

**COMPETITIVE BID SOLICITATION
FIXED-PRICE DEFINED SCOPE OF WORK TO COMPLETE
ADDITIONAL SITE CHARACTERIZATION ACTIVITIES**

**Gore's Friendly Service
340 W. 4th Street (Intersection of Route 120 & Route 46)
Emporium Borough, Cameron County, Pennsylvania
PADEP Facility ID # 12-21838; USTIF Claim # 2000-0139(M)**

August 19, 2010

ICF International (ICF), on behalf of the Pennsylvania Underground Storage Tank Indemnification Fund (USTIF), is providing this Request for Bid (RFB) to prepare and submit a fixed price proposal for a defined scope of work (SOW) to complete additional site characterization activities at the Gore's Friendly Service facility (the site).

Corrective action under Chapter 245 is being conducted in response to a confirmed petroleum release at the site in 1998. A Site Characterization Report and Remedial Action Plan (SCR/RAP; dated October 16, 2006) were submitted by Harris Environmental Services, Inc. (Harris) to the Pennsylvania Department of Environmental Protection (PaDEP) and were approved with modifications. The PaDEP also approved a Non-Use Aquifer Determination (NUAD) for the site in 2006. A Supplemental Site Characterization Report (SSCR) was submitted by Groundwater Sciences Corporation (GSC) to the PaDEP on April 3, 2008. A revised RAP, specifying source removal and the SSS as the remedial standard for the site, was submitted by Groundwater Sciences Corporation (GSC) to the PaDEP on March 23, 2009. The PaDEP approved the SSCR and revised RAP with modifications in correspondence dated April 10, 2009. The tank owner ceased retail petroleum dispensing operations in early 2009 and removal of the remaining retail petroleum USTs, removal of additional newly discovered abandoned USTs, and additional soil excavation was conducted in July of 2009. In discussions between GSC, ICF and the PaDEP, the PaDEP verbally agreed that no additional active remediation under the SSS would be necessary following the 2009 UST removal and soil excavation activities. The general SOW for this RFB Solicitation is to obtain access to three off-site properties, complete off-site groundwater plume delineation and on- and off-site soil vapor assessment activities, and prepare and submit a PaDEP-approvable SSCR.

The Solicitor, Witter Gas & Oil Company, Inc. (Witter), has an open claim (claim number referenced above) with the USTIF and the corrective action work will be completed under this claim. Reimbursement of Solicitor-approved, reasonable, necessary, and appropriate costs up to claim limits for the corrective action work described in this RFB will be provided by the USTIF.

Should your company elect to respond to this RFB Solicitation, one (1) copy of the signed bid package must be provided directly to the ICF International (ICF) Claims Handler at the address indicated below. In addition to the one hard copy submittal, the bid package must also be submitted in electronic format (Adobe PDF format) on a CD to be included with the hard copy bid package to the ICF Claims Handler. **The outside of the bid package must be clearly labeled with "BID – CLAIM # 2000-0139(M)".** No bid packages will be accepted via email.

The ICF Claims Handler and the Technical Contact will assist¹ the Solicitor in evaluating the competitive bids received; however, it is the Solicitor who will ultimately select the successful bidder with whom it will negotiate a mutually agreeable contract.

The signed response to this RFB (both hard copy and electronic copy) must be provided as directed above no later than close of business (5 p.m. EST) on October 8, 2010. Bid evaluation will consider, among other factors, estimated total cost, unit costs, schedule, discussion of technical and regulatory approach, qualifications, and contract terms and conditions. The cost will be the most heavily weighted evaluation criteria. The Solicitor (via the Technical Contact) will inform the successful bidder by email. The unsuccessful bidders will be informed by email and by posting the name of the successful bidder on the USTIF’s website, following the full execution of the Remediation Agreement by the Solicitor and the successful bidder.

A. SOLICITOR, ICF CLAIMS HANDLER, AND TECHNICAL CONTACT INFORMATION

<u>Solicitor</u>	<u>ICF Claims Handler</u>	<u>Technical Contact</u> ²
Mr. Herb Witter, Jr. Witter Gas & Oil Co., Inc. P.O, Box 154 Port Allegany, PA 16743	Linda Crabb ICF International, Inc. 4000 Vine Street Middletown, PA 17057 Phone: (800) 888-7843 Fax: (717) 944-8389 lcrabb@icfi.com Cc: dcassel@icfi.com	David L. Reusswig, P.G. Groundwater Sciences Corporation 2601 Market Place Street Suite 310 Harrisburg, PA 17110 Phone: (717) 901-8183 Fax: (717) 657-1611 dreusswig@groundwatersciences.com

NOTE: Submitted bid responses are subject to Pennsylvania’s Right-to-Know Law. All questions regarding this RFB Solicitation and the subject site conditions must be directed via e-mail to the Technical Contact identified above with the understanding that all questions and answers will be provided to all bidders. The email subject line must be “Gore’s 2000-139(M) – RFB QUESTION”. Bidders must neither contact nor discuss this RFB Solicitation with the Solicitor, USTIF, PADEP, or ICF unless approved by the Technical Contact. Bidders may discuss this RFB Solicitation with subcontractors and vendors to the extent required for preparing the bid response. **All questions must be received by close of business on October 4, 2010.**

B. ATTACHMENTS TO THIS RFB SOLICITATION

The following attachments have been included with this RFB to assist in bid preparation:

- Attachment 1: UST Closure Report (Witter; dated April 9, 1999)**
- Attachment 2: UST Closure Report (Witter; dated August 24, 2000)**
- Attachment 3: Site Characterization Report/Remedial Action Plan (Harris; dated October 16, 2006)**
- Attachment 4: Supplemental Site Characterization Report (GSC; dated April 2, 2008)**

¹ This assistance is being provided on behalf of ICF International (ICF) who is the USTIF claims administrator.

