

# **COMPETITIVE FIXED-PRICE BID SOLICITATION**

## **SUPPLEMENTAL SITE CHARACTERIZATION, EXPOSURE EVALUATION / RISK ASSESSMENT, REVISED RAP-SSS PREPARATION, SOIL ATTAINMENT DEMONSTRATION, REMEDIAL ACTION COMPLETION REPORT, AND SITE CLOSURE ACTIVITIES**

**SNOW SHOE TRAVEL PLAZA  
529 EAST SYCAMORE ROAD  
SNOW SHOE TOWNSHIP, CENTRE COUNTY, PENNSYLVANIA 16874**

**PADEP FACILITY ID #14-08117  
PAUSTIF CLAIM #1998-383(F)**

*October 11, 2011*

This Request for Bid (RFB) Solicitation has been issued by the Pennsylvania Underground Storage Tank Indemnification Fund (PAUSTIF or "Fund") on behalf of the Claimants, Mr. Joginder and Karamjeet Grewal, owners of Snow Shoe Travel Plaza ("Site), who hereafter are referred to as "Clients" or "Solicitors". In general, this RFB references a scope of work (SOW) for activities leading up to and including a demonstration of attaining a combination of Pennsylvania Department of Environmental Protection (PADEP) Statewide Health Standards (SHS) and Site Specific Standards (SSS) followed by site environmental closure / restoration. The Snow Shoe Travel Plaza property supports active gasoline and diesel retail sales and a convenience store and is located at 529 East Sycamore Road, Snow Shoe Township, Centre County, PA.

The Solicitors have elected to pursue site environmental closure under Pennsylvania's storage tank regulations based on attaining PADEP Act 2 residential used aquifer SHS Medium Specific Concentrations (MSCs) for soil and SSS for groundwater. Implementation of the RFB SOW is expected to yield data sufficient to achieve these site closure objectives and secure a relief of liability under PADEP Act 2 regulations. The SOW (Tasks 1 through 9) described below will be subject to a Fixed-Price Agreement (see Attachment 2) to be executed by the Solicitors and the selected consultant.

The Solicitors request a written approach, schedule, and firm fixed-price bid to complete these tasks, which shall be completed in accordance with all applicable PADEP rules and regulations. Although not a party to this 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. The RFB tasks listed below are described in Section 3.

- Task 1. Install Shallow and Deep Well Pairs, Geotechnical Sampling and Wellhead Repairs;
- Task 2. Quarterly Groundwater Monitoring, Sampling and Reporting;
- Task 3. Soil Vapor Intrusion Assessment;
- Task 4. Aquifer Characterization Testing;
- Task 5. Quantitative Contaminant Fate and Transport Modeling;
- Task 6. Exposure Pathway Evaluation and Risk Assessment;
- Task 7. Prepare a Draft and Final RRAP (combination SSS / SHS);
- Task 8. Prepare a Draft and Final RACR; and
- Task 9. Environmental Closure / Restoration Activities.

Please note that **a bidder's response to this RFB Solicitation Package means it 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, bidders are still expected to describe their approach to completing the SOW in full and in detail.

Should your company elect to respond to this RFB Solicitation, **one copy of the signed bid package must be provided directly to the Funds' third-party administrator, ICF International (ICF)**, at the address and to the attention of the person identified in Section 1 below. In addition to this one hard copy submittal, **one electronic (PDF) copy of the complete bid response (a single PDF file) must be submitted to ICF on a compact disk (CD)** to be included with the hard copy bid response. The outside of the shipping package containing the bid response **must be clearly marked and labeled with "Bid – Claim #1998-383(F)."**

Please note that **the bid response (hard copy and digital version) is to be sent only to ICF** who will be responsible for opening the bids and providing copies to the Technical Contact and the Solicitor. No bid responses will be opened for review until the due date and time elapses. Submitted bid responses are subject to Pennsylvania's Right-To-Know law.

The signed bid package (hard copy and electronic copy) sent to ICF must arrive **no later than close of business (5 p.m.) on November 11, 2011**. Please note that if your bid response is not received by ICF by this due date and time, it will not be considered, i.e., only those bid responses received by the specified due date and time from those bidders who also attended the mandatory pre-bid site visit (see Section 6) will be considered.

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>). 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 / understood the historical site documentation.
- Understood site hydrogeologic conditions / assessed the dissolved-phase contaminant plume.
- Expressed the methods and personnel it will use to complete the exposure pathway evaluation / risk assessment.
- Conveyed confidence in demonstrating attainment of a combined SHS / SSS cleanup and obtaining a PADEP relief of liability for the subject property.
- Addressed all requirements of Tasks 1 through 9, including the requirement to prepare, submit and gain PADEP approval of a RACR.
- Designed a project approach and schedule that periodically takes stock of whether the remedial goal of demonstrating attainment with the residential used aquifer SHS-MSCs for soil and SSS for groundwater can be reasonably achieved at this site.

While the Technical Contact will assist ICF, PAUSTIF, and the Solicitors in evaluating the bid responses, it is up to the Solicitors to select their consultant from those bid responses deemed acceptable to PAUSTIF as reasonable, necessary, and appropriate. The Technical Contact will assist the Solicitors in communicating their choice of the successful bidder, which is anticipated to occur within six (6) weeks after receiving the bid responses.

## 1. ICF, SOLICITOR, AND TECHNICAL CONTACT INFORMATION

<u>ICF International</u>	<u>Solicitors</u>	<u>Technical Contact</u>
Ms. Linda Crabb ICF International 4000 Vine Street Middletown, PA 17057	Joginder and Karamjeet Grewal Snow Shoe Travel Plaza 529 E. Sycamore Rd. Snow Shoe, PA 16874	Mr. R. Michael Lowe Excalibur Group, LLC 4127 Bennett Drive Annandale, VA 22003 <a href="mailto:mlowe@excaliburgrp LLC.com">mlowe@excaliburgrp LLC.com</a>

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 seven (7) 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, PAUSTIF, or ICF unless agreed to in writing by the Technical Contact. This RFB Solicitation may be discussed with subcontractors and vendors to the extent required for preparing the bid response. If a bidder has specific questions it wishes to discuss with the PADEP, these questions should be provided to the Technical Contact who will forward them to the PADEP, but the PADEP may elect not to reply to any questions it receives.

Please note that unless a question can be successfully demonstrated to be proprietary in nature, all submitted questions and responses submitted 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

Based on file documentation, a chronology of key events that have occurred at the site is as follows:

- **1998** – When the subject property was previously owned by Nittany Oil Company, Inc. (Nittany Oil), five USTs (three 10,000-gallon diesel USTs, one 10,000-gallon gasoline UST and one 5,000-gallon gasoline UST) were removed from the ground along with approximately 100 tons of contaminated soil. The UST and soil removal work was completed on 9/21/98. Nittany Oil's consultant, Bolger Brothers, Inc. (BBI) reported that "...extensive soil contamination was encountered in the area of the UST excavation and the diesel and gasoline product distribution lines..." BBI's UST Closure Report stated that 200 ft. of steel piping was removed but leakage was evident at some fittings and noted additional obvious contaminated soil left in place. Sixteen soil samples were collected from the sidewalls of the excavation and laboratory analysis indicated that seven of the soil samples exceeded SHS. No soil samples were collected from beneath the USTs. An additional 14 soil samples were collected beneath the conveyance piping with eight of the samples containing contaminants greater than SHSs. Two water samples were collected from the bottom of the UST excavation and both exceeded SHS.

Following the removal of the UST systems, BBI initiated site characterization activities at the site and submitted a Site Characterization Report (SCR) on 11/11/98. BBI installed 21 soil borings to depths ranging from 4 to 15 feet below grade and converted four of the soil borings into 1-inch diameter groundwater monitoring wells designated as MW-1 through MW-4. BBI reported that the boring depths varied because of numerous zones of perched water and sandstone bedrock refusal. Results

from the soil sample analyses generally indicated shallow soil contamination from between 2 ft. to 8 ft. below grade. BBI estimated that groundwater flow was in an easterly direction but reported that the groundwater levels were likely elevated at that time because of an 8,000- to 10,000-gallon per day leak from a municipal water main located about 100 ft. upgradient of the release area. However, the SCR was silent regarding the presence of an on-property septic system and drain field located to the west of the diesel dispenser islands. BBI reported in the SCR that "...the limits of unsaturated and saturated soil contamination have been established..."

- **1999** – In January, BBI reportedly excavated an additional 2,245 tons of soil from areas outside the original UST and dispenser island areas. Soil samples were collected by BBI at 19 locations and all of the soil sample results were less than SHS. However, areas where soil samples exceeded SHSs (8A, 8B, 10, 14A, 14B, 18, and 21 collected from the outer limits of the soil investigation area during the 1998 soil excavation work) were not removed during this 1999 soil excavation event. Moreover, multiple excavation locations extended only to, but not beyond, borings that exhibited contamination greater than SHSs. Consequently, it appears that there was insufficient confirmation soil sampling conducted by BBI that verified that soil contamination did not extend beyond the impacted soil boring locations.

In April, BBI installed seven groundwater monitoring wells (MWs-5, -6, -7, -8, -9, -10, -11) that were screened from 5 ft. to 29.5 ft. below grade. Sandstone bedrock was encountered generally between 10 and 18 ft. below grade and a petroleum odor was noted at shallow depths (1-10 ft. below grade) on the boring / well construction logs generated for MWs-5, -6, and -7.

On May 9, 1999, the current consultant of record, Groundwater & Environmental Services, Inc. (GES) acting as a subcontractor to BBI, conducted a pumping test on MW-6 while monitoring hydraulic influence in MW-5 and MWs-7 through -11. The pumping test was identified by GES as a Remedial Feasibility Study (RFS). GES used their mobile Data Acquisition and Processing Laboratory (DAPL) unit to conduct the pumping test. The reported purpose of the pumping test was to assess applicable technologies for remediation of hydrocarbon impacted groundwater. During the test, groundwater was pumped from MW-6 for 5.5 hours at a flow rate of approximately 1.3 gallons per minute (gpm). Following the pumping test, groundwater recharge in MW-6 was monitored for 38 minutes. A drawdown of 0.12 ft. was observed in MW-7 located 52 ft. from the extraction well, MW-6. No drawdown was observed in any of the other wells monitored during the pumping test. Based on these test results, GES concluded that the site could be hydraulically controlled by groundwater extraction.

