

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

**Former Marie's Service Station
404 New Alexandria Road
Greensburg, Westmoreland County, Pennsylvania
PADEP Facility ID # 65-80800; USTIF Claim # 1996-0307(F)**

May 13, 2011

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 Former Marie's Service Station facility (the site).

Corrective action under Chapter 245 is being conducted in response to a confirmed petroleum release at the site in 1996 based on results of sampling from UST closure activities. Cook Environmental Engineering, Inc. (Cook) initiated site characterization activities in 1997 with the installation and sampling of three groundwater monitoring wells. A Site Characterization Report (SCR) was submitted by Cook to the Pennsylvania Department of Environmental Protection (PaDEP) and was disapproved. Following the disapproval of the SCR, there were apparently no corrective action activities until 2009, when a prospective buyer expressed interest in purchasing the property and, as part of the due diligence, discovered that the PaDEP had not granted a Relief from Liability to the owners for the 1996 release. In order for the transaction to proceed, the prospective buyer requested the PaDEP to issue a "No Further Action Letter" or a Relief from Liability for the site. KU Resources, Inc. (KU), retained by the property owners and sellers, Doug and Rita Semingson (the Semingsons) as part of the due diligence process, contacted the PaDEP in December of 2008 to discern the PaDEP's views regarding the status of the site. However, the PaDEP stated that because of the time lapse, the status of any impacts at the facility was unknown, and based on the analytical results included in the 1996 SCR, the PaDEP would require additional site characterization activities to adequately delineate site impacts and additional corrective action activities to bring this site to regulatory closure. The Semingsons retained KU to continue with the corrective action process and KU conducted several quarters of groundwater sampling, conducted additional site characterization activities in an attempt to complete delineation of site impacts, conducted a total phase extraction (TPE) feasibility test to assess the feasibility of TPE as an Interim Remedial Action (IRA), and installed and activated a total-phase TPE system (recovery of groundwater, separate-phase liquid (SPL) and vapor) as an IRA. KU refers to the system in their reports as a dual-phase extraction (DPE) system. KU submitted a Site Characterization Report (SCR) to the PaDEP on October 28, 2009 and the PaDEP has not issued a formal response to the SCR pending the submittal of a Remedial Action Plan (RAP). Based on discussions with the PaDEP, the PaDEP will not issue a formal letter in response to the SCR until the property owners select a remediation standard and the PaDEP receives a RAP for the site, but the PaDEP is aware that additional work is necessary to complete delineation of site impacts and has reviewed and commented on the scope of work presented as part of this RFB.

Following the operation of the TPE system as an IRA over a period of almost two months (from February 8, 2011 through April 1, 2011), the Semingsons have elected to put the remaining site characterization activities (delineate remaining SPL, groundwater impacts and soil impacts at the site, and submit a SCR) out for competitive bidding under a defined scope of work (SOW). The general SOW for this RFB Solicitation is to obtain access to four off-site properties, conduct an engineering survey of the sanitary sewer line along Roosevelt Way, abandon three existing on-site groundwater monitoring wells, install/develop/survey and conduct quarterly monitoring of three replacement and seven new bedrock groundwater monitoring wells, continued quarterly groundwater monitoring of all other existing on-site wells, and preparation and submittal of a SCR.

The Solicitors, Doug and Rita Semingson, have 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 and necessary 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 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 as a single file in 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 # 1996-0307(F)”**. No bid packages will be accepted via email. The ICF Claims Handler and the Technical Contact will assist¹ the Solicitors in evaluating the competitive bids received; however, it is the Solicitors who will ultimately select the 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 June 28, 2011. 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 Solicitors (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 Solicitors and the successful bidder.

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

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

<u>Solicitors</u>	<u>ICF Claims Handler</u>	<u>Technical Contact</u>²
Doug and Rita Semingson 8476 E. Cactus Road Scottsdale, Arizona 85260	Gerald Hawk ICF International, Inc. 4000 Vine Street Middletown, PA 17057 Phone: (800) 888-7843 Fax: (717) 944-8389 jerryhawk@comcast.net 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 “Marie’s 1996-0307(F) – RFB QUESTION”. Bidders must neither contact nor discuss this RFB Solicitation with the Solicitors, 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 June 21, 2011.**

