the twelve USTs in the northern portion of the property, five new double-walled fiberglass USTs (three 10,000-gallon gasoline USTs, one 10,000-gallon kerosene UST, and one 550-gallon wastewater UST) and new double-walled fiberglass piping and dispensers were installed in the southern portion of the property. Approximately 31,500 gallons of groundwater was treated and discharged to an adjacent storm sewer during the new UST installation activities. The new UST excavation dewatering was conducted under the same PADEP permit and the water was treated using the same process discussed above.

Details of the dewatering process were described in GHR's Dewatering Report dated January 1998.

In January 1998, GHR prepared an Initial Site Assessment Report for the site. The Initial Site Assessment Report discussed investigation activities associated with a petroleum release in 1994 and contamination identified during the UST closure activities in 1997.

In February 2000, GHR submitted a Fate and Transport Evaluation and Petition for Case Closure to the PADEP. The report presented the results of aquifer testing and analysis as well as a fate and transport analysis using the PADEP's FATBACK4.xls and Quick_Domenico.xls modeling tools. Based on the conclusions in the report, GHR requested "Case Closure and No Further Action" for the site.

On July 21, 2003, the claimant provided the PADEP with a "Site Update" letter report. The letter report documented off-site access attempts for the purposes of off-site, down-gradient monitoring well installation and off-site potable well search and sampling efforts. According to the letter report, Hess requested access to install monitoring wells on the adjacent down-gradient property (owned at the time by Mr. Friedman). Although "numerous attempts" were made to coordinate access with Mr. Friedman, access was not granted. Additionally, two potable wells (one located on the Moss Rehab Outpatient Center property located at 737 Bethlehem Pike (owned by Mr. Friedman) and one located on the Antique Center's property located at 735 Bethlehem Pike) were identified in the letter report. These wells are located approximately 400 feet and 540 feet, respectively, to the north (down-gradient) of the Hess station property.

On August 8, 2003, the PADEP responded to the "Site Update" letter report. The PADEP's response, which also indicated that the PADEP "comprehensively reviewed the Regional Storage Tank Case File for the subject facility", stated that the "Department believes that characterization activities completed by GHR are not sufficient to render a NFA decision" (referring to the February 2000 report summarized above). The PADEP's letter listed "potential deficiencies in documents previously submitted by GHR".

On July 10, 2003, a sample was collected by EMS from the Antique Center's water supply well and analyzed for the constituents on the PADEP's then current unleaded gasoline shortlist (benzene, toluene, ethylbenzene, total xylenes, MTBE, naphthalene, and cumene) by EPA's

SW846 8260B method. No analyzed substance was detected above the laboratory's report detection limit.

On January 7, 2004, EMS collected a sample from the Moss Rehab Outpatient Center's water supply well and analyzed for a full suite of VOCs (including those the Antique Center sample was analyzed for) by EPA's 524.2 Method. MTBE was reported at a concentration below the laboratory's report detection limit but above the laboratory's method detection limit at a concentration of 0.38 ug/l and was flagged by the laboratory as an estimated value ("J"). The construction details of the two sampled water supply wells are not known (the Antique Center well is reportedly hand dug). According to conversations with EMS, no other samples have been collected from these water supply wells.

On September 26, 2004, monitoring wells MW-5, MW-6 and MW-7 were installed in the PennDOT right-of-way to the north (down-gradient) of the site under the supervision of EMS. Monitoring well MW-5 was installed to 18 fbg with 15 feet of well screen. Monitoring wells MW-6 and MW-7 were installed in a common borehole with MW-6 installed to 55 fbg with 20 feet of well screen and MW-7 installed to 13 fbg with 10 feet of well screen.

Groundwater samples have been collected from site monitoring wells quarterly since 2004 (and at least triannually (three times per year) since 1996). Unleaded gasoline substances have been detected in groundwater above the RUA MSC in all monitoring wells. Recent sampling results indicate that only MTBE persists in groundwater above the RUA MSC in one monitoring well, off-site down-gradient shallow monitoring well MW-7.