In July, BBI installed six additional groundwater monitoring wells (MWs-12, -13, -14, -15, -16, and -17) to establish the limits of groundwater contamination. Sandstone was generally encountered between 13-20 ft. below grade and a petroleum odor was noted at shallow depths on the boring / well construction logs generated for MWs-12, -16, and -17. Following the initial groundwater monitoring event for these six wells, BBI installed two additional wells (MWs-18 and -19) in October. Groundwater monitoring wells MW-12 through MW-19 were installed to a depth of 30 ft. and were screened from 5 ft. to 30 ft. below grade.

On 11/24/99, BBI submitted a combined SCR / Feasibility Study / Remedial Action Plan (RAP) wherein BBI concluded that the "...extensive soil sampling analysis has demonstrated that residual soil contamination is at levels that are currently below SHS..."<sup>1</sup> The RAP specified remediation of the uppermost aquifer using a pump and treat system.<sup>2</sup> BBI proposed in the RAP that top-loading pneumatic pumps be installed in MWs-6, -9, -10, -15, -16 and -17 and that use of these wells will

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<sup>1</sup> As noted earlier, soil borings 8A, 8B, 10, 14A, 14B, 18, and 21 collected from the outer limits of the soil investigation area during the 1998 soil sampling event were not excavated during this soil excavation event.

<sup>2</sup> Bidders should note that MWs-5 through -19 are screened from the overburden into sandstone bedrock (5 ft. below grade to about 30 ft. below grade).

achieve hydraulic control for the known groundwater impact. The remedial system was designed for a groundwater extraction flow rate of 15 gpm and would utilize an oil/water separator, air stripper, iron removal filter, and liquid- and vapor-phase granular activated carbon to treat extracted groundwater. Treated water was discharged into an intermittent stream located along the eastern side of the property under a NPDES permit. GES's SCR / Feasibility Study / Remedial Action Plan (RAP) did not provide a remedial feasibility / alternatives analysis that evaluated other potential remedial technologies that could be used to address both soil and groundwater contamination at the site.

On 12/14/99 the PADEP conditionally approved the SCR / RAP pursuing SHSs. The approval was contingent upon installing more groundwater monitoring wells north of MW-10 and southwest of MW-16. PADEP's conditional approval letter directed the facility owner to follow the schedule in the SCR / RAP but there was no schedule included in the document.

- **2000** – In August 2000 the pump and treat remedial system was started by BBI. The treatment system installation included installing pumps in the wells identified above, installation of pipe trenches and underground remedial system piping, installation of a remediation shed and electrical hook-up, and installation of asphalt paving over the remedial system pipe trenches.

In August, BBI notified ICF that they had encountered a “foaming” problem with the remedial system. The suspected cause of the foaming problem was that one or more of the remedial system extraction wells were capturing groundwater from the facility septic system leach field which was used as a drain field for the facility showers. BBI added a de-sudsing chemical to the remedial system influent to address the problem.

- **2001 – 2002** – In 2001, the PADEP allowed a reduction of groundwater sampling in select wells thereby reducing the total number of wells to seven groundwater monitoring wells and six extraction wells. In June 2002, BBI requested and received approval from the PADEP to modify extraction wells MW-9, MW-16, and MW-18 to increase the flow rate of groundwater extraction.
- **2003** – BBI either merged with or was purchased by GES who subsequently became the claimant's consultant.

GES informed ICF that they intended to modify the remedial system by installing three additional extraction wells based on their discussions with the PADEP who expressed concern that the existing recovery well network appeared to not be adequately controlling downgradient migration of MTBE. GES and the PADEP reportedly discussed treating the area downgradient of the release using *in situ* chemical oxidation but GES abandoned the proposed plan due to the size of the target treatment area and the presence of sandstone bedrock which would likely require extensive feasibility testing of the remedial technology.

On 8/13/13, Nittany Oil notified the Fund that it sold the property to the current owners, Joginder and Karamjeet Grewal. Following the sale of the property, on 10/2/03 GES submitted a Revised RAP (RRAP) that specified converting three groundwater monitoring wells (MWs-18, -19, and -20) to groundwater extraction wells and adding three new groundwater monitoring wells (MWs-22, -23, and -24). The RRAP also provided a summary of the remedial actions completed to date which included pumping / treating 2,110,000 gallons of groundwater since system startup in August 2000 to 10/2/03. GES requested and the PADEP approved (on 10/22/03), reduced quarterly groundwater monitoring wherein GES would be required to continue quarterly groundwater monitoring on extraction wells MWs-6, -9, -10, -15, -16, and -17 and plume perimeter groundwater monitoring wells MWs-8, -12, -13, -18, -19, -20, and -21.<sup>3</sup> The remaining wells would require annual groundwater monitoring / sampling.

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<sup>3</sup> Bidders should note that MW-7 contained SPL during the monitoring period of 2001 through 2003 but this well was not proposed by GES to be included in the expanded pump and treat program.

- **2004** – In January, GES submitted a letter to the PADEP describing a proposed remedial system upgrade to address effluent dissolved iron concentrations in excess of the NPDES permit limitations following the issuance of a Notice of Violation (NOV) to the facility owner. On 2/18/04, the PADEP approved the remedial system modification to reduce elevated dissolved iron concentrations. GES installed an oxygen diffuser and 150-gallon conical-bottom sediment tank to mitigate the dissolved iron issue.

In July, GES informed the Fund that the three new extraction wells (MMs-18, -19, and -20) had been brought on-line; however, GES indicated in its 3<sup>rd</sup> and 4<sup>th</sup> Quarter 2004 RAPRs that these wells were not used as extraction wells from July to September of 2004.

GES stated in its 3<sup>rd</sup> Quarter 2004 RAPR that groundwater mounding observed at the site "...is believed to have been caused by the increased infiltration through the former excavation and from water leaving the restroom septic leach field located south of the restroom..." suggesting that after six years of site characterization and four years of remedial system operation, there remained uncertainty about the direction of groundwater flow at the site.<sup>4</sup>

- **2005 – 2007** - In January 2007, ICF contacted GES and requested that GES evaluate closing the site using a risk-based Site Specific Standard via pathway elimination. GES responded by stating that closing the site under the SSS would not be possible because: a) groundwater contaminants of concern (COCs) periodically exceeded SHS in MW-22 and MW-23 which are located near the downgradient property boundary adjacent to the Pennsylvania Department of Transportation (PennDOT) right of way (ROW); b) pursuit of site closure under the SSS would require acceptance of deed restrictions imposed by PADEP on the PennDOT ROW because the contaminant plume had potentially migrated beyond the property boundary; and c) preliminary conversations with PennDOT revealed that a deed restriction placed on its property would likely be unacceptable.

Also in January 2005, GES reportedly was evaluating alternative remedial strategies that included bioremediation and *in situ* chemical oxidation injection even though remedial feasibility testing or a remedial alternatives analysis was never completed to determine the viability of these technologies.

In March 2005, GES submitted a written inquiry to PennDOT regarding their receptivity to allowing a deed restriction imposed by PADEP on its ROW referring to assessing the "...plausibility of the application of the PADEP site specific standards (SSS) for the ongoing remedial action of a documented petroleum release..."

On 11/15/05, ICF sent a letter to GES requesting a response regarding: a) the overall effectiveness of GES's long standing remedial actions; b) when GES's on-going remediation will lead to successful site closure; and c) what additional measures could be taken to cost-effectively accelerate closure. GES continued to operate the remedial system and conduct quarterly groundwater monitoring, sampling and reporting and, on 7/19/07, GES submitted a report to PADEP concluding that contaminated soil is still present at the site from 2-7 ft. below grade in three distinct on-site areas representing 1,300 cubic yards of contaminated source material.

On 8/13/07, ICF sent a letter to GES requesting that GES re-evaluate the nature and extent of on-site soil contamination to determine if significant *in-situ* contaminant mass, among other factors, may be contributing to persistent groundwater contamination and the slow progress of the remedial system. ICF requested that GES develop and submit a proposal by 8/27/07 that contained a detailed written draft work plan (e.g., soil excavation, staging, loading, transportation and disposal (T&D), groundwater management, soil attainment demonstration sampling, backfilling, site restoration, etc.) and cost estimate to fully address the three areas of impacted soil identified at the site.

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<sup>4</sup> Bidders should note that as of the 3<sup>rd</sup> Quarter 2004 RAPR, the location of the septic system leach field had not yet been identified in any of the documents provided to the PADEP.

GES submitted its work plan and cost estimate on 8/27/07 that included soil excavation coordination, permitting, contaminated soil excavation by GES's subcontractor, staging, loading, T&D, excavation dewatering, soil attainment sampling (using PADEP's "No Exceedance Rule") and reporting, and site restoration.

After negotiation of the soil excavation work plan and cost estimate, GES submitted a revised proposal on 12/10/07 wherein it included soil excavation coordination, permitting, excavation oversight, excavation dewatering, soil attainment sampling (using PADEP's "No Exceedance Rule") and reporting, and site restoration. The claimant requested that he contract directly with the excavation contractor, Maxwell Trucking & Excavating, Inc. (Maxwell) who would perform contaminated soil excavation, staging, loading, T&D, backfilling, and site restoration work.

**2008** – In April 2008, GES performed oversight activities of the soil excavation that was composed of the three areas identified by GES as containing contaminated soil at concentrations greater than SHS. Prior to performing excavation operations, Maxwell saw-cut and removed the asphalt over the proposed excavation areas. All three areas were excavated to a depth of about 8 ft. below grade. While excavating soil from the southern-most area, an engineered trench, approximately 3-4 ft. wide and 3 ft. deep was discovered at the base of the excavation. The trench contained, black stained aggregate, was filled with groundwater that exhibited strong petroleum hydrocarbon odors, and traversed the site in a north to south direction. Maxwell continued to excavate the trench to the north where it ultimately intersected the original UST cavity. The engineered trench was about 12-15 ft. below grade at the former UST cavity interface.