B. ATTACHMENTS TO THIS RFB SOLICITATION

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

- Attachment 1a: UST Closure Report (Precise Tank Modifications; November 6, 1996)**
- Attachment 1b: Site Characterization Report (Cook Env. Engineering; May 1, 1997)**
- Attachment 1c: Site Characterization Report (KU Resources; October 28, 2009)**
- Attachment 1d: PaDEP Correspondence**
- Attachment 1e: Most Recent Quarterly Groundwater Sampling Reports (KU Resources; Second Quarter 2009 through Third Quarter 2010)**
- Attachment 1f: Additional Site Data (includes Fourth Quarter 2010 and First Quarter 2011 Groundwater Analytical Data and Laboratory Analytical Reports, and Remedial System Data)**
- Attachment 1g: Site Plan Showing Proposed Groundwater Monitoring Well Locations**
- Attachment 1h: Additional Site Maps**
- Attachment 2: Standardized Bid Spreadsheet**
- Attachment 3: Draft Remediation Agreement**

² Subcontractor to ICF.

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

Former Marie's Service Station; 404 New Alexandria Road, City of Greensburg, Westmoreland County, Pennsylvania (see **Attachment 1h**).

USTIF Eligibility

Following the documented release from the unleaded gasoline UST systems in 1996, the Solicitors filed a claim with the USTIF and eligibility was granted under USTIF Claim No. 1996-0307(F). 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

Reportedly, the site was used as a gasoline dispensing facility since the early 1940s. The current owners of the site property, Doug and Rita Semingson, acquired the property in 1989 from Dorothy Marie. At the time of acquisition, a retail gasoline service station (Marie's Service Station) was in operation on the property and remained so until 1996 when the UST systems were closed by removal. The site property was subsequently leased to Diamond Auto Glass, Inc. and used as a vehicle glass repair/replacement facility until October 30, 2008. The site was vacant until October or November of 2010, when the current occupant of the site, Superior Auto Glass, began leasing the property from the Semingsons for use as a vehicle glass repair/replacement facility.

USTs and ASTs on Site

Currently, there are no known USTs or ASTs at the site. 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 1a**.

Current and Historical Constituents of Concern

The constituents of concern (COCs) at this site, for which a Relief from Liability 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 (124TMB), and 1,3,5-trimethylbenzene (135TMB). Based on data obtained from the quarterly comprehensive groundwater sampling event conducted on September 2, 2010, the constituents that exceed the Residential, Used Aquifer (RUA) Medium-Specific Concentrations (MSCs) are benzene, ethylbenzene, total xylenes, methyl tert-butyl ether (MTBE), naphthalene, 124TMB and 135TMB.

Site Description

Site plans showing pertinent features of the site and surrounding properties are presented in **Attachments 1g and 1h**. The site is occupied by a one-story block structure with a partial basement. A paved parking area is located on the north and east side of the structure. A steep embankment is located on the south side of the structure and extends downward from the parking area to Roosevelt Way. Storm water drainage is directed northwest toward New Alexandria Road. The site and surrounding area is served by public water and a public sanitary system. Overhead electrical lines and underground telephone, septic, water and natural gas lines are located on and near the site.

There are both commercial properties and residential properties surrounding the site. A Sheetz retail petroleum dispensing facility with a convenience store is located to north of the site on the opposite side of New Alexandria Road. The eastern property line is bounded by Dagwood's Bar & Grille and beyond by a property that was formerly occupied by Rosey's Auto Clinic (a Sunoco-branded retail gasoline dispensing and auto repair facility). Roosevelt Way is located immediately south of the property, beyond which is an embankment that leads to an elevated railroad track. The site is bounded to the west by the intersection of Roosevelt Way and New Alexandria Road and immediately northwest of the intersection are residential homes.

Site Topography

A USGS 7.5-minute topographic quadrangle map, a site plan with topographic contours, and aerial photograph of the site are provided in **Attachment 1h**. The site is situated at approximately 1,000 feet above mean sea level. Topography is primarily flat across the site, although, as previously mentioned, there is a steep embankment near the southern property line across Roosevelt Way that is topped by railroad tracks.

Surface Water

The closest surface water body to the site is Jacks Run Creek, a perennial stream that flows southeast toward Sewickley Creek and eventually the Youghiogheny River. Jacks Run Creek is part of the Sewickey Creek watershed. Jacks Run Creek is located, at its closest point, approximately 290 feet to the east and downgradient of the site.