² Subcontractor to ICF.

- Attachment 5: UST Removal and Soil Excavation IRA Activities Summary Report (GSC; dated December 23, 2008)**
- Attachment 6: Revised Remedial Action Plan (GSC; dated March 23, 2009)**
- Attachment 7: UST Removal and Soil Excavation IRA Activities Summary Report (GSC; dated October 12, 2009)**
- Attachment 8: PaDEP Correspondence**
- Attachment 9: Off-Site Access Request Letters**
- Attachment 10: Historical Groundwater Elevation Data**
- Attachment 11: Historical Groundwater Analytical Data**
- Attachment 12: Site Plan Showing Proposed Groundwater Monitoring Well and Soil Vapor Monitoring Point Locations**
- Attachment 13: Aerial Photograph Showing Proposed Groundwater Monitoring Well and Soil Vapor Monitoring Point Locations**
- Attachment 14: Standard Bid Format**
- Attachment 15: Standard Remediation Agreement**

C. SITE SETTING AND BACKGROUND INFORMATION

The following information summarizes, and is derived from, relevant information provided in previous environmental reports, including the reports attached to this RFB. If there is any conflict between the summary provided herein and the source documents, the bidder should defer to the source documents.

Site Name/Address

Gore's Friendly Service; 340 West 4th Street (Intersection of Route 120 & Route 46), Emporium Borough, Cameron County, Pennsylvania (see Figures 1, Figure 2 and Figure 3 in **Attachment 4**).

USTIF Eligibility

Following the documented release from the diesel and unleaded gasoline UST systems in 1998, the Solicitor filed a claim with the USTIF and eligibility was granted under USTIF Claim No. 2000-139(M). The Solicitor has selected the SSS as the remedial goal to be pursued to obtain Relief from Liability (RfL) from the PaDEP, and USTIF has agreed to 100% reimbursement of Solicitor-approved reasonable and necessary costs up to claim limits for the corrective action work described in this RFB.

Site Use Description

The site is currently a used automobile sales and repair facility and used car sales facility. Retail petroleum dispensing operations ceased in early 2009.

USTs and ASTs on Site

Currently, there is one 550-gallon used motor oil UST located just inside the westernmost repair garage. All other known registered, unregistered and abandoned UST systems have been removed from the site. Details of previous UST closure activities are provided in **Attachment 1, Attachment 2, Attachment 5 and Attachment 7**.

Current and Historical Constituents of Concern

The constituents of concern (COCs) at this site, for which a RfL will be necessary, are the substances on the PaDEP's Old and New Shortlists for unleaded gasoline (benzene, toluene, ethylbenzene, total xylenes, cumene, methyl tert-butyl ether (MTBE), naphthalene, 1,2,4-trimethylbenzene (1,2,4-TMB), and 1,3,5-trimethylbenzene (1,3,5-TMB)). Based on data obtained from the most recent comprehensive groundwater sampling event conducted on September 30, 2009, the constituents that exceeded the Residential Non-Use Aquifer SHS were benzene, 1,2,4-TMB and 1,3,5-TMB.

Site Description

The site has been an active retail petroleum dispensing and automotive repair facility since at least the 1960s, however, the petroleum dispensing operations ceased in February of 2009. Currently, the only business activities conducted at the site is used automobile sales and repair.

A site plan showing pertinent features of the site is presented as Figure 2 in **Attachment 4**. There is a one-story service station building located in the center of the property that contains two auto repair garages and an office. A shed that has been converted into an occupied office building is located to the northwest of the service station building.

A shed that currently contains a deactivated groundwater treatment system is located directly behind the service station building.

There are both commercial properties and residential properties surrounding the site. A Fuel On retail petroleum dispensing facility with a convenience store is located to the southwest of the site on the opposite side of Route 120. Residential buildings are located to the west, north, east and south of the site.

The site and surrounding properties are supplied by public water and sewer.

Site Topography

A USGS 7.5-minute topographic quadrangle map and an aerial photograph of the site are provided as Figure 1 and Figure 3 in **Attachment 4**, respectively. The site is situated at approximately 1,030 feet above mean sea level. Topography is primarily flat across the site and the surrounding properties.

Site Geology

Based on information obtained from drilling activities, soils at the site consist of approximately two feet of gravel and brick fill material underlying asphalt or grass. The fill material is underlain by a silty clay from approximately 2-6 feet below grade (fbg). The clay is underlain by sand and gravel which overlies bedrock.

Bedrock at the site was encountered at approximately 11-20 fbg. Geologic cross sections A-A' and B-B' were constructed from data collected from monitoring wells and soil borings and are presented as Figure 6a and Figure 6b in **Attachment 4**, respectively. According to the Geological Quadrangle Map of Emporium, Pennsylvania (Edmunds, W.E., Pennsylvania Topographic and Geological Survey, 1977), bedrock at the site consists of sandstone of the

Lock Haven Formation (Devonian in age). This formation creates the valley bottom of the Driftwood Branch-Sinnemahoning Creek drainage basin.

The site lies on the northwest flank of the Boone Mountain Anticline, approximately a quarter mile northwest of the southwest-northeast trending axial trace of the Boone Mountain Anticline. The paralleling Cowanesque Synclinal axial trace lies approximately five miles to the north/northwest.