After Maxwell excavated the trench in a northerly direction, it continued to excavate in a southerly direction. As the excavation advanced further to the south, the trench became shallower and "daylighted" at the ground surface in the unpaved area of the site about 75 ft. from the southern property boundary. Maxwell excavated three exploratory trenches perpendicular to the north / south axis of the trench to determine if there were additional impacts to soil beyond the engineered trench. No evidence of soil contamination was noted in the perpendicular trenches excavated by Maxwell.<sup>5</sup>

GES performed dewatering activities and on-site treatment of groundwater extracted from the excavation. Groundwater was pumped through bag filters, treated with liquid phase granular activated carbon and then discharged via a temporary NPDES permit into the intermittent stream located parallel to the eastern property boundary. GES reportedly extracted and treated approximately 900,000 gallons of water during the soil excavation activities.

GES also collected 47 soil attainment demonstration samples from the sidewalls and base of the excavation. GES used PADEP's "No Exceedance Rule" to demonstrate attainment of the SHS for soil. None of the soil samples collected by GES contained concentrations of PADEP unleaded gasoline constituents greater than SHS. GES submitted a Draft Soil Excavation Report (addressed to Scott Fergusson of the PADEP) to ICF for review on 7/7/08 but according to Mr. Fergusson, the final version of the report was never submitted by GES to the PADEP. According to Excalibur's discussions with Mr. Fergusson, the soil data contained in GES's report should be submitted in the RACR by the selected consultant. **No further soil attainment sampling needs to be conducted at the site as it appears that attainment of the SHS for soil can be demonstrated using these existing data.**

At the conclusion of soil excavation activities, Maxwell backfilled the excavation with staged, clean soil and imported backfill, followed by asphalt paving. Prior to backfilling the excavation, GES repaired the underground piping leading to some of the pumping wells that had been damaged during excavation operations. Bidders should also note that the PADEP approved the deactivation of the

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<sup>5</sup> The function of the engineered trench is unknown but it is suspected that it was constructed to dewater the UST cavity to facilitate UST installation. It appeared that the trench served as a conduit for groundwater contaminant migration to the southern end of the subject property following the release.

remedial system during and following excavation operations and the remedial system has not been reactivated since the soil excavation activities were initiated.

During the soil excavation operations, Excalibur examined all of the extraction and groundwater monitoring wells at the site. We noted that the original pumping wells (MWs-6, -9, -10, -15, -16 and -17) were protected by 3-4 ft. diameter manhole covers designed for storm or sanitary sewers. The 6-inch diameter well casings within the sewer manholes were not equipped with well cap seals because the pump piping exited the tops of the well casings rather than from the sidewalls. GES staff reported to Excalibur that the top of the recovery well casings were frequently submerged in several feet of water that accumulated in the manholes apparently from surface run-off and that water had to be pumped out of the manholes to facilitate gauging and collecting samples from the wells. Excalibur also noted that the "surface water retention tray" installed beneath each manhole cover was in very poor condition (i.e., cracks, holes) and likely allowed surface water to infiltrate the interior of the manhole.

- **2009 – Present** – On 2/7/11, GES submitted a letter to the PADEP that included a site map depicting the locations of proposed monitoring well pairs and requested that select wells be removed from the groundwater monitoring program.<sup>6</sup> The proposed wells to be removed from the groundwater monitoring program included MWs-1, -2, -3, -4, -5, -6, -7, -9, -13, -15, -17, -18, and -20.<sup>7</sup> On 2/17/11, the PADEP responded to GES's groundwater monitoring well reduction request and indicated that all wells specified in GES's 2/7/11 letter could be removed from the groundwater monitoring well program with the exception of MW-20. GES currently continues to perform routine quarterly groundwater monitoring, sampling and reporting.

Bidders should refer to the accompanying electronic files for additional background information on this site (see Attachment 1 for a list of these documents).<sup>8</sup> Bidders should carefully consider what information, analyses, and interpretations contained in Attachment 1 can be used in performing the SOW outlined in this RFB.

### 3. SCOPE OF WORK OBJECTIVES

The Solicitors seek 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 being considered non-responsive.**

Once the contract is signed, any modification to the selected consultant's SOW for Tasks 1 through 9 will require prior written approval by the Solicitors **and PAUSTIF** through its third-party administrator, and may require PADEP pre-approval.

The selected consultant's approach to completing the SOW will 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 and

<sup>6</sup> Bidders should note that MWs-1, -2, -3, -4, -5, -7, -11, -14 had been recently sampled by GES annually although GES reported that MW-1 was destroyed and they have been unable to locate MWs-2, -3, and -4.

<sup>7</sup> Bidders should note that MWs-6, -9, -15, -17, -18, and -20 are remedial system pumping wells.

<sup>8</sup> The best scanned-in version of each document available to the Technical Contact has been provided.

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 project schedule must specify no less than two (2) weeks for the Solicitors and PAUSTIF to review and comment on the draft RRAP and draft RACR (Tasks 7 and 8) before these reports are finalized and submitted to the PADEP for review and comment. The draft RRAP shall be submitted to the Solicitors and PAUSTIF for review within seven (7) months of contract award. The draft RACR shall be submitted to the Solicitors and PAUSTIF for review within ten (10) months of contract award. Note that Task 9 would be performed following PADEP approval of the RACR. Therefore, the bid shall include time to address any PADEP comments received on the RRAP as well as the 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 be 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.). Project planning and management activities will also include preparing and implementing plans for Health and Safety, Waste Management, Field Sampling/Analysis, and/or other plans that may be required by regulations or that may be necessary and appropriate to complete the SOW, and shall also include activities related to establishing any necessary access agreements. Project management costs shall be included in the fixed-price quoted for Tasks 1 through 9, as appropriate.
- 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 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 Tasks 1 through 9, as appropriate.
- Be responsible for providing the Solicitor with adequate advance notice prior to each visit to the property. The purpose of this notification is to coordinate with the Solicitor to ensure that appropriate areas of the property are accessible. Return visits to the site prompted by a failure to make the necessary logistical arrangements in advance will **not** constitute a change in the selected consultant's SOW or total project cost for Tasks 1 through 9.
- 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 contract 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 – Install Shallow and Deep Well Pairs, Geotechnical Sampling and Wellhead Repairs.**

Under this task, bidders shall provide a firm fixed-price cost for installing five (5) groundwater monitoring well pairs at the approximate locations indicated on the attached site plan (Figure 1). Bidders should note that these locations have been reviewed and approved by the PADEP. In general, each of the five well pairs shall consist of: 1) one shallow well installed to intercept groundwater within the unconsolidated overburden materials; and 2) one deeper well installed to intercept the first groundwater-bearing zone encountered in bedrock (10 wells total). Because the existing deeper wells are constructed to straddle both the overburden and underlying bedrock water-bearing horizons, the extent and magnitude of dissolved impacts along with the direction of groundwater flow within these individual horizons is unclear.

This type of well construction is also problematic in that it does not allow a meaningful determination of hydraulic properties or contaminant fate and transport because of the substantive differences between the overburden and bedrock aquifer materials. Therefore, the intent of the new well pairs to be installed under this task is to support the combined SHS / SSS closure through providing and evaluating discrete data for the overburden and shallow bedrock groundwater-bearing horizons.

For this bid solicitation, bidders shall assume that each shallow overburden groundwater monitoring well will attain a total depth of 15 feet below grade (ft-bg). Each overburden well boring shall be advanced using 4-1/4-inch inside diameter (ID) hollow-stem augers in conjunction with continuous split-spoon soil sampling. Bidders shall assume that borings for the deeper bedrock wells will be advanced to a total depth of 35 ft-bg via air-rotary / air hammer or a combination of hollow-stem augers and air-rotary / air hammer drilling methods.<sup>9</sup> Permanent outer surface casing shall be installed within each of the deeper bedrock well borings to seal-off impacted, or potentially impacted, groundwater within the overburden before advancing the borings to total depth. The casing shall be set at least three feet into competent bedrock and grouted in place. The grout shall be allowed to cure for a minimum 24-hour period before resuming drilling to total depth. Bidders may specify the use of either threaded or collared steel or polyvinylchloride (PVC) permanent outer surface casing. For costing purposes, bidders shall assume using 20 feet of surface casing in each of the five bedrock well borings. Should more or less casing be needed, bidders shall provide an all-inclusive unit cost per foot to install and grout the casing. Also, in the event that more or less drilling footage is required beyond that estimated above for the shallow and deeper wells, bidders shall provide a unit cost per foot for any additional borehole advancement, logging, screening and well installation.

Although no soil samples will be collected for laboratory analysis of unleaded gasoline parameters, one soil sample shall be collected from the saturated overburden materials at a background location and analyzed for fraction organic carbon to assist with the fate-and-transport modeling effort (Task 5). A portion of this sample shall also be analyzed for the pre-March 2008 PADEP short list of unleaded gasoline parameters to verify background conditions. In addition, two Shelby tube samples shall be obtained from the saturated overburden materials and analyzed by an accredited geotechnical laboratory for total porosity, bulk density, and wash sieve to also assist with the fate and transport modeling. One Shelby tube sample shall be collected from a well boring located in natural materials (if encountered) and the other sample shall be collected from a well boring located in fill material.<sup>10</sup>

The ten new groundwater monitoring wells shall be constructed in accordance with the PADEP Groundwater Monitoring Guidance Manual. In general, bidders shall assume constructing each well using 2-inch diameter Schedule 40 PVC casing and well screen. With respect to the five shallow monitoring wells, final well construction must ensure that the screened interval intersects the water table surface and accounts for seasonal groundwater fluctuations. Should a shallow overburden well be installed with a submerged screen, this well will be replaced at the selected consultant's sole expense. With respect to the five deeper bedrock wells, bidders shall assume using no more than 5 to 10 feet of screen<sup>11</sup> to ensure that the targeted bedrock groundwater zone is isolated from groundwater present within the overburden. Annulus materials shall consist of a filter-pack of silica sand extending to a height of approximately one to two feet above the top of the screen section overlain by two to three feet of hydrated bentonite pellets as a well seal. The remaining annulus shall be filled with a cement / bentonite slurry to a depth of approximately one ft-bg. Surface finishing shall consist of an expandable locking cap

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<sup>9</sup> Should hollow-stem augers be used, note that continuous split-spoon soil sampling of the overburden materials in the deeper well borings will not be necessary (i.e., continuous sampling of the overburden materials within the shallow well boring in each well pair will be sufficient).