Site Geology

Based on information obtained from KU's site investigation activities, a layer of heterogeneous fill material composed of sand, gravel and brick underlies the pavement to depths between three and six feet below grade (fbg) at the site. The fill layer is underlain by a yellowish-brown silty clay layer starting at depths of three to six fbg to a total depth of seven to eleven fbg.

Bedrock at the site was encountered at approximately seven to eleven fbg. A geologic cross section was constructed by KU and is included in **Attachment 1c**. According to Cook's and KU's SCRs, provided as **Attachments 1b** and **1c**, respectively, bedrock at the site consists of sandstone of the Monongahela Group (Uniontown and Pittsburgh Formations) of Pennsylvanian age.

According to KU's SCR, the site lies approximately ¼ mile east of the synclinal axis of the Greensburg Syncline, which trends northeast-southwest and plunges to the southwest. The bedrock strike is north 20 degrees east and dips slightly to the west at five degrees towards the Greensburg Syncline.

Additional information regarding site geology is provided in **Attachments 1b** and **1c**.

Site Hydrogeology

According to KU's SCR (**Attachment 1c**), depth to groundwater at the site has ranged from approximately 11-19 fbg. Groundwater beneath the site is present in a bedrock aquifer that is primarily controlled by fracture flow. Groundwater flow direction at the site is generally toward the east/southwest. Groundwater elevation contour maps generated from KU's site characterization activities are provided in **Attachment 1c**. The average hydraulic gradient at the site was estimated by KU to be 0.13 feet per foot. Slug tests conducted in monitoring wells MW-2 and MW-5 by KU showed that the estimated hydraulic conductivity at the site ranged from 3.0×10^{-4} to 4.3×10^{-4} centimeters per second.

Additional information regarding site hydrogeology is provided in **Attachments 1b** and **1c**.

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 Removal Activities

In October of 1996, the Semingsons contracted Cook to oversee the closure by removal of five USTs by Precise Tank Modifications (PTM) at the site. A total of three gasoline USTs, one diesel UST, one pump island, and associated product delivery piping were removed from the facility. A waste oil UST, located inside the building, was reportedly closed in place. The following USTs were identified in the UST Closure Report prepared by PTM:

- Tank 001 - 2,000-gallon unleaded gasoline UST removed on October 15, 1996
- Tank 002 - 4,000-gallon unleaded gasoline UST removed on October 16, 1996
- Tank 003 - 4,000-gallon unleaded gasoline UST removed on October 14, 1996
- Tank 004 - 1,000-gallon diesel fuel UST removed on October 15, 1996
- Tank 005 – 1,000-gallon waste oil UST closed-in-place on October 16, 1996

During the removal of the USTs, obvious impacts were observed by PTM and Cook from beneath Tank 001 and 002 which were located in a common UST grave. Approximately 75 tons of petroleum-impacted soil was removed from around Tanks 001 and 002 and disposed at the Valley Landfill located in Irwin, Pennsylvania. No soil samples were collected from beneath Tank 001 and Tank 002 because of the obvious contamination, however, soil samples were collected from beneath Tanks 003 and 004. Analytical data and other information obtained during the UST closure activities is included in the UST Closure Report provided as **Attachment 1a**.

Chapter 245 Corrective Action Activities

Following the notification to the PaDEP of the 1996 release in the area former USTs 001 and 002, Cook initiated site characterization activities in February of 1997 by overseeing the installation of three bedrock monitoring wells (by Geo-Environmental Drilling, Inc.), sampling the three wells on March 13, 1997, and submitting a SCR on May 1, 1997. The March 1997 groundwater sampling data showed that dissolved-phase MTBE concentrations in well MW-1 were greater than the applicable RUA MSCs and dissolved-phase benzene, ethylbenzene, MTBE, naphthalene, toluene and total xylenes concentrations in well MW-3 were greater than the applicable RUA MSCs. The PaDEP sent a letter to the Semingsons in response to the Cook SCR and deemed the report incomplete because the extent and degree of soil impacts surrounding Tanks 001 and 002 were not complete and there was no assessment of Tank 005 which was closed in-place. In response to the PaDEP's letter, Cook submitted a letter detailing additional proposed activities to complete site characterization, of which the PaDEP approved the installation of two soil borings around Tank 005, collection of additional groundwater samples from the three site monitoring wells, and completion of at least five soil borings and soil sampling in the vicinity of the Tank 001/002 excavation. Additionally, in April of 1997, Cook requested a quotation from Geo-Environmental Drilling, Inc. to install three additional groundwater monitoring wells at the site but these wells were not installed. No further work was conducted at the site by Cook, including preparation of a SCR, and Cook apparently is no longer conducting business and could not provide or verify information regarding the 1996 and 1997 activities at the facility.