Additional information regarding site geology is provided in Harris’ October 16, 2006 SCR (**Attachment 3**) and GSC’s April 2, 2008 SSCR (**Attachment 4**).

Site Hydrogeology

Based on observations made during drilling and water level measurements collected in the monitoring wells, depth to groundwater at the site has ranged from approximately 5-11 fbg. Groundwater flow direction at the site is generally toward the southwest, towards Sinnemahoning Creek, which is located approximately 300 feet southwest of the site. Groundwater elevation contour maps generated from GSC’s supplemental site characterization activities are provided as Figure 7 and Figure 8 in **Attachment 4**.

Additional information regarding site hydrogeology is provided in Harris’ October 16, 2006 SCR (**Attachment 3**) and GSC’s April 2, 2008 SSCR (**Attachment 4**).

Nature of Confirmed Releases and Subsequent Activities

The following information is based on documents submitted to the PaDEP, some of which are included as attachments to this RFB. The information associated with activities not conducted by GSC has not been independently verified by ICF or the Technical Contact.

UST Upgrade and Removal Activities

1998 UST Upgrade Activities

UST piping upgrades for the three registered UST systems adjacent to the building and installation of a new 2,000-gallon off-road diesel fuel UST in the southwestern portion of the site were conducted in 1998. During excavation of soil for the installation of the 2,000-gallon off-road diesel fuel UST, impacted soil was encountered and approximately 16 tons of impacted soil from this area were removed and disposed of off-site. Details of these activities are provided in the April 9, 1999 UST Closure Report included as **Attachment 1**.

2000 UST Removal Activities

A 2,000-gallon diesel UST, located just off the southeast corner of the service station building, that was not used since the installation of the off-road diesel UST in 1998, was closed by removal in April of 2000. No obvious contamination was found during the removal of this UST and the UST was closed “clean”. Details of these activities are provided in the August 24, 2000 UST Closure Report included as **Attachment 2**.

2007 UST Removal Activities

There was an unregistered, abandoned kerosene UST located in the northwestern portion of the site (just north of the gasoline/diesel UST grave) that was removed in August of 2007 under the supervision of Harris and reportedly was closed "clean". A report detailing these activities was not available.

2008 UST Removal and Soil Excavation IRA Activities

On August 11 and August 12, 2008, Comprehensive Environmental Services, Inc. (CES) conducted UST removal and soil excavation IRA activities at the site. During these activities, which were observed by GSC, an abandoned 4,000-gallon UST, that was suspected to be present based on a geophysical survey (the geophysical report is included in **Attachment 4**) and later identified by hand digging, was excavated and removed. The UST appeared to be in good condition with no holes observed in the UST during the inspection. Based on visual observation and soil screening using a photoionization detector (PID), obviously impacted soil was excavated during the removal of the 4,000-gallon UST.

During the process of over-excavating impacted soils to the west of the abandoned 4,000-gallon UST, another abandoned UST, a 2,500-gallon UST, was encountered and also removed. Several holes were observed in this UST and visual observations and PID measurements indicated obvious soil impacts around this UST. The excavation area was expanded by digging two trenches to a depth of four fbg in the direction of the dispenser islands and the service station building to investigate the possible presence of additional abandoned USTs and to remove additional impacted soil. No other USTs were found during these activities. Approximately 172 tons of impacted soil was removed from the site and disposed of off-site. Details of the 2008 UST removal activities are provided in the December 23, 2008 Summary of UST Removal and Soil Excavation IRA Activities letter report included as **Attachment 5**.

2009 Registered UST Removal and Soil Excavation IRA Activities

All four remaining registered USTs, along with the dispensers and product piping, were closed by removal on July 6-9, 2009. The registered USTs were located in two separate areas but shared a dispenser island. The on-road diesel UST (No. 002) and the two gasoline USTs (Nos. 003 and 004) were located in the northwestern portion of the property. Product piping from these tanks went to two gasoline dispensers and to two diesel dispensers located on two dispenser islands within the concrete dispenser pad. The off-road diesel UST (No. 005; installed in 1998) was located beneath the southwestern portion of the concrete dispenser pad. The off-road diesel dispenser, located on the southwestern dispenser island between the gasoline and on-road diesel dispensers, was connected to the UST by a short length of product piping. The on-road diesel UST (No. 002) and the two gasoline USTs (No. 003 and No. 004) were constructed of fiberglass and the off-road diesel UST (No. 005) was constructed of steel.

To facilitate remediation at the site by removing additional source material, the dispenser area was over excavated to remove impacted soils to the water table (approximately 9 fbg). Approximately 560 tons of contaminated soil was removed from the site as a result of the registered UST/dispenser island excavation.

Details of the July 2009 UST removal and soil excavation activities are provided in the October 12, 2009 Summary of UST Removal and Soil Excavation IRA Activities letter report included as **Attachment 7**.

2009 Abandoned UST Closure Activities

Following the backfilling of the excavations described above, a trench was excavated near the southwestern corner of the property to repair an electrical line damaged during the registered UST removal. During the trenching activities on July 14, 2009, three more abandoned USTs were discovered, located in north-south orientation, parallel to Woodland Avenue (Figure 3 in **Attachment 7**). The USTs were temporarily covered to allow access to the property until they could be removed.

On July 27, 2009, the three USTs were uncovered, evaluated, and removed from the site. The three steel USTs were (from south to north) approximately 1,000-gallon, 1,200-gallon, and 1,000-gallon capacities. Prior to their removal, a vacuum truck removed approximately 1,220 gallons of water from the 1,000-gallon and the 1,200-gallon USTs. The PaDEP was notified and kept informed.