<sup>10</sup> Bidders should note that native materials may exist in the NE corner of the property where one of the new wells pairs is to be installed. Based on the 2008 contaminated soil excavation, the overburden in the southern end of the property appears to be primarily composed of fill material.

<sup>11</sup> At the discretion of the selected consultant based on well depth and hydrogeologic conditions.

fitted to the top of the PVC riser and a flush-mounted traffic-rated manhole with a bolt-on lid set into a 2 ft by 2 ft concrete pad. The shallow and deep well in each well pair shall be separated by a horizontal distance no greater than that deemed necessary to prevent jeopardizing the integrity of the completed well as the other well is being advanced / installed.

Each bidder's fixed-price cost for this task shall account for: (a) identifying subsurface utilities and other buried features of concern including, but not necessarily limited to, contacting PA One Call and clearing each borehole location to a minimum depth of 5 ft-bg using vacuum excavation; (b) well development activities; (c) management of investigation-derived wastes; and (d) professional surveying of the new well locations and top-of-casing elevations. Well drilling / installation and development activities along with supporting documentation (e.g., waste manifests, boring logs and construction details, etc.) shall be documented in a concurrent quarterly Remedial Action Progress Report (RAPR), in the RRAP and in the RACR. Bidders shall manage liquid and solid wastes generated by the well drilling / installation / and development activities (including PPE) in accordance with standard industry practices and applicable laws, regulations, guidance, and PADEP directives.

#### Repairs to Existing Wellheads

The surface seals for several existing groundwater monitoring and recovery wells are inadequate and may potentially allow contaminants to enter these wells from surface runoff and serve as a source of impact to groundwater. To remedy this situation, the selected bidder shall inspect all existing active and inactive monitoring and recovery wells and complete reasonable and necessary limited repairs to insure an adequate surface seal and security at the wellhead including; a) replacing missing or malfunctioning leak-proof caps at the top of the riser pipe; b) replacing worn or missing manhole lid gaskets; c) replacing missing or stripped manhole bolts; and d) replacing missing or malfunctioning locks. Pumps and piping shall be removed from the inactive recovery wells, as needed, to ensure an adequate seal at the top of the well casing. For the purpose of this bid solicitation, bidders shall assume a total of 10 wells will require such limited surface repairs. Bidders shall also provide a unit cost per well in the event that more than 10 wells need repaired. If deemed necessary and appropriate, any manhole and pad replacement will be considered out-of-scope and subject to the new conditions clause of the fixed-price Agreement.

**Task 2 –Quarterly Groundwater Monitoring, Sampling and Reporting.** Under this task, the ongoing program of quarterly groundwater monitoring, sampling and reporting shall be continued until the RACR (Task 8) has been approved by the PADEP. Considering the scope of work described in this RFB, PADEP approval of the RACR would reasonably be expected to occur within one-year of contract execution with the selected consultant. Therefore, bidders shall provide a firm fixed-price to complete four quarters of groundwater monitoring, sampling and reporting. In accordance with the PADEP's 2/17/11 letter granting a reduction in the number of wells to be monitored and sampled quarterly (see Attachment 1), each quarterly event shall include 21 wells (MW-8, MW-10, MW-11, MW-12, MW-14, MW-16, MW-19, MW-21, MW-22, MW-23, MW-24, and the five new well pairs to be installed under Task 1). The conduct and results of each event shall be documented in quarterly RAPRs.<sup>12</sup> Bidders shall provide a comprehensive fixed unit cost per quarterly monitoring, sampling and reporting event should more than four events become necessary.

During each quarterly groundwater monitoring and sampling event, the depth to groundwater and any potential separate-phase hydrocarbons (SPH) shall be gauged in each monitoring well designated for sample collection and prior to purging any of these wells for sampling. Groundwater level measurements

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<sup>12</sup> PADEP suggests that groundwater monitoring reports (GMRs) be referred to as RAPRs which are due to the PADEP on January 30, April 30, July 30, and October 30.

obtained from the monitoring wells shall be converted to groundwater elevations for assessing groundwater flow direction and hydraulic gradient.<sup>13</sup>

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. 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.<sup>14</sup> In addition, each event shall include measurements for these field parameters: pH, temperature, specific conductance, dissolved oxygen (measured in-situ), and oxidation/reduction potential.

The RAPRs describing the sampling methods and results will be provided to the PADEP on a quarterly basis and within 30 days of the receipt of analytical results for each quarter. At a minimum, each RAPR shall contain the following: a) a narrative description of the sampling procedures and results; b) tabulated data from current quarterly and all historical data; c) maps depicting groundwater flow directions and groundwater analytical data; d) for each well exceeding SHS, a graphical depiction of recent key contaminant concentration trends; and e) 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 reported in the RRAP (Task 7) and RACR (Task 8).

**Task 3 – Soil Vapor Intrusion Assessment.** Under this task, bidders shall provide a fixed-price cost for conducting a soil vapor study based on developing and submitting a Soil Vapor Sampling Plan to the PADEP for its review and approval. This plan shall be consistent with the requirements, guidance, and decision matrices in the *Land Recycling Program Technical Guidance Manual – Section IV.A.4, Vapor Intrusion into Buildings from Soil and Groundwater*. For the purpose of this bid solicitation, bidders shall assume installing and sampling of a total of five (5) soil vapor monitoring points generally positioned adjacent to the southern side and southeast corner of the ‘Citgo Shop’ building and the northern and western sides of the “metal garage” building. Each bid shall depict the proposed soil vapor monitoring point locations on Figure 1 attached to this RFB and describe the proposed monitoring point depth and construction. Additionally, bidders shall quote a comprehensive unit price per soil vapor monitoring point, inclusive of installation, sampling, analysis and reporting, should the PADEP require more or fewer monitoring points. The installed 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. The soil vapor monitoring points shall be installed during the well installation activities to be completed under Task 1.

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<sup>13</sup> Note that the depths to groundwater measured in the 21 wells designated for sample collection, and the resultant groundwater elevations, will represent data from wells intercepting only the overburden, only the shallow fractured bedrock, or both of these horizons. Therefore, the selected consultant must consider the technical implications of this mixed dataset in its evaluation of groundwater movement.

<sup>14</sup> Each bidder’s approach to implementing Task 2 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.

Each 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 soil vapor study shall be described in a concurrent quarterly RAPR along with any recommendations regarding the necessity for an expanded vapor intrusion assessment inclusive of indoor air quality sampling, if necessary. The soil vapor study shall also be described in the RRAP and RACR.

**Task 4 – Aquifer Characterization Testing.** In order to establish hydraulic characteristics for the shallow unconsolidated and deeper bedrock water-bearing horizons, provide input for the contaminant fate-and-transport modeling (Task 5), and assist with refining the conceptual site model, the successful bidder shall conduct single-well aquifer characterization tests (slug testing) on each of the five new well pairs installed under Task 1 (slug testing at ten well locations total). Either a rising or falling head slug test shall be completed at each well location as determined by the selected bidder based on well construction and groundwater level information. The test results would be expected to provide reasonable site-wide average hydraulic conductivity values for the shallow overburden and deeper bedrock horizons and account for potential local variation in hydraulic properties. The slug testing will be performed according to accepted industry standards and the data will be reduced / evaluated using appropriate methods (e.g., Bouwer and Rice slug test solution for determining the hydraulic conductivity of unconfined aquifers with completely or partially penetrating wells [1976]).

Bidders shall provide a firm fixed-price cost to conduct slug testing at the ten new well locations and reduce / evaluate the data along with a detailed description of the proposed slug test procedures and the planned techniques for reducing the data. Documentation of the slug testing methods, results and conclusions shall be provided in a concurrent quarterly RAPR, as well as the RRAP and RACR, and the slug testing results shall be utilized in the fate-and-transport modeling described under Task 5.

**Task 5 - Quantitative Contaminant Fate and Transport Modeling.** After the additional groundwater monitoring well pairs have been installed and sampled at least two times (Tasks 1 and 2) and after collecting and evaluating the aquifer characterization test data (Task 4), quantitative contaminant fate-and-transport models shall be developed for the shallow overburden and underlying bedrock horizons to address all dissolved-phase constituents whose concentrations exceed the relevant PADEP SHS-MSCs for groundwater. In general, the contaminant fate-and-transport modeling shall rely primarily on hydraulic, groundwater quality and other relevant data generated from the five new well pairs to be installed under Task 1.

The selected modeling applications shall also be suitable for the site conditions. Although there are intrinsic differences in aquifer characteristics between the overburden and the underlying fractured bedrock, bidders shall assume both these groundwater-bearing horizons shall be modeled using the New Quick Domenico (QD) model. Prior to implementing this task, the selected consultant shall confer with the PADEP project officer for concurrence on the modeling applications proposed for use at this site.<sup>15</sup> Note that an extensive modeling effort for the bedrock horizon is not anticipated considering the relatively low levels of dissolved contaminants currently exceeding the SHS on-property and at the property boundary, the expected limited areal extent of these contaminants exceeding the SHS, and other site conditions.

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<sup>15</sup> Should the PADEP request an alternative modeling method(s) that result in increased project costs, such work will be subject to the “New Conditions” provision of the Fixed-Price Agreement.

Bidders shall provide a firm fixed-price cost to develop calibrated, contaminant fate-and-transport models utilizing data generated from the site characterization tasks described above and any relevant historical site characterization data. The fixed-price cost for this task shall also include documenting the modeling effort in the RRAP (Task 7) and RACR (Task 8), which shall include describing all model input / output, providing an explanation of model construction, identification and justification of all input parameter values and sources, and a discussion of modeling results and conclusions at a level of detail appropriate to demonstrate the reliability and veracity of the models.

Environmental data currently available for this site suggest that the application of such surface water modeling applications as SWLOAD5B and PENTOXSD are probably not necessary to assess potential impacts to downgradient surface water. Should the additional site characterization data indicate that contaminant loading to surface water needs to be evaluated, such modeling will be subject to the "New Conditions" provision of the Fixed-Price Agreement.

**Task 6 – Exposure Pathway Evaluation and Risk Assessment, Truck Wash Well.** Under this task, bidders shall provide a fixed-price cost for performing an exposure evaluation and risk assessment. This task shall include conducting an exposure pathway analysis to 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 site to commercial use, excluding future groundwater use, and protecting future construction/utility worker activities). A residential / commercial well use survey and evaluation of local groundwater ordinances shall also be performed as part of this task, as well as research concerning zoning ordinances, flood zones, and future land use plans for the properties in the area of concern.