KU resumed corrective action activities at the site on behalf of the Semingsons in 2009. KU conducted quarterly groundwater sampling at the site from the Second Quarter of 2009 through the First Quarter of 2011. In addition to the quarterly groundwater monitoring activities, KU conducted the following corrective action activities:

- PaDEP file review for adjacent UST facilities;
- Installation of five additional monitoring wells;
- Installation of ten soil borings;
- Installation of four soil vapor monitoring points;
- Collection of site-specific aquifer data including a slug testing and pump testing;
- Conduct a fracture trace analysis;
- Collection of soil, soil vapor and groundwater samples;
- Conduct a water well survey for properties with 1,000 feet of the site;
- Conduct a sensitive receptor survey to identify potential ecological and human receptors on and downgradient of the site; and,
- Conduct a site survey.

Details of KU's activities listed above are provided in KU's SCR, which was submitted to the PaDEP on October 28, 2009 (**Attachment 1c**). As confirmed in discussions between GSC and the PaDEP Project Officer for this site, Ms. Amy Kemerer, the PaDEP did not issue a formal letter to KU in response to the SCR as they were waiting to review the SCR until the property owners selected a remediation standard and the PaDEP received a RAP for the site. However, at the request of GSC, the PaDEP did comment on the SCR submitted by KU primarily for the purpose of implementing an IRA activity at the site to address the SPL identified at the site as discussed in the SCR.

The most recent quarterly groundwater sampling event at the site was conducted by KU on March 30, 2011. Historical groundwater data from KU's initial groundwater sampling in February of 2009 through the First Quarter of 2011 is included in **Attachment 1f**. The most recent quarterly report completed by KU and submitted to the PaDEP was the Third Quarter 2010 Groundwater Sampling Report (included in **Attachment 1e**). KU did not submit a quarterly report to the PaDEP for the Fourth Quarter 2010 and First Quarter 2011, however, the groundwater data (laboratory analytical reports and summary table) collected from these quarterly sampling events is provided in **Attachment 1f**. The enclosed historical groundwater monitoring data, as well as the groundwater data generated from the additional quarterly groundwater sampling included as part of this RFB's SOW, will be used to assist in determining whether additional wells will be necessary to adequately complete plume delineation and submit a SCR, and to establish a baseline for groundwater concentrations on which an appropriate remedial approach and timeframe can be established and eventually presented in the RAP for this site.

D. OBJECTIVE / SCOPE OF WORK

This RFB Solicitation is a defined 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 reviewed by the PaDEP and is designed to 1) complete or enhance groundwater plume delineation to the north, south, east and west of the site, 2) confirm groundwater flow direction at the site, 3) determine through an engineering survey whether the sanitary sewer line to the south of the site is acting as a groundwater interceptor and, therefore, a preferential pathway, and 4) to prepare and submit a SCR. Following the completion of these activities to the satisfaction of the PaDEP, the remaining corrective action activities necessary for the Solicitors to obtain Relief from Liability for the site will either be competitively bid or the selected bidder for this RFB may be invited to complete the activities necessary to obtain Relief from Liability, 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 to four properties;
- Conduct a professional engineering survey of the sanitary sewer line along Roosevelt Way;
- Abandon three existing on-site groundwater monitoring wells (MW-1, MW-2 and MW-3);
- Install, survey, gauge and sample three on-site replacement bedrock groundwater monitoring wells (MW-1R, MW-2R and MW-3R) and seven off-site bedrock groundwater monitoring wells (MW-109 through MW-115);
- As an optional task dependent on groundwater analytical results obtained from initial and confirmatory characterization sampling of wells MW-109, MW-110 and MW-115, gauge and sample three existing off-site bedrock groundwater monitoring wells (MW-10 on the Sheetz property, MW-33D on the Dagwood's property, and MW-14 on the Rosey's Auto Clinic property); and,
- Preparation and submittal of a SCR.

The submitted bid shall follow the milestone format outlined herein. Bids shall include a detailed description of the anticipated costs for each milestone including labor rates, time requirements and equipment costs. A Standardized Bid Spreadsheet, to be completed and attached to the bid, is included as **Attachment 2**. The fixed-price cost for each of the milestones 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 within the Right-of-Way and at the gas station drilling locations), and project management, scheduling and project coordination time deemed necessary to complete each milestone.