Approximately 250 tons of impacted soil were removed from the site as a result of the abandoned UST excavation. Details of the July 2009 abandoned UST removal and soil excavation activities are provided in the October 12, 2009 Summary of UST Removal and Soil Excavation IRA Activities letter report included in **Attachment 7**.

Chapter 245 Corrective Action Activities

Following the notification to the PaDEP of the 1998 release in the area where the off-road diesel fuel UST was located, Harris initiated site characterization activities in July of 1999. In December of 2002, the initial SCR/RAP and a request for a NUAD were submitted by Harris to the PaDEP. The initial SCR/RAP and three subsequent revised SCR/RAPs were disapproved by the PaDEP (**Attachment 8**). Harris submitted a fourth revised SCR/RAP to the PaDEP on October 16, 2006 (**Attachment 3**) with the additional information needed by the PaDEP to support a NUAD, and the PaDEP approved this report with modifications (**Attachment 8**). The approved RAP specified groundwater recovery (i.e., "pump and treat") as the remedial option and the Non-Use Aquifer (NUA) SHS as the remedial goal for the site.

In November of 2000, Harris installed a passive SPL recovery system (i.e., a "petrol-trap" autobailer) in well GS-8. According to Harris, the autobailer removed about three cups of SPL from November 2000 through June of 2003, and a very small amount of SPL from June 2003 through November 13, 2007, when the autobailer was removed and the well was abandoned.

Additional site characterization activities were conducted by GSC in 2007 and 2008. The supplemental site characterization is detailed in the SSCR submitted to the PaDEP by GSC on April 2, 2008 (**Attachment 4**). A revised RAP (**Attachment 6**), specifying source removal and the SSS as the remedial standard for the site, was submitted by GSC to the PaDEP on March 23, 2009. The PaDEP approved the SSCR and revised RAP with modifications in correspondence dated April 10, 2009 (**Attachment 8**).

Harris activated a groundwater recovery system on August 31, 2007. The system consisted of a pump in well GS-7. Evaluation of the data provided by Harris in previous DMRs indicated that the system only pumped approximately 7.5 gallons per day on average from well GS-7. Since it was concluded that this approach was not providing adequate hydraulic control to prevent off-site migration of the plume and was not providing adequate mass removal to support this technology as a cost-effective, long-term remedial approach, the PaDEP agreed that the system should be shut down and other more feasible, cost-effective remedial technologies be evaluated as the long-term remedial approach for the site.

Harris has historically conducted quarterly sampling of monitoring wells GS-3, GS-7 and GS-9. The final quarterly sampling conducted by Harris was in March of 2010.

Comprehensive Groundwater Sampling

Comprehensive groundwater sampling was conducted prior to and following the 2009 UST removal and soil excavation IRA activities. The purpose of the groundwater sampling was to obtain comprehensive groundwater data to assist in the determination of well locations to adequately complete plume delineation, and to establish a baseline for groundwater concentrations on which remediation timeframe remedial progress will be based. The groundwater elevation data and the analytical results for the baseline sampling, conducted on June 23, 2009 (pre-IRA sampling) and September 30, 2009 (post-IRA sampling) are summarized on the historical groundwater elevation data table and the groundwater analytical data table included as **Attachment 10** and **Attachment 11**, respectively.

D. OBJECTIVE / SCOPE OF WORK

This RFB Solicitation is a defined scope of work (SOW) type where a specific SOW is presented to the bidders who prepare their bids on the basis of that scope. In the case of this RFB solicitation, the defined SOW has been approved by the PaDEP and is designed to complete groundwater plume delineation to the south and west of the site and complete a soil vapor assessment for the site. Following the completion of these activities to the satisfaction of the PaDEP, the remaining corrective action activities necessary for the Solicitor to obtain RfL for the site will either be competitively bid, or the Solicitor may choose to retain the selected bidder for this RFB to complete the activities necessary to obtain RfL, that is, to “close” the site.

The SOW has been prepared using the guidelines of Pennsylvania Code Title 25, Chapter 245 (The Storage Tank and Spill Prevention Program) and Chapter 250 (The Land Recycling Program). There are several key elements that must be completed in order for the approach outlined in this RFB to be successful. The critical elements and general sequence of events for completion of the work specified in this RFB are:

- Obtain off-site access;
- Completion of supplemental site characterization activities (installation and sampling of additional off-site groundwater monitoring wells, installation of on- and off-site soil borings and soil sampling, and installation and sampling of on- and off-site soil vapor monitoring points); and,
- Preparation of a Supplemental Site Characterization Report (SSCR).

The submitted bid shall follow the task format outlined herein. Bids shall include a detailed description of the anticipated costs for each task including labor rates, time requirements

and equipment costs. A Standard Bid Format, to be completed and attached to the bid, is included as **Attachment 14**. The fixed-price cost for each of the tasks detailed below shall include all costs for preparation of any pertinent project guidance documents in accordance with Chapter 245 (e.g., health and safety plan, field sampling/analysis plan and quality assurance/quality control plan, etc.), for utility clearance (both coordination of PA One-Call and conducting physical utility clearance using soft dig techniques if deemed necessary (particularly at the gas station drilling locations), and project management, scheduling and project coordination time deemed necessary to complete each task.