The most recent Semi-Annual Site Update Reports have been included in Attachment 1. Included in these documents are summaries of groundwater chemistry and water levels and includes groundwater elevation and chemistry maps. Please note that groundwater elevation measurements collected from MW-6 and MW-7 (nested wells) appear to be switched on multiple occasions (April 30 and August 3, 2009 and February 23, May 25, and August 4, 2011).

Current Conditions:

Site characterization is currently not complete and a comprehensive SCR has not been prepared and submitted to the PADEP. Concentrations of MTBE in groundwater persist above applicable RUA MSC in one monitoring well, off-site monitoring well MW-7. Groundwater samples collected from the site have never been analyzed for 1,2,4-TMB and 1,3,5-TMB.

USTs on Site:

There are five active double-walled fiberglass USTs (three 10,000-gallon gasoline USTs, one 10,000-gallon kerosene UST, and one 550-gallon wastewater UST) and associated double-walled fiberglass piping located in the southern portion of the property (Figure 1).

Scope of Work (SOW)

This RFB seeks competitive bids from qualified contractors to perform the activities in the Scope of Work (SOW) specified herein. The PADEP reviewed this RFB and provided comments in writing on May 24, 2013.

Objective

The objective of this RFB is to execute the defined SOW that will gather additional soil chemistry, groundwater chemistry, and other subsurface information necessary to evaluate site conditions that will enable the submission of a SCR. Following the completion of the SOW specified in this RFB, the remaining corrective action activities necessary for the Solicitor to obtain relief from liability will either be competitively bid or the Solicitor may choose to retain the consultant selected for this RFB.

Constituents of Concern

The Constituents of Concern (COCs) for this site are the VOCs listed on the March 18, 2008 PADEP unleaded gasoline shortlist (benzene, toluene, ethylbenzene, total xylenes, cumene, naphthalene, methyl tert-butyl ether, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene).

General SOW Requirements

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

- The Storage Tank and Spill Prevention Act (Act 32 of 1989, as amended),
- Pennsylvania Code, Title 25, Chapter 245 - Administration of the Storage Tank Spill and Prevention Program,
- The Land Recycling and Environmental Remediation Standards Act of 1995 (Act 2), as amended),
- Pennsylvania Code, Chapter 250 - Administration of Land Recycling Program, and

- Pennsylvania's Underground Utility Line Protection Law, Act 287 of 1974, as amended by Act 121 of 2008.

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

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

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

Site –Specific Milestones

Milestone A – Performance of a Professional Land Survey and Engineering Evaluation of Underground Utilities

A professional land survey of the site shall be conducted by a Pennsylvania-licensed land surveyor. The survey should include all principal site features (including but not limited to: buildings, walkways, areas of pavement, concrete, and grass, manholes, tops of well casings, catch basins, and valve boxes) and the site's property lines and rights of way.

In order to evaluate migration through underground utilities and/or coarse bedding material, the selected bidder shall conduct an engineering evaluation of underground utilities (including but not limited to storm sewers, sanitary sewers, water lines, and natural gas lines) beneath the site property. The survey should extend to a distance of 50 feet beyond the property line in all directions. The evaluation should include any on-site laterals to these utilities which may have served or currently serve as preferential migration pathways for petroleum impacted water, potential separate phase liquid (SPL), or vapors. This evaluation should include a review of available municipal and authority plans of the utilities beneath Bethlehem Pike and the subject site.

Milestone B – Performance of a Geophysical Survey

A geophysical survey of the site shall be performed prior to the intrusive characterization activities described in this work plan. The purpose of this survey is to identify and locate historical UST excavations, previous areas of soil excavation, potential unknown USTs, conveyance lines and other underground utilities and features. The survey will also attempt to investigate and locate the former UST remote fill documented in GHR's January 1988 UST Closure Report and discussed in the Nature of Confirmed Release and Subsequent Activities section. It is anticipated that both electromagnetic (EM) and ground-penetrating radar (GPR) technologies would be employed.