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:<sup>16</sup>

- 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 concentrations in soil and groundwater do not screen out when compared to the USEPA Region 3 risk-based screening levels, i.e., if constituent concentrations are less than the risk-based screening levels, it is not a COPC.<sup>17</sup> 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

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<sup>16</sup> All four elements are necessary for an exposure pathway to be deemed complete; otherwise, the pathway is not complete and there is no risk.

<sup>17</sup> Constituent concentrations are to be screened against the USEPA Region 3 risk-based screening levels 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.

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 Region 3 risk assessment screening criteria insofar as is necessary for determining any potential ecological risk.

The exposure evaluation / risk assessment shall determine whether a non-potable production well located somewhere on the property for commercial truck wash use would present an unacceptable level of risk to human health.

After completing the exposure analysis and risk assessment, the selected consultant will present its draft findings to the Solicitor and PAUSTIF for review and comment within the RRAP (Task 7).

Regarding the 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 completed by the current consultant of record. Searches of any other available public and private water supply databases shall also be conducted. Based on the current distribution of dissolved contaminants and largely undeveloped nature of the surrounding properties, additional assessment of the groundwater pathway beyond the work specified above is not anticipated. However, in the event that the PADEP requires other groundwater assessment activities, such as a door-to-door water supply survey and private water supply sampling, completion of these activities would be subject to the "New Conditions" provision of the Fixed-Price Agreement.

**Task 7 – Prepare a Draft and Final RRAP (combination SSS / SHS).** The 11/24/99 SCR / RAP prepared by the current consultant of record, as approved by the PADEP on 12/14/99, proposed site closure under the SHS for soil and groundwater. However, the Solicitor now wishes to close this site and obtain a PADEP Relief of Liability (ROL) under the SHS for soil and under SSS for groundwater.<sup>18</sup> Therefore, the bidder shall provide a firm fixed-price for developing a RRAP which presents and describes this alternative site closure strategy. The RRAP shall contain all applicable historical information required under 25 PA Code §245.311 and all newly developed data and analyses under the contract stemming from this RFB. The RRAP contents shall be of sufficient quality to reasonably expect PADEP approval. Each bidder's project schedule shall provide two (2) weeks for Solicitor and PAUSTIF

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<sup>18</sup> Closure for site soil shall involve demonstrating attainment of the SHS MSCs for a used aquifer in a residential setting and the SSS closure strategy for site groundwater shall involve a combination of pathway elimination (via on-site deed restriction), post-remedial care (for off-site impacts, if necessary) and site-specific numerical risk evaluation for pathways that cannot be readily eliminated via institutional controls.

review of the draft document. The final RRAP shall address any comments received from the Solicitor and PAUSTIF on the draft report before it is submitted to the PADEP for its review.

The RRAP shall describe the conduct and results of Tasks 1 through 6 performed in support of the combined SHS / SSS site closure strategy. The RRAP shall also discuss the planned preparation of a RACR (Task 8) and site restoration (Task 9). Additionally, the RRAP shall include the draft environmental covenant (EC) for the subject property, a post-remedial care plan for off-site properties (if necessary)<sup>19</sup> and a petition to PADEP for an environmental covenant waiver for adjacent roadways (if necessary).<sup>20</sup> The RRAP shall also: (a) incorporate any historical information that the selected consultant deems appropriate; (b) include all necessary figures, tabulated data and appendices; and (c) provide a detailed schedule for implementing this alternative remedial approach.

The draft EC for the Snow Shoe Travel Plaza property shall preclude future installation of wells for potable use in order to eliminate the groundwater ingestion and related potentially complete pathways. To the extent vapor intrusion sampling indicates this to be a complete pathway presenting unacceptable risks, the EC shall include a requirement for vapor barriers to be installed in future building construction. The selected consultant shall write the draft EC to potentially allow a groundwater supply well in a designated non-impacted on-property area that will be used solely as a non-potable source of water for a future truck wash provided that the owner of the property completes the studies necessary to show that the water from the well will never be impacted above SHS and the owner of the property obtains PADEP written agreement / concurrence.<sup>21</sup> Assisting the Solicitor with finalizing the environmental covenant will subsequently be conducted under Task 8.

Note that the schedule and cost for Task 7 shall anticipate addressing any PADEP comments on the RRAP. The RRAP shall be signed and sealed by a Professional Geologist **and** a Professional Engineer registered in the Commonwealth of Pennsylvania.

**Task 8 – Prepare a Draft and Final RACR.** Under this task, the bidder shall provide a fixed-price cost to prepare a draft and final RACR following the completion of Tasks 1 through 7 above. At a minimum, the RACR shall: (a) detail the methods and results of pre- and post-RRAP implementation work (Tasks 1 through 7); (b) discuss the selected closure criteria for the site with conclusions of how the data support the SHS closure for soil and SSS for groundwater; (c) provide a demonstration of attainment under the SHS for soil; (d) provide a demonstration of attainment of site-specific risk based standards for groundwater contaminants; and (e) request permanent closure for the site for the current release under an Act 2 ROL. 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. Quarterly groundwater data collected from new and pre-existing wells since the RRAP was submitted shall be used to confirm conclusions presented in the RRAP.

The RACR shall also include the final copy of the finalized, signed and notarized environmental covenant and the final post-remedial care plan (if any). Note that the selected consultant shall assist the Solicitors with finalizing the draft environmental covenant for the property and that 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

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<sup>19</sup> Post-remedial care may be necessary depending on the fate and transport modeling results, the extent of the off-property dissolved contaminant plume, and the projected distance the plume could travel.

<sup>20</sup> It is our understanding that the PADEP will not require an environmental covenant waiver for the downgradient PADOT property to the south (Interstate Route 80 cloverleaf).

<sup>21</sup> Although the PADEP has indicated it will consider this request based on the large size of the property and possibility for restricting coverage of the environmental covenant, should the Department not approve installation of the groundwater supply well, the proposed truck wash will utilize the available public water supply.

that will be executed for this RFB solicitation (i.e., the successful bidder will not be expected to subcontract legal services).

In order to demonstrate soil attainment under the SHS, the RACR shall provide a thorough discussion of the sampling locations, sample selection criteria, sampling methods and analytical results provided from the biased no-exceedance soil sampling program that was completed during the extensive 2008 soil excavation work. In general, the analytical data set consists of 47 biased soil samples for which no constituents of concern exceeded the applicable regulatory standards. Sampling methods, sample selection criteria, analytical results and a figure depicting the soil sampling locations are described / provided in the 7/7/08 Draft Soil Excavation Report contained in Attachment 1 of this RFB.

The project schedule shall allow two (2) weeks for Solicitor and PAUSTIF review of the draft 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 RACR to the PADEP in accordance with Section 245.313. The RACR shall be signed and sealed by a Professional Geologist **and** a Professional Engineer registered in the Commonwealth of Pennsylvania.

**Task 9 – Environmental Closure / Restoration Activities.** Under this task, bidders shall describe and provide a fixed-price cost for properly closing the site, including: a) removal of the above-grade elements of the idled groundwater pump & treat remediation system; b) abandonment of all monitoring / recovery wells and below-grade remediation system piping consistent with PADEP guidelines;<sup>22</sup> c) well head removals; d) any site re-grading that may be needed due to conduct of past corrective action activities; and e) re-vegetation and asphalt / concrete repairs, as necessary.

The selected consultant shall determine whether the Solicitor wishes to maintain any components of the remedial system (e.g., the equipment shed) before removing them from the property for proper disposal.<sup>23</sup> This task shall also include photo-documenting the site restoration work and completion of well abandonment forms. Well abandonment forms shall be forwarded to the Pennsylvania Bureau of Topographic and Geologic Survey. Additionally, copies of these photographs and forms shall be provided for the Solicitor's files.

#### 4. TYPE OF CONTRACT / PRICING

The Solicitors wish to execute a mutually agreeable, firm, 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.<sup>24</sup> The Fund will facilitate negotiations between the Solicitors and the selected consultant toward executing this Fixed-Price Agreement.

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<sup>22</sup> Groundwater monitoring wells at the site 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 Abandonment Forms shall be forwarded to PADEP so they can close their files on this facility. Should in-place abandonment of the existing monitoring/recovery wells and/or below-grade remedial system piping not be acceptable to the PADEP, alternate methods that result in increased project costs will be subject to the "New Conditions" provision of the Fixed-Price Agreement.

<sup>23</sup> Task 9 of the Request for Bid specifies appropriate off-property disposal of any remedial system components that are not retained by the Solicitor. However, should a bidder choose to sell these components to a third party for salvage, recycling / reconditioning, or reuse, any proceeds recovered from the sale of such components shall be credited back to the Fund when the contract milestone for Task 9 is invoiced. Disposal records or documents from the sale of the components supporting the Fund credit shall be provided along with the invoice.

<sup>24</sup> The selected consultant will be provided an electronic copy of the sample contract in Word format to allow contract-specific information to be added.

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 Solicitors and the PAUSTIF.

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:

- Milestone A – Install Shallow and Deep Well Pairs, Geotechnical Sampling and Wellhead Repairs (Task 1).
- Milestone B1 through B4 – Quarterly Groundwater Monitoring, Sampling and Reporting (Task 2). Note that the schedule assumes four Milestone B payments.
- Milestone C1 and C2 – Soil Vapor Intrusion Assessment (Task 3). Note that the schedule assumes two Milestone C payments.
- Milestone D – Aquifer Characterization Testing (Task 4).
- Milestone E – Quantitative Contaminant Fate and Transport Modeling (Task 5).
- Milestone F – Exposure Pathway Evaluation and Risk Assessment (Task 6).
- Milestone G – Prepare a Draft and Final RRAP w/ Draft ECs (combination SSS / SHS) (Task 7).
- Milestone H – Prepare a Draft and Final RACR (Task 8).
- Milestone I – Environmental Closure / Restoration Activities (Task 9).