Milestone A – Obtain Off-Site Access for Three Properties

Milestone B – Supplemental Site Characterization Activities

Task B1 Geophysical Survey on Off-Site Fuel On Property

Task B2 Installation, Surveying, Development, and Sampling (One Initial Characterization Round) of Two New Off-Site Bedrock Groundwater Monitoring Wells (MW-9B and MW-17B) and One Off-Site Soil Groundwater Monitoring Well (MW-17S)

Task B3 Comprehensive Gauging and Sampling of 13 Monitoring Wells (GS-1, GS-3, GS-9, GS-9B, GS-12S, GS-12B, GS-13S, GS-13B, GS-14, GS-15, GS-16S, GS-17S, and GS-17B) (to be conducted after Milestone B2)

Task B4 Soil Boring Installation and Soil Sampling; Soil Vapor Monitoring Point Installation and Two Soil Vapor Sampling Rounds

Milestone C – Preparation, Submittal and PADEP Approval of Supplemental Site Characterization Report (SSCR)

MILESTONE A – OFF-SITE ACCESS

Prior to installing the off-site monitoring wells, soil borings and soil vapor points, the selected bidder shall obtain off-site access to the following properties where additional off-site wells, soil borings and soil vapor points shall be installed:

403 Woodland Avenue (residential property) – Owners are Matthew Rodich et al.

338 West 4th Street (residential property) – Owner is Michael Thompson

401 West 4th Street (commercial property) – Owner is Fuel On, Inc.

The Technical Contact has discussed the proposed site characterization activities and proposed drilling locations with the above-referenced property owners. GSC has also provided written correspondence to the above-referenced owners (**Attachment 9**), and all have agreed in principle to allow access to their properties. Therefore, bidders should assume that off-site access to conduct the necessary site characterization activities will be granted without extended negotiation.

The selected bidder shall contact the above-referenced property owners to discuss the details and schedule of the activities to be conducted on the respective owner’s property and to prepare and execute written access agreements with these property owners as required, at a fixed price. The PaDEP will be involved to the extent necessary to ensure access is granted at these properties and any other location where that location is deemed critical to gain an understanding of the relationship between the Solicitor’s release and adjacent properties.

MILESTONE B – SUPPLEMENTAL SITE CHARACTERIZATION ACTIVITIES

Task B1 Geophysical Survey on Off-Site Fuel On Property

Because monitoring well locations proposed on the Fuel On property are close to active gasoline USTs, a geophysical survey limited to the portion of the Fuel On property where drilling and monitoring well installation is planned, shall be performed. The purpose of this survey is to help identify and locate known and potentially unknown USTs, conveyance lines, and other underground utilities and features prior to the invasive characterization activities on this property. The geophysical survey shall include both electromagnetic (EM) and ground-penetrating radar (GPR) technologies.

Task B2 Installation, Surveying, Development, and Sampling (One Initial Characterization Round) of Two New Off-Site Bedrock Groundwater Monitoring Wells (MW-9B and MW-17B) and One Off-Site Soil Groundwater Monitoring Well (MW-17S)

After the above-mentioned access has been formally granted and any off-site access agreements required have been executed, the selected bidder shall install the following wells, the locations of which are shown on **Attachment 12** and **Attachment 13**:

- One soil well and one bedrock well southwest of the site on the Fuel On gasoline station property.
- One bedrock well on the residential property (Rodich property) located west of the site (MW-9B). This well will serve as a supplement to soil well GS-9, for the purpose of determining current bedrock groundwater quality at this off-site location.

Soil Monitoring Well

For the purpose of this RFB assume that the soil monitoring well shall be installed with the following characteristics:

- a. Continuous soil/overburden characterization shall be conducted and a soil boring log shall be prepared using an appropriate soil classification system (e.g., Modified Burmister or USCS);
- b. The soil well shall be constructed of two-inch diameter, threaded, flush-joint, schedule 40 PVC riser and 0.010- or 0.020-inch slot width well screen;
- c. The soil well shall be drilled and installed into the soil saturated zone to the top of competent bedrock³;
- d. The soil well screen shall straddle the unsaturated/saturated zone interface;
- e. The soil well screen shall be entirely in soil;
- f. A sand filter pack of appropriate grain size shall be placed in the annulus from the bottom of the borehole to not more than two feet above the screened interval and hydrated bentonite chips shall be used to seal the annulus (between the PVC and the borehole wall) above the sand pack up to grade;

³ For cost estimation purposes, Bidder shall assume that each well shall be installed by hollow stem auger drill rig to a depth of 20 feet below grade, which is the presumed maximum depth to competent bedrock and auger refusal.

- g. The soil groundwater monitoring well shall be completed at the surface with a securable manhole, set in concrete flush with the ground surface. A locking, pressure fit, watertight cap shall be used to prevent the infiltration of surface runoff and rainwater and to restrict access by unauthorized individuals; and,
- h. A monitoring well construction log shall be prepared for the well.

Bedrock Monitoring Wells

For the purpose of this RFB assume that the bedrock monitoring wells shall be installed with the following characteristics:

- a. Continuous soil/overburden and bedrock characterization shall be conducted and boring logs shall be prepared for each well using appropriate classification systems;
- b. Bedrock wells shall be constructed of two-inch diameter, threaded, flush-joint, schedule 40 PVC riser and 0.010- or 0.020-inch slot width well screen;
- c. Bedrock wells shall be constructed such that the top of the screen is five (5) feet below the soil/bedrock interface and the top of the sand pack is at least three (3) feet below the soil/bedrock interface;
- d. The bedrock well shall be drilled such that there is a surface casing to the top of bedrock (ungROUTED) and a protective casing set three (3) feet into the bedrock and grouted in the bedrock socket and the surface casing (Please prepare your bid with a cost for this configuration. If you wish to propose an alteration to this configuration, please do so in the text with an associated cost as an option);
- e. Hydrated bentonite chips, bentonite slurry or another acceptable sealant combination shall be used to seal the annulus (between the PVC and the casing) above the sand pack up to grade;
- f. Each bedrock well shall be completed at the surface with a securable manhole, set in concrete flush with the ground surface. A locking, pressure fit, watertight cap shall be used to prevent the infiltration of surface runoff and rainwater and to restrict access by unauthorized individuals; and,
- g. A monitoring well construction log shall be prepared for each well.