Milestone C – Soil Boring Investigation

A soil investigation shall be conducted in the vicinity of the former UST remote fill area that was discovered during the 1997 UST closure. Despite elevated FID measurements observed in the vicinity of the remote fill discovered during the UST closure, soil was not investigated in this area. Four soil borings shall be advanced to a depth of 4 fbg around the former remote fill (discussed in GHR's 1998 UST Closure Report and identified by the geophysical survey conducted as part of Milestone B) to investigate potential petroleum impacts. In the event that the former remote fill cannot be located in the field, the four soil borings shall be advanced along the down-gradient property line in the general locations shown on Figure 1.

Assume for the purpose of this RFB that one discrete soil sample will be collected from each of the four remote fill investigation soil borings (a total of four soil samples). Each sample should be collected from a depth between 3 fbg and 4 fbg.

Continuous geological logs should be prepared by or under the supervision of a Professional Geologist licensed in the Commonwealth (PG) for each boring advanced at the site using a standard and consistent classification system procedure (Modified Burmister or USCS). Soil samples should be screened at two-foot intervals with a PID (using headspace measurements). All soil samples shall be analyzed for the substances listed in the COC section of this RFB by EPA Method 5035/8260B.

All bidders are also required to provide an all-inclusive (mobilization, sample collection, sample analysis, etc.) fixed unit-rate cost to advance four additional soil borings with the collection and analysis of four soil samples. This cost will be used to determine possible additional Milestone payouts in the event that additional soil delineation is required to characterize the site. This information shall be provided in the Schedule of Unit Rates in Attachment 2.

Milestone D – Monitoring Well Installation, Development, and Surveying

One groundwater monitoring well (MW-8) shall be installed by the selected bidder in the general location identified on Figure 1. As shown on Figure 1, MW-8 shall be installed beyond down-gradient monitoring wells MW-6 and MW-7 in the PennDOT Right-of-Way. Please note that access to the PennDOT Right-of-Way has not been secured and that the selected bidder shall be required to obtain access as part of this Milestone.

The monitoring well shall be installed to a total depth of 20 fbg using air rotary drilling techniques. The monitoring well shall be constructed of 2-inch PVC materials with 5 feet of riser. Continuous geological logs should be prepared by or under the supervision of a PG using the same standard and consistent classification system used in Milestone C.

All bidders are also required to provide an all-inclusive (mobilization, well installation, development, survey, etc.) fixed unit-rate cost to install one additional monitoring well (MW-9, Figure 1) near the down-gradient property line, more-or-less equidistant between monitoring wells MW-1 and MW-4. The installation of MW-9 will be contingent upon the results of the soil boring investigation described in Milestone C and must be approved in writing by the Solicitor and the PAUSTIF. For the purposes of providing this cost information, please assume MW-9 will be installed using the same drilling, construction, and completion specifications as MW-8. This cost information shall be provided in the Schedule of Unit Rates in Attachment 2.

All monitoring wells installed at the site shall be completed at the surface with a securable manhole, set in concrete flush with the ground surface. A locking, pressure fit,

watertight cap shall be used to prevent the infiltration of surface runoff and rainwater and to restrict access by unauthorized individuals. Following the surface completion of each well, the tops of casings of the monitoring wells shall be vertically and horizontally surveyed to allow for the calculation of groundwater elevations across the site.

Following the completion of the monitoring well(s), the selected bidder shall develop the monitoring well(s) in accordance with generally-accepted practices as outlined in the PADEP's Groundwater Monitoring Guidance Manual, dated December 1, 2001 (Document #383-3000-01).

Milestone E – Groundwater Sampling

Two groundwater sampling events shall be conducted at the site. The first sampling event shall include only the newly installed groundwater monitoring well(s) installed as part of Milestone D. The second sampling event shall include all site monitoring wells (MW-1 through MW-8 or MW-9). The first sampling event shall be conducted no sooner than two weeks following the development of the new well(s) and the second groundwater sampling event shall occur within the calendar quarter following the most recent quarterly sampling event conducted by the previous consultant. Depth-to-water measurements shall be collected from all monitoring wells prior to the collection of groundwater samples during each sampling event. All groundwater samples shall be collected in laboratory-provided containers and analyzed for the substances listed in the COC section of this RFB by EPA Method 5030B/8260B.