**TABLE 2 – SAMPLE MILESTONE COMPLETION / PAYMENT SCHEDULE**

Estimated Milestone Timing Month After Contract Award	SOW Activities Anticipated / Completed for that Month	Milestone <sup>1</sup>
2	Install Shallow and Deep Well Pairs, Geotechnical Sampling and Wellhead Repairs; Continued Quarterly Groundwater Monitoring, Sampling and Reporting; Soil Vapor Intrusion Assessment (monitoring point installation and first sampling event); Soil Vapor Intrusion Assessment (second sampling event)	A, B1, C1, C2

Estimated Milestone Timing Month After Contract Award	SOW Activities Anticipated / Completed for that Month	Milestone <sup>1</sup>
4	Continued Quarterly Groundwater Monitoring, Sampling and Reporting	B2
5	Aquifer Characterization Testing	D
6	Quantitative Contaminant Fate and Transport Model; Exposure Evaluation and Risk Assessment	E, F
7	Prepare a Draft and Final RRAP w/ Draft ECs; Continued Quarterly Groundwater Monitoring, Sampling and Reporting	G, B3
10	Continued Quarterly Groundwater Monitoring, Sampling and Reporting; Prepare a Draft and Final RACR	B4, H
13	Site Closure / Restoration Activities	I

1. 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 deliverable deadlines 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 Release of Liability from the PADEP) under either the SHS and/or the Site Specific Standard (*do not include UST removals / closures*)? [NOTE: The Solicitors require 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 RRAP and 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 Solicitors and ICF / PAUSTIF will be kept informed as to project progress and developments and how the Solicitors will be informed of, and participate in, evaluating potential alternatives / tradeoffs with regard to the SOW.

## 6. MANDATORY PRE-BID SITE VISIT

On **Thursday, October 20, 2011**, 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

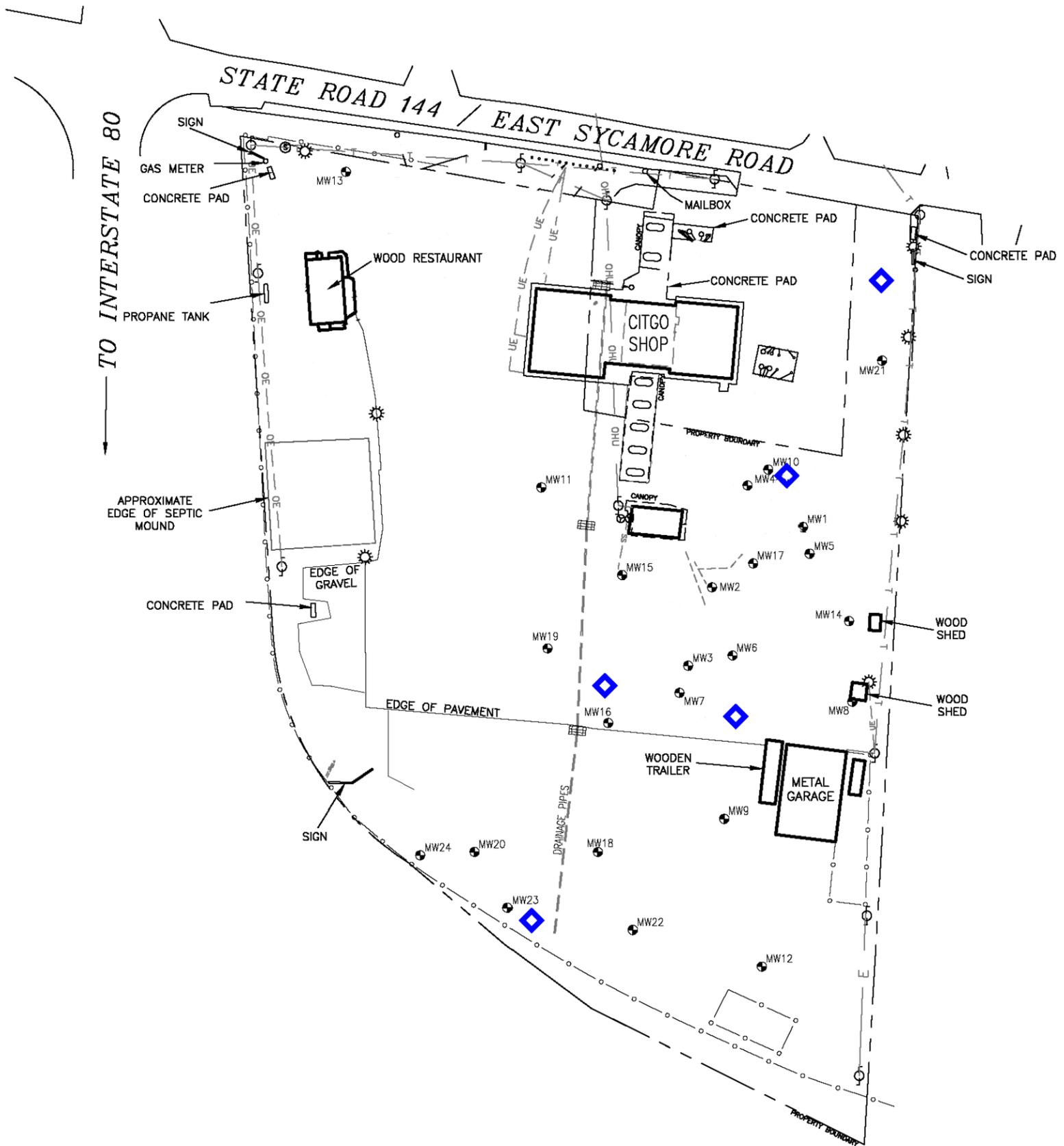
minimize the number of assumptions, special conditions, and exemptions referenced in the submitted bid response.<sup>25</sup>

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<sup>25</sup> 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.

**Figure 1**

**Proposed Monitoring Well Pair Locations**



**LEGEND**

- STREET LIGHT
- SANITARY SEWER MANHOLE
- UTILITY POLE
- CATCH BASIN
- DISPENSER ISLAND
- CHAIN LINK FENCE
- MONITORING WELL
- OVERHEAD UTILITY (ELECTRIC/TELEPHONE)
- OVERHEAD ELECTRIC LINE
- UNDERGROUND ELECTRIC LINE
- OVERHEAD TELEPHONE LINE
- UNDERGROUND SANITARY SEWER LINE
- UNDERGROUND UNKNOWN UTILITY
- PROPOSED SHALLOW/DEEP WELL LOCATION

DRAFTED BY:	<b>PROPOSED SHALLOW &amp; DEEP AQUIFER MONITORING WELL LOCATION MAP</b>		
CHECKED BY:	<b>JOGINDER GREWAL</b>		
REVIEWED BY:	<b>SNOW SHOE TRAVEL PLAZA</b>		
	<b>EXIT 22 INTERSTATE 80</b>		
	<b>SNOW SHOE, PENNSYLVANIA</b>		
<b>NORTH</b>			
	SCALE IN FEET 	DATE 2-12-08	FIGURE 1

## ATTACHMENT 1

### Relevant Project Documents

<u>Filename:</u>	<u>Document:</u>
981109_UST Closure Report_BBI.pdf	November 9, 1998 Bolger Brothers' UST closure report
981111_SCR_BBI.pdf	November 11, 1998 Bolger Brothers' SCR
991127_SC_RFS_RAP Report.pdf	November 27, 1999 Site Characterization Report / Remedial Feasibility Study / Remedial Action Plan
991214_SCR_RAP Approval_w Mods_PADEP.pdf	December 14, 1999 PADEP approval of Site Characterization Report and Remedial Action Plan
010218_Treatment Syst. Mods Approval_PADEP.pdf	February 18, 2001 PADEP approval of remedial system modifications to address elevated iron concentration in effluent discharge
031002_RAP Revisions_GES.pdf	October 2, 2003 GES-requested RAP revisions
031022_RAP Approval_PADEP.pdf	October 22, 2003 PADEP RAP-revisions approval letter
050119_Est. Life Cycle Costs_GES_No Cost Data.pdf	January 19, 2005 closure plan
051115_Remedial System Assessment_ICF.pdf	November 15, 2005 evaluation of remedial system performance
061025_Response_060926 GES Proposal_ICF.pdf	October 25, 2006 ICF response to GES's September 26, 2006 proposal
070719_Additional Soil Investigation_GES.pdf	July 19, 2007 report describing GES' additional soil investigation activities
080707_DRAFT Soil Excavation Report.pdf	July 7, 2008 draft report describing GES' 2008 soil removal effort and sampling results
110207_Monitoring Reduction Request_GES	February 7, 2011 request by GES to reduce groundwater monitoring well sampling / reporting
110217_Quarterly MW Reduction Approval_PADEP	February 17, 2011 PADEP approval of monitoring reduction request
04 Q3 RAPR.pdf	Third Quarter 2004 Remedial Action Progress Report
04 Q4 RAPR.pdf	Fourth Quarter 2004 Remedial Action Progress Report
06 Q1 RAPR.pdf	First Quarter 2006 Remedial Action Progress Report
06 Q2 RAPR.pdf	Second Quarter 2006 Remedial Action Progress Report
06 Q3 RAPR.pdf	Third Quarter 2006 Remedial Action Progress Report
07 Q2 RAPR.pdf	Second Quarter 2007 Remedial Action Progress Report
07 Q3 RAPR.pdf	Third Quarter 2007 Remedial Action Progress Report

## ATTACHMENT 1 (continued)

<b><u>Filename:</u></b>	<b><u>Document:</u></b>
07 Q4 RAPR.pdf	Fourth Quarter 2007 Remedial Action Progress Report
08 Q1 RAPR.pdf	First Quarter 2008 Remedial Action Progress Report
08 Q2_Q3 RAPR.pdf	Second and Third Quarters 2008 Remedial Action Progress Report
08 Q4 RAPR.pdf	Fourth Quarter 2008 Remedial Action Progress Report
09 Q2 RAPR.pdf	Second Quarter 2009 Remedial Action Progress Report
09 Q3 RAPR.pdf	Third Quarter 2009 Remedial Action Progress Report
09 Q4 RAPR.pdf	Fourth Quarter 2009 Remedial Action Progress Report
10 Q1 RAPR.pdf	First Quarter 2010 Remedial Action Progress Report
10 Q2 RAPR.pdf	Second Quarter 2010 Remedial Action Progress Report
10 Q3 RAPR.pdf	Third Quarter 2010 Remedial Action Progress Report
10 Q4 RAPR.pdf	Fourth Quarter 2010 Remedial Action Progress Report
11 Q1 RAPR.pdf	First Quarter 2011 Remedial Action Progress Report
11 Q2 RAPR.pdf	Second Quarter 2011 Remedial Action Progress Report

## **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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**REMEDIATION AGREEMENT**

PADEP Facility ID #:[##-#####]

USTIF Claim #:[####-####(x)]

This agreement (“Agreement”) is entered into as of the \_\_\_\_ day of \_\_\_\_ [Insert Year], by and between [Insert Owner’s Name] and [Insert Facility Name] (Client’), with a principal place of business at [Insert Address] and [Insert Environmental Consulting Firm Name and (Appropriate Acronym)], (“Consultant”) a [Insert State Name] Corporation with its principal place of business at [Insert Environmental Consultant’s Address] (collectively, the “Parties”).