Following the installation of the above-referenced wells, the selected bidder shall develop the newly installed wells. At least ten well volumes shall be removed from each well during development.

The selected bidder shall conduct initial monitoring and sampling of the three newly installed monitoring wells at least two weeks following well development. Water level measurements shall be taken from each of the new wells. Depth-to-water measurements shall be completed using a probe capable of distinguishing water and/or the presence or absence of SPL to the nearest 0.01 feet. The depth to water shall be recorded and then used to determine the water level elevations within each new well. Casing elevations shall be surveyed within +/- 0.01 foot relative to an arbitrary benchmark already established at the site. The benchmark elevation shall be obtained by referencing the approximate ground surface elevation of the property or from an available benchmark from the USGS topographic map or benchmark elevation marker located at the site if one exists. Water level depth data (measured from the top of casing) shall then be subtracted (with

appropriate corrections made for the presence of SPL) from respective casing elevations to determine water level elevations relative to the arbitrary benchmark such that groundwater elevations within each well can be determined. Monitoring wells that contain SPL shall be corrected for product thickness when calculating the static groundwater elevations in these wells.

The selected bidder shall collect initial groundwater characterization samples from the three new monitoring wells to determine the concentration of applicable dissolved-phase unleaded gasoline constituents. Groundwater sampling and analysis shall be conducted in accordance with generally accepted practices as outlined in the PaDEP's Groundwater Monitoring Guidance Manual, dated December 1, 2001 (Document # 383-3000-001).

Sampling equipment shall be decontaminated prior to sample collection in accordance with generally accepted industry practices. At least three times the volume of standing water column shall be purged from each well prior to sample collection to ensure a representative sample is collected. All wells shall be purged using a bailer, as this is consistent with the purging method employed during previous sampling events, thus, assuring that future sampling results reflect historical purging methods. At the conclusion of purging, groundwater samples shall be collected following at least 75% recovery in the well. Based on observations made during previous groundwater sampling activities at the site, most, if not all, of the wells have been able to be purged of at least three wells volumes without evacuating and, if evacuation did occur, recovery was fast enough to still allow for relatively efficient purging and sampling of the well.

Samples shall be collected directly from a bailer following purging. All volatile samples should be collected directly into laboratory-supplied sample containers and kept chilled (i.e., < 4° C) through delivery to the analytical laboratory.

All samples shall be analyzed in accordance with the PaDEP's Old and New Shortlists of unleaded gasoline parameters (i.e., benzene, toluene, ethylbenzene, total xylenes, cumene, naphthalene, MTBE, 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene) using the approved laboratory methods capable of reporting to the PaDEP-established Practical Quantitation Limits.

Task B3 Comprehensive Gauging and Sampling of 13 Monitoring Wells (GS-1, GS-3, GS-9, GS-9B, GS-12S, GS-12B, GS-13S, GS-13B, GS-14, GS-15, GS-16S, GS-17S, and GS-17B) (to be conducted after Milestone B2)

At least two weeks but not more than eight weeks following the initial sampling event, the selected bidder shall conduct confirmatory monitoring and sampling of the new wells for characterization purposes, as well as conduct monitoring and sampling of all other on- and off-site groundwater monitoring wells listed above. Water level measurements, purging, sampling and analyses shall be conducted in the same manner as described for Task B2. The depth to water data collected during this comprehensive groundwater monitoring round shall be used to determine water level elevations such that groundwater flow direction within both soil and bedrock can be determined and used to create groundwater elevation and/or potentiometric surface contour maps for both the soil and the bedrock aquifers. Groundwater concentration contour maps for all constituents that exceed the applicable Residential NUA SHS shall be prepared using the data from this sampling round and these maps shall be included in the SSCR referenced below.

Task B4 Soil Boring Installation and Soil Sampling; Soil Vapor Monitoring Point Installation and Two Soil Vapor Sampling Rounds

Soil boring installation and soil sampling shall be conducted to expand the delineation of soil impacts within the eastern portion of the site property and on the residential property immediately east of the site (the Thompson property). Three soil borings that twin the locations of on-site soil borings SB-6, SB-13 and SB-16 shall be drilled. Additionally, two soil borings on the Thompson property, located approximately twenty-five feet northeast and southwest of soil boring SB-16, shall be drilled. The soil borings shall be drilled to a total depth that represents the top of permanently saturated soil (presumed to be approximately nine fbg based on historical soil groundwater elevation data). Soil cores shall be examined and descriptions of soil types/characteristics, corresponding depths, and any other pertinent soil information shall be documented on soil boring logs. Soil screening using a photoionization detector (PID) shall be conducted at two-foot intervals. One soil sample from each boring, representing the depth interval above the zone of permanent soil saturation that exhibits the highest PID response, shall be submitted for laboratory analysis. All five soil samples shall be collected in accordance with applicable PaDEP regulations and guidance and analyzed for PaDEP’s Old and New Shortlists of unleaded gasoline constituents.