For the purposes of providing a cost for this Milestone, please assume that two monitoring wells (MW-8 and MW-9) will be installed at the site as part of Milestone D.

All bidders are also required to provide an all-inclusive, per-well, fixed, unit-rate for a reduction in the number of groundwater monitoring wells sampled. This cost will be used to determine the applicable Milestone payout in the event that one or more wells cannot be sampled (MW-9 is not installed, wells are inaccessible, dry, etc.). This information shall be provided in the Schedule of Unit Rates in Attachment 2.

Milestone F – Preparation of a Site Characterization Report

Following the completion of Milestone E, the selected bidder shall prepare an SCR that documents and discusses the data obtained and the conclusions drawn from the completion of the SOW contained within this RFB. The selected bidder shall include, as necessary, additional investigation work required for the successful characterization of the site. Additionally, the selected bidder shall incorporate a vapor intrusion evaluation with regard to the unleaded gasoline release into the SCR by comparing the soil and

groundwater data collected as a result of work described within this RFB to the PADEP's Vapor Intrusion Guidance Screening Values.

Tables, figures, and other attachments that support the text shall include but not be limited to the following:

- Updated comprehensive historical groundwater elevation data;
- Updated comprehensive historical groundwater analytical data;
- Site map (showing site boundaries and pertinent site features);
- Monitoring well and soil boring location maps (showing existing and new locations);
- Groundwater elevation isopleth maps for each comprehensive sampling round;
- Groundwater chemistry concentration isopleth (plume) maps for each analyte found to be above the RUA MSC in any well (for each sampling round);
- Laboratory analytical reports for groundwater and soil with chains of custody and field sampling documentation;
- Soil boring logs for new soil borings and well logs for groundwater monitoring wells;
- Results of the engineering survey; and
- Results of the geophysical survey;

Additionally, the selected bidder shall conduct a receptor survey for potential future remedial actions. The selected bidder shall perform the following tasks:

1. Review the PA Groundwater Information System (PAGWIS) records available from the PA Topographic and Geologic Survey website. This task shall include plotting all recorded wells within a ½-mile radius of the Site on a map and including a copy of the database records for that search distance in an appendix to the SCR, and
2. Perform a Pennsylvania Natural Diversity Inventory (PNDI) environmental review to evaluate for the presence of special concern species and resources. This review can be performed over the internet at <http://www.gis.dcnr.state.pa.us/hgis-er/Login.aspx>.

The selected bidder shall prepare the SCR in draft form for review and comment by the Solicitor and the PAUSTIF prior to submitting it to the PADEP. The bidders' schedule shall provide two weeks for this review.

Additional Information

In order to facilitate PAUSTIF's review and reimbursement of invoices submitted under this claim, the Solicitor requires that project costs be invoiced by the milestone tasks identified in the bid. The standard practice of tracking total cumulative costs by milestone will also be required to facilitate invoice review. Actual milestone payments will occur only after successful and documented completion of the work defined for each milestone. The selected consultant will

perform only those tasks/milestones that are necessary to reach the Objective identified in this RFB. Selected consultant will not perform, invoice, or be reimbursed for any unnecessary work completed under a Milestone.

Any “new conditions”, as defined in Attachment 1, arising during the execution of the SOW for any of the milestones may result in termination of or amendments to the Environmental Consulting Services Agreement. All necessary modifications to the executed Environmental Consulting Services Agreement will require the prior written approval of the Solicitor and the PAUSTIF. PADEP approval may also be required.

List of Attachments

1. Environmental Consulting Services Agreement
2. Bid Cost Spreadsheet
3. Site Information/Historic Documents
 - a. Site Map
 - b. Initial Site Characterization, April 1997
 - c. Underground Storage Tank Closure Report, January 1998
 - d. Dewatering Report, January 1998
 - e. Initial Site Assessment, January 1998
 - f. Fate and Transport Evaluation and Petition for Case Closure, February 2000
 - g. Site Update, July 21, 2003
 - h. PADEP Site Update Response Letter, August 8, 2003
 - i. Well Logs
 - j. Semi-Annual Site Update Reports