**RECITALS**

WHEREAS, the Pennsylvania Department of Environmental Protection (“DEP”) has determined that corrective action of a petroleum release at a regulated underground storage tank (“UST”) site is required (“Remediation”).

WHEREAS, the Pennsylvania Underground Storage Tank Indemnification Fund (“Fund”) has also determined the Remediation is eligible for reimbursement.

WHEREAS, the Client desires that Consultant perform the scope of work described in Exhibit A to this Agreement (the “Scope of Work”) for a total fixed cost (see Exhibit B).

WHEREAS, the Fund is not a party to this Agreement, but agrees to dedicate funds for the payment of reasonable corrective action costs in connection with the Remediation so long as the Fund is provided with reporting and monitoring data in accordance with this Agreement to assure that payment is warranted based upon the conditions of this Agreement.

NOW THEREFORE, in consideration of the obligations, covenants and conditions set forth in this Agreement, the Parties, intending to be legally bound, agree as follows:

**1. Recitals Incorporated**

The above recitals are hereby incorporated as if fully set forth herein.

**2. Responsibilities of Consultant**

- a) Consultant shall, as an independent contractor to Client, perform the Scope of Work.
- b) The Scope of Work shall be performed in accordance with all applicable federal, state, and local rules and regulations, including the requirements of the Storage Tank and Spill Prevention Act (Act 32 of 1989, as amended) and Pa. Code, Title 25, Chapter 245, meeting and demonstrating attainment of the Standard (as defined in Exhibit A) 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 Scope of Work will be completed consistent with Remedial System Design [or Insert name of Appropriate Document], dated [Insert Date] and Response to Telephone Conversation [or Insert name of Appropriate Document] of [Insert Date] that contained clarifications on the Remedial System Design [or Insert name of Appropriate Document] dated [Insert Date]. Both documents are included for reference as Exhibit D of this Agreement. Any significant modification to the Scope of

## **DRAFT**

Work will require approval of the Client, Pennsylvania Department of Environmental Protection (PADEP), and the Fund.

- c) Consultant shall perform the Scope of Work for a total fixed price (“TFP”) of **[Insert Dollar Value]**, subject to all other provisions of this Agreement.
- d) Consultant shall attend periodic site meetings with the Fund and Client for site status updates. The Fund will provide Consultant ten (10) days written notice of the meeting.

### **3. Responsibilities of Client**

- a. Client shall exclusively retain the services of Consultant to perform the Scope of Work, in accordance with, and subject to, the other provisions of this Agreement.
- b. Client shall provide access for Consultant and its subcontractors, to the Site, and shall enter into any other access agreements with other third party property owners, as necessary to complete the performance of the Scope of Work.
- c. Client shall, as necessary to complete the Scope of Work: (i) cooperate and assist Consultant with the preparation and submittal of all information and documents including, without limitation, correspondence, notices, reports, data submittals, restrictive covenants, engineering and institutional controls, and the like, and (ii) implement and maintain any engineering or institutional controls.
- d. Client shall transmit to Consultant copies of all documentation, correspondence, reports, and the like, sent or received by Client, regarding the environmental conditions at the Site.

### **4. Period of Performance**

This Agreement shall be effective from the date first above written until the Scope of Work is completed by Consultant, subject to the other provisions of this Agreement.

### **5. Standard of Care**

Consultant will perform the Scope of Work and other services with the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services under similar conditions in the same or similar locality. The foregoing is in lieu of all other warranties, express or implied, including warranties of marketability or fitness for a particular purpose.

### **6. Fees and Payment**

- a. Consultant shall submit a payment request (“Payment Request”) to the Client for approval using the form in Exhibit C, upon the completion of milestones as described in Exhibit B and Exhibit C. The Client-approved Payment Request will then be submitted to the Fund for payment.
- b. **[Paragraph 6b applies only to performance-based contracts. Delete paragraph 6b if the contract is NOT performance-based.]**

## DRAFT

If Consultant is able to obtain the final milestone prior to completing the other milestones, all milestones payments are due and payable to Consultant.

- c. Client shall use the Fund to satisfy the Payment Request in connection with the performance of the Scopes of Work under the following conditions:
  - i. Client shall submit all necessary documentation to effectuate Consultant's direct payment from the Fund;
  - ii. Should the Fund be temporarily suspended or permanently terminated, Client shall reimburse Consultant for any unpaid Payment Requests and interest, within 30 days of notification by Consultant of such suspension or termination. Interest is calculated as 0.75% per month on outstanding amounts;
  - iii. In all cases where Consultant is ultimately paid by the Fund for eligible amounts paid by Client, Consultant will refund to Client such amounts;
  - iv. Should Fund guidelines be substantially changed, either party may terminate this Agreement with or without cause upon a 30 day written notice. Consultant shall be paid any outstanding unclaimed amounts due from Client at the time of such termination within thirty (30) days of notice of termination; and
  - v. To ensure payment, Consultant will perform the Scope of Work and remedial actions for the TFP and in accordance with PADEP approved RAP and, if necessary, the PADEP-approved RAP addendum.

### 7. Insurance

During the performance of this Agreement, Consultant will carry and maintain the following insurance coverage:

- a. Workers Compensation Insurance - at the statutory limits, and Employer's liability with a limit of not less than \$1,000,000 each occurrence.
- b. Automobile Liability and coverage on all vehicles owned, hired, or used in performance of this Agreement with limits not less than \$1,000,000 – Bodily Injury and Property Damage combined single limit and aggregate.
- c. Comprehensive General Liability Insurance – as well as coverage on all equipment (other than motor vehicles licensed for highway use) owned, hired, or used in the performance of this Agreement with limits not less than \$1,000,000 each occurrence and \$2,000,000 in the aggregate.
- d. Pollution Liability/Professional Liability at \$1,000,000 per occurrence and \$2,000,000 in the aggregate.

### 8. Performance Product and Warranty

**[Delete the paragraph below and replace with "Not Applicable." if the contract scope of work cannot reasonably be expected to remediate the site to the selected cleanup standards and the contract scope of work does not include a demonstration of attainment]**

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Consultant estimates that the demonstration of attainment with the approved PADEP standard for all compounds listed in the Scope of Work will commence following **[Insert number of quarters] (Insert number of months)** of operation after the start-up of the Remedial System. If such demonstration of attainment cannot be initiated within this defined schedule, Consultant shall conduct the pre-defined Additional Measures (as defined in Exhibit A). If demonstration of attainment cannot be initiated at the end of the Additional Measures, Consultant may, at its option, forgo the remaining milestone payments, terminate this Agreement, and be released from any further obligation.

### **9. Equipment Loss or Damage**

Consultant owned items used for the Agreement that are damaged or destroyed by acts of nature, improper design, installation, maintenance or handling, theft, or vandalism are at the sole expense of the Consultant. All other items shall be replaced at the expense of Client.

### **10. Non-performance by Remediation Contractor**

Except as provided in Section 8, if Consultant fails to meet any specification of the Scope of Work as outlined in this document, the Client or the Fund shall notify Consultant by certified letter of the deficiency(ies). If Consultant does not correct the deficiency(ies) within thirty (30) days, Consultant shall be in breach of contract and the Client may void the contract or the Fund may withhold any further payment. Consultant shall be notified by certified letter that the contract is void and if any invoices are payable upon review and approval by the Fund. If Consultant corrects the deficiency(ies) within 30 days, the contract will continue.

### **11. Cancellation**

- a. The TFP shall not be increased except upon the occurrence of a “New Condition” as defined in this section.
- b. A “New Condition” exists when one or more the following events occur and, as the result of such event, Consultant has demonstrated that the cost and/or period of time necessary to accomplish the Scope of Work is increased:
  - i. The discovery of New Contamination (defined as any presence or release, or any portion of a presence or release, of any regulated substance including, without limitation, petroleum that impacts soil, sediments, surface water and/or groundwater and did not exist or was not identified in the Baseline Conditions). Without limiting the definition of New Contamination, New Contamination includes:
    - a documented tank, line and/or dispenser failure, or surface spill, that impacts soil, sediments, surface water and/or groundwater;
    - the discovery of unknown or abandoned underground storage tanks and/or lines and associated equipment that demonstrate that they have caused a release of oil or hazardous material to the environment and this release causes a substantial increase in the scope of work and costs;
    - the detection of any dissolved regulated substances not previously detected at the site; and
    - increases in dissolved regulated substance(s) greater than 100 times the maximum concentration of such regulated substance(s) measured during the two years prior to the execution of this agreement for more than two consecutive quarters, provided

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that this increase is not attributed directly to the remedial actions being conducted or the deactivation of the remedial actions;

- ii. Construction or reconfiguration of the Site, to the extent that it interferes with the Scope of Work;
  - iii. Promulgation of new, or change in interpretation of existing, federal, state, or local law, regulation, ordinance or written policy;
  - iv. Limitation of access to the Site or adjacent properties, changes in access, significant changes in access agreements, access that requires the institution of administrative or legal action, or access that requires unreasonable or uncustomary monetary expenditures;
  - v. Demands, claims or lawsuits, and the like, that impact the progress of the remediation or requires additional effort not accounted for in the Scope of Work;
  - vi. Non-payment or continuous late payment of Consultant invoices. Continuous late payment is defined as at least two payments not received for more than 60 days after submittal of associated Payment Requests within a calendar year; or
  - vii. One or more of site specific assumptions provided in Exhibit A no longer remain true and accurate.
- c. Upon the discovery or occurrence of any New Condition,
- i. Consultant shall notify Client in writing, describing the details of such New Condition; and
  - ii. Consultant shall provide an additional scope of work and associated cost estimate to account for such New Condition (“Out of Scope Work”) for Client’s approval and authorization. Upon Client approval, Consultant shall continue with the original Scope of Work and perform the Out of Scope Work, with the Out of Scope Work performed on a time and materials, unit cost or lump sum basis as Consultant and Client shall agree; or
  - iii. If Consultant and Client are unable to agree as provided above as to the value of the Out of Scope Work, Consultant, in its sole discretion, may terminate this Agreement. Upon such termination, Consultant shall be paid for all incurred and outstanding costs, fees and expenses as of the date of termination and all reasonable demobilization costs and Consultant shall have no further obligations under this Agreement. If Consultant is released from this Agreement, all environmental remediation and monitoring equipment and material purchased solely for the execution of this Scope of Work shall remain onsite and in usable state/condition.