A soil vapor assessment must be conducted to determine whether soil vapor intrusion into the occupied buildings on- and off-site is an issue. Three soil vapor points (SVP-1 through SVP-3; Figure 5 in **Attachment 4**) were installed and sampled once by GSC during supplemental site characterization activities. Construction logs for the existing soil vapor points and soil analytical data is included in **Attachment 4**. In order to further characterize the vapor phase and obtain the data necessary to evaluate remedial options and exposure pathways, an additional seven soil vapor points shall be installed at the locations shown on **Attachment 12** and **Attachment 13**. The seven vapor monitoring points shall be installed to a depth of five fbg. Each point shall have one soil vapor collection point with a screened interval not to exceed six inches (from 5 to 4.5 fbg). One soil vapor sample shall be collected from each soil vapor monitoring point during each of two sampling events. Soil vapor point installation, sampling and analyses shall be conducted in accordance with the PaDEP’s *Technical Guidance Manual - Section IV.A.4. Vapor Intrusion into Buildings from Groundwater and Soil under Act 2 Statewide Health Standard (January 24, 2004)*.

The vapor samples shall be analyzed for the PaDEP’s Old and New Shortlists of unleaded gasoline constituents including benzene, toluene, ethylbenzene, total xylenes, cumene, naphthalene, MTBE, 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene using EPA Method TO15. The above-mentioned PaDEP guidance shall be used to assist in evaluating the soil vapor sample results. The guidance specifies that soil vapor shall be compared to 100 times the Residential Indoor Air Medium-Specific Concentrations (MSCs) to account for attenuation effects.

MILESTONE C - PREPARATION, SUBMITTAL AND PADEP APPROVAL OF A SUPPLEMENTAL SITE CHARACTERIZATION REPORT

The selected bidder shall prepare a SSCR in accordance with 25 Pa Code §245.310. The selected bidder shall prepare the SSCR in draft form for review and comment by the Solicitor and the USTIF. The bidders’ schedules shall provide two weeks for this review. The selected bidder shall address all of the comments received by the Solicitor and the USTIF before submission to the PaDEP.

The selected bidder shall prepare a SSCR that documents and discusses the data obtained and the conclusions drawn from the completion of tasks A1 through B4. Tables, figures, and other attachments that support the text shall include the following:

- Updated comprehensive historical groundwater elevation data (existing Microsoft Excel files will be provided);
- Updated comprehensive historical groundwater analytical data (existing Microsoft Excel files will be provided);
- Updated comprehensive soil vapor analytical data (existing Microsoft Excel files will be provided);
- Site map (showing site boundaries and pertinent site features) (AutoCad files will be provided);
- Monitoring well and soil vapor point location map (showing existing and new locations);
- Soil and bedrock groundwater head potential contour maps (for the comprehensive sampling round);
- Soil and bedrock groundwater concentration contour maps for all constituents found to be above the Residential NUA SHS in any sample (for the comprehensive sampling round);
- Geophysical survey report;
- Laboratory analytical reports for groundwater and soil vapor, chains of custody, and field sampling documentation; and,
- Soil boring logs and well construction logs for new groundwater monitoring wells.

In addition to the specific tasks specified above, the selected consultant shall also:

- Complete necessary, reasonable, and appropriate project planning and management activities until the SOW specified in the executed Remediation Agreement has been completed. Such activities would be expected to include client communications/updates, meetings, record keeping, subcontracting, personnel and subcontractor management, quality assurance/quality control, scheduling, and other activities. Project planning and management activities will also include preparing and implementing any plans required by regulations or that may be necessary and appropriate to complete the SOW. This may include health and safety plans, waste management plans, field sampling and analysis plans, and/or access agreements. Project management costs shall be included in the fixed prices quoted for Milestones A through C, as appropriate.
- Be responsible for coordinating, managing and completing the proper management, characterization, handling, treatment, and/or disposal of all investigation-derived wastes in accordance with standard industry practices and applicable laws, regulations, guidance and PaDEP directives. Waste characterization and disposal documentation shall be maintained and provided to the Solicitor upon request and shall be included as an appendix to the SSCR. Waste disposal costs shall be included in the fixed prices quoted for Milestones A through C, as appropriate.
- Be responsible for providing the Solicitor and property tenants with adequate advance notice prior to each visit to the property. The purpose of this notification is to coordinate with the Solicitor and tenants to facilitate appropriate access to the areas of the site necessary to complete the SOW. 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 bidder’s SOW or total quoted cost for Milestones A through C.

All work shall be conducted in accordance with industry standards/practices, and be consistent with the applicable PaDEP laws, regulations, and guidelines (e.g., PaDEP Groundwater Monitoring Guidance Manual, Document No. 383-3000-001 dated December 1, 2001).

Each bidder should carefully review the existing site information provided in the attachments to this RFB and seek out other appropriate sources of information to develop a cost estimate and schedule for the SOW. There is no prequalification process for bidding. Therefore, bids that demonstrate an understanding of existing site information and standard industry practices will be regarded as responsive to this solicitation.

E. TYPE OF CONTRACT/PRICING

The Solicitor wishes to execute a mutually agreeable Fixed-Price Defined SOW contract (Remediation Agreement). A Standard Remediation Agreement is included as **Attachment 15** to this RFB Solicitation. This standard agreement has been previously employed by other Solicitors on other USTIF-funded claims. The bidder must identify in the bid response and document any modifications that they wish to propose to the Remediation Agreement language in **Attachment 15** other than obvious modifications to fit this RFB (e.g., names and dates). The number and scope of any modifications to the standard agreement will be one of the criteria used to evaluate the bid. **Any bid response that does not clearly and unambiguously state whether the bidder accepts the Remediation Agreement language in Attachment 15 "as is", or that does not provide a cross-referenced list of requested changes to this agreement, will be considered non-responsive.** This statement should be made in a Section entitled “Remediation Agreement”. Any proposed changes to the agreement should be specified in the bid response, however, these changes will need to be reviewed and agreed upon by both the Solicitor and the USTIF.