## 12. Indemnity

Consultant shall indemnify and hold Client harmless from and against any liabilities, losses, claims, orders, damages, fines and penalties (collectively, “Claims”) arising out of or related to negligent acts or omissions of Consultant in the performance of the Scopes of Work. Client shall indemnify and hold Consultant harmless from and against any Claims arising out of or related to

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(i) the negligent acts or omissions, or violations of Law, of Client and (ii) regulated substances, including petroleum, that are present at, released to or from, treated at, or removed from, the site.

### 13. Closure

**[Delete the paragraph below and replace with “Not Applicable.” if the contract scope of work does not include a demonstration of attainment and RACR]**

The Consultant shall remove all associated remediation equipment and materials including utilities from the site within sixty (60) days of receipt of DEP approval of its Remedial Action Completion Report. The Consultant shall abandon all wells (including preexisting wells from the site characterization), borings, trenches, and piping/utility runs installed by the Consultant as part of corrective action in accordance with all applicable requirements within 60 days of receipt of DEP approval of its Remedial Action Completion Report. Disruption of the Client’s normal business shall be kept to a minimum. The Consultant shall return the site to the condition prior to initiation of the Scope of Work. Conditions prior to initiation of the Scope of Work will be established by preparing detailed site plans and photographic documentation.

### 14. Governing Law and Assignment

This Agreement shall be governed by and construed in accordance with the laws of the State of Pennsylvania and it may not be assigned without the prior written consent of the other party.

### 15. Modification

No modification to or waiver of any term of this Agreement shall be valid unless it is in writing and signed by both parties.

### 16. Integration

This Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior agreements and understandings (whether written or oral) between the parties.

### 17. Order of Precedence

In the event of a conflict in the terms and conditions of this Agreement, the following order of precedence shall apply:

- A. This Agreement
- B. The Scope of Work (Exhibit A)
- C. Schedule of Fixed Prices (Exhibit B)
- D. Consultant Bid Response [**or Proposal**] Document dated [**Insert Date of Bid Response**]
- E. The Request for Bid Document dated [**Insert Date of RFB Document**]
- F. Task Orders (if applicable)
- G. Other Contract Documents

### 18. Notice

Any notice, request, demand or communication which is or may be required to be given



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**EXHIBIT A  
SCOPE OF WORK**

(Scope of Work is defined here as described in Section 2b)

**Location:** [Insert Facility Address]

**Goals:**

**[Delete the following paragraphs and substitute contract-specific goals if the contract scope of work cannot reasonably be expected to remediate the site to the selected cleanup standards and the contract scope of work does not include a demonstration of attainment]**

The goal of this project is to cost effectively clean up the site in a reasonable timeframe to obtain a PADEP Relief of Liability under Act 2 by achieving the remediation standard(s) specified for soil and groundwater in a PADEP-approved RAP.

Obtain Pennsylvania Department of Environmental Protection (PADEP) approval of Final Remediation Completion Report using a PADEP approved standard for benzene, toluene, ethylbenzene, xylenes, methyl-tert-butyl ether (MTBE), isopropylbenzene, and naphthalene (the compounds of concern or COCs) (the “Standard”), associated with the documented releases of **[Insert name of released product]** on **[Insert Date]** and **[Insert Additional Dates, if necessary]** which are referenced as PADEP Facility Identification Number **[Insert Facility ID Number]**.

**Strategy/Scope of Work:**

The Strategy/Scope of Work is described in the Bid Response Document dated **[Insert Date]** and the Request for Bid Document dated **[Insert Date of RFB Document]**, with the following exceptions:

- **[Insert Site Specific Information or “None”]**

**Site Specific Assumptions:**

The Site Specific Assumptions are described in the Bid Response Document dated **[Insert Date]** and the Request for Bid Document dated **[Insert Date of RFB Document]**, with the following exceptions:

- **[Insert Site Specific Assumptions or “None”]**

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**EXHIBIT B**  
**Schedule of Fixed Prices**  
{INSERT SITE-SPECIFIC INFORMATION}

**Milestones:**

ID	Milestones Sub-Milestones	Estimated Schedule to Complete	Amount (dollars \$)
A	Remedial Action Plan Final Design, specifications, procurement, purchase of equipment and groundwater monitoring	1 quarter Q1	\$Insert Amount
B1	Remedial System Installation: Trenching & piping and groundwater monitoring	1 quarter Q2	\$ Insert Amount
B2	Remedial System Installation: Equipment Installation, Start-up of System, 1 <sup>st</sup> quarter of Remedial System O&M and groundwater monitoring	1 quarter Q3	\$ Insert Amount
C1	Remedial System O&M & Groundwater Monitoring	1 quarter Q4	\$ Insert Amount
C2	Remedial System O&M & Groundwater Monitoring	1 quarter Q5	\$ Insert Amount
C3	Remedial System O&M & Groundwater Monitoring	1 quarter Q6	\$ Insert Amount
C4	Remedial System O&M & Groundwater Monitoring	1 quarter Q7	\$ Insert Amount
C5	Remedial System O&M & Groundwater Monitoring	1 quarter Q8	\$ Insert Amount
C6	Remedial System O&M & Groundwater Monitoring	1 quarter Q9	\$ Insert Amount
C7	Remedial System O&M & Groundwater Monitoring	1 quarter Q10	\$ Insert Amount
C8	Remedial System O&M & Groundwater Monitoring	1 quarter Q11	\$ Insert Amount
C9	Remedial System O&M & Groundwater Monitoring	1 quarter Q12	\$ Insert Amount
C10	Remedial System O&M & Groundwater Monitoring	1 quarter Q13	\$ Insert Amount
C11	Remedial System O&M & Groundwater Monitoring	1 quarter Q14	\$ Insert Amount
D1	Attainment Sampling: Soil & Groundwater	1 quarter Q15	\$ Insert Amount
D2	Attainment Sampling: Groundwater	1quarter Q16	\$ Insert Amount
D3	Attainment Sampling: Groundwater	1quarter Q17	\$ Insert Amount
D4	Attainment Sampling: Groundwater	1quarter Q18	\$ Insert Amount
D5	Attainment Sampling: Groundwater	1quarter Q19	\$ Insert Amount
D6	Attainment Sampling: Groundwater	1quarter Q20	\$ Insert Amount
D7	Attainment Sampling: Groundwater	1quarter Q21	\$ Insert Amount
D8	Attainment Sampling: Groundwater	1quarter	\$ Insert

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		Q22	Amount
F	DEP Approval of the Final Remediation Completion Report and Post Remediation Activities/Site Restoration	2 quarters Q24	\$ Insert Amount
	TOTAL CONTRACT CEILING		\$Insert Total Amount

**Additional Measures:**

**[Delete the paragraph below and replace with “Not Applicable.” if Section 8 also contains the words “Not Applicable”]**

If demonstration of attainment of the Standard can not be initiated within this defined schedule, Consultant shall conduct the following additional measures (“Additional Measures”):

- Perform four (4) quarters (12 months) of Remedial System O&M and Groundwater Monitoring.

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**EXHIBIT C  
PAYMENT REQUEST SCHEDULE**

{INSERT SITE-SPECIFIC INFORMATION INTO THIS TABLE}

<b>Milestone Identification</b>		<b>Supporting Documentation</b>	<b>Completion Date (months)</b>	<b>Payment Request Amount (\$)</b>
A	Remedial Action Plan Final Design, specifications, procurement, purchase of equipment and groundwater monitoring	<ul style="list-style-type: none"><li>▪ RAP Final Design &amp; Specifications</li><li>▪ DEP approval letter of RAP</li><li>▪ Groundwater Sampling Report</li></ul>		
B1	Remedial System Installation: Trenching & piping and groundwater monitoring	<ul style="list-style-type: none"><li>▪ Design Specifications</li><li>▪ Vendor Invoices</li><li>▪ Groundwater Sampling Report</li><li>▪ Photo Documentation</li></ul>		
B2	Remedial System Installation (in accordance with this Agreement Section 2b): Equipment Installation, Start-up of System, 1 <sup>st</sup> quarter of Remedial System O&M and groundwater monitoring	<ul style="list-style-type: none"><li>▪ Remediation Status Progress Report with groundwater sampling results and remedial system performance data (hours in operation, gallons extracted and treated, extraction wells operating, repairs and notes)</li><li>▪ Photo Documentation</li></ul>		
C1-11	Remedial System O&M & Groundwater Monitoring	<ul style="list-style-type: none"><li>▪ Remediation Status Progress Report with Groundwater Sampling results</li></ul>		
D1	Attainment Sampling: Soil & Groundwater	<ul style="list-style-type: none"><li>▪ Soil &amp; Groundwater Attainment Sampling Report</li></ul>		
D2-8	Attainment Sampling: Groundwater	<ul style="list-style-type: none"><li>▪ Groundwater Attainment Sampling Report</li></ul>		
F	DEP Approval of Remedial Completion Report, and Post Remediation Activities/Site Restoration	<ul style="list-style-type: none"><li>▪ DEP Approval Letter of Remedial Action Completion Report</li><li>▪ Letter report verifying well abandonment by Licensed Driller and PG</li><li>▪ Photo Documentation</li></ul>		

**DRAFT**

**EXHIBIT D  
SUPPORTING DOCUMENTS**

*Request for Bid  
PAUSTIF #1998-383(F)  
Snow Shoe Travel Plaza  
Snow Shoe, PA  
October 11, 2011*

## **ATTACHMENT 3**

### **Standardized Bid Format**