The Remediation Agreement fixed costs shall be based on unit prices for labor, equipment, materials, subcontractors/vendors and other direct costs. The total cost quoted by the selected bidder will be the maximum amount to be paid by the Solicitor unless a change in scope is authorized and determined to be reasonable and necessary. There may be deviations from and modifications to this SOW during the project. The Remediation Agreement states that any significant changes to the SOW will require approval by the Solicitor, USTIF, and PaDEP.

The bidder shall provide its bid using the Standard Bid Format included as **Attachment 14** with descriptions for each task provided in the body of the bid document. In addition to **Attachment 14**, the bidder shall provide a unit rate schedule that will be used for any out-of-scope work on this project.

The selected bidder’s work under the USTIF claim will be subject to ongoing review by the Solicitor and USTIF or its representatives to assess whether the work has been completed and the associated incurred costs are reasonable and necessary.

In order to facilitate USTIF’s review and reimbursement of invoices submitted under this claim, the Solicitor requires that project costs be invoiced by the milestone tasks identified in

the bid. The standard practice of tracking total cumulative costs by bid task will also be required to facilitate invoice review.

Each bid package received will be assumed to be valid for a period of up to 120 days after receipt unless otherwise noted. The costs quoted in the bid and the rate schedule will be assumed to be valid for the contract.

F. BID RESPONSE DOCUMENT

Each bid response document must include at least the following:

1. Demonstration of the bidder’s understanding of the site information provided in this RFB, standard industry practices, and objectives of the project.
2. Fixed price bid pricing using the standardized format in **Attachment 14** and a unit rate schedule for any out-of-scope work. The following information relating to the bid pricing should be included as additional sheets in **Attachment 14** or discussed in the body of the bid document:
 - a. The bidder’s proposed unit cost rates for each expected labor category, subcontractors, other direct costs, and equipment;
 - b. The bidder’s proposed markup on other direct costs and subcontractors (if any);
 - c. The bidder’s estimated total cost by task consistent with the proposed SOW identifying all level-of-effort and costing assumptions.
3. Documentation of the bidder’s level of insurance consistent with the levels listed in **Attachment 15**⁴.
4. The names and brief resumes of the proposed project team for the key project staff, including the proposed Professional Geologist of Record who will be responsible for overseeing the work and applying a professional seal to the project deliverables.
5. Responses to the following specific questions:
 - a. Does your company employ a Pennsylvania-licensed Professional Geologist that is designated as the proposed project manager? How many years of experience does this person have?
 - b. How many Chapter 245 projects is your company currently consultant for in the Northcentral Region of Pennsylvania? Please list up to ten projects.
 - c. How many Chapter 245 projects has your company and/or the proposed Pennsylvania-licensed Professional Geologist worked on in the Northcentral Region of Pennsylvania during the last five years?

⁴ The selected bidder agrees and shall submit evidence to the Solicitor before beginning work that bidder has procured and will maintain Workers Compensation; commercial general and contractual liability; commercial automobile liability; and professional liability insurance commensurate with the level stated in the Remediation Agreement and commensurate with industry standards for the work to be performed.

- d. How many Chapter 245 Corrective Action projects involving an approved SCR, RAP and RACR in the State has your company and/or the Pennsylvania-licensed Professional Geologist closed (i.e., obtained RfL from the PaDEP) using any standard?
 - e. How many Chapter 245 Corrective Action projects in the State has your company and/or the Pennsylvania-licensed Professional Geologist closed (i.e., obtained RfL from the PaDEP) using the Site-Specific Standard? Please list up to five. Please include concise case histories of up to two sites.
 - f. Has your firm ever been a party to a terminated USTIF-funded Fixed-Price (FP) or Pay-for-Performance (PFP) contract without attaining all of the Milestones? If so, please explain, including whether the conditions of the FP or PFP contract were met.
6. Sufficient description of subcontractor involvement by task.
 7. Detailed schedule of activities for completing the proposed SOW.
 8. Description of how the Solicitor, ICF and the USTIF will be kept informed as to project progress and developments, and how the Solicitor (or designee) will be informed of and participate in evaluating technical issues that may arise during this project.
 9. Key assumptions made in formulating the proposed cost estimate. The use of overly narrow assumptions will negatively impact the bid.
 10. Exceptions or special conditions applicable to the proposed SOW.
 11. Quotations from major subcontractors.

G. MANDATORY SITE VISIT

THERE WILL BE A MANDATORY SITE MEETING ON SEPTEMBER 15, 2010. The Solicitor, the Technical Contact, or their designee will be at the site between 1:00 PM and 3:00 PM to answer questions and conduct a site tour for one participant per firm. This meeting is mandatory for all bidders – no exceptions. This meeting will allow each bidding firm to inspect the site and evaluate site conditions. **A CONFIRMATION OF YOUR INTENT TO ATTEND THIS MEETING IS REQUESTED TO BE PROVIDED TO THE TECHNICAL CONTACT VIA E-MAIL BY SEPTEMBER 13, 2010 WITH THE SUBJECT “GORE’S 2000-0139(M) – SITE MEETING ATTENDANCE CONFIRMATION”.** The name and contact information of the company participant should be included in the body of the e-mail.