MILESTONE A – OBTAIN OFF-SITE ACCESS

Prior to the installation and/or sampling of off-site groundwater monitoring wells specified under Tasks 5 and 6 below, the selected bidder shall enter into a mutually acceptable access agreement with Sheetz (for access to install and sample monitoring well MW-115 (on the Sheetz property), with the owner of the Dagwood's property (for access to install and sample monitoring wells MW-109 and MW-110), and with the Pennsylvania Department of Transportation (PennDOT) (for access to install and sample proposed monitoring wells MW-111, MW-112, MW-113 and MW-14). Proposed monitoring well locations are shown on Figure 1, Plate 1 and Plate 2.

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 Solicitors' release and adjacent properties. The Technical Contact has not discussed the proposed site characterization activities and proposed drilling locations with the above-referenced property owners. However, bidders should assume that off-site access to conduct the necessary site characterization activities will be granted without extended negotiation and should specify the anticipated level of effort.

MILESTONE B – CONDUCT A PROFESSIONAL SURVEY OF SANITARY SEWER LINE ALONG ROOSEVELT WAY

A detailed engineering survey and description of the sanitary sewer line that runs along Roosevelt Way and may be situated below the water table shall be performed by a Pennsylvania-licensed professional surveyor. The lateral and vertical locations of the selected sanitary sewer line and associated manholes shall be surveyed. Lateral positions and manholes shall be surveyed to within 0.01 feet and vertical positions of sewer pipe inverts and the bottom of manholes shall be surveyed to within 0.01 feet. The manholes shall be inspected by a licensed professional surveyor to identify the manhole bottom and surface elevations, piping diameter(s), and pipe invert elevations and orientations. The results of the professional survey along with descriptions of manhole information shall be provided on a survey map and included in the SCR. The purpose of the engineering survey of the sanitary sewer line is to determine whether the bedrock plume is being intercepted by the sewer line trench and the coarse bedding that makes up the trench surrounding the

sewer line could be acting as a preferential pathway for groundwater and vapor migration. Based on the survey and groundwater gauging/sampling data obtained, further groundwater characterization and/or vapor intrusion assessment may be recommended beyond this SOW.

MILESTONE C – ABANDONMENT OF MONITORING WELLS MW-1, MW-2 AND MW-3; INSTALLATION OF REPLACEMENT WELLS FOR MW-1, MW-2 AND MW-3; INSTALLATION OF OFF-SITE BEDROCK MONITORING WELLS MW-109, MW-110, MW-111, MW-112, MW-113, MW-114 AND MW-115

The three groundwater monitoring wells that Cook Engineering initially installed at the site, wells MW-1, MW-2, and MW-3, have screened intervals which are consistently below the recorded water levels at the site and, therefore, are less useful for measuring SPL thicknesses within these wells. Furthermore, these wells are completed across the soil-bedrock interface and may be acting as a conduit from these two potentially separate hydrostratigraphic units for SPL and contaminated groundwater to migrate (see attached well logs). Therefore, the selected bidder shall abandon these three monitoring wells by overdrilling a 10-inch diameter borehole to the maximum well depth and properly sealing the boreholes in accordance with applicable PaDEP guidance documents and standard industry practices.

Following the abandonment of the three wells, the selected bidder shall install replacement wells for the three abandoned wells (MW-1, MW-2 and MW-3) and install seven off-site bedrock groundwater monitoring wells (MW-109 through MW-15) at the approximate locations shown on the site plan included as **Attachment 1g**. The purpose of the proposed well installation is to replace the existing, improperly constructed monitoring wells at the site and attempt to delineate SPL and the dissolved-phase plume on- and off-site.

Prior to drilling these monitoring wells, soft-digging using an air-knife shall be conducted to at least a depth of four feet below grade (fbg) to ensure that the drilling locations are clear of shallow underground utilities.

The on-site replacement bedrock wells and the off-site bedrock wells shall be drilled and constructed in a similar fashion as the on-site bedrock groundwater monitoring wells that KU installed (MW-4 through MW-8), ensuring that the wells are constructed in such a manner that the water table and the same fracture zones are adequately screened. However, the well screen should not be overly long and should straddle the water table. The bedrock monitoring wells shall be drilled using air rotary techniques or a combination of hollow stem auger (HAS) and air rotary (AR) techniques. Drilling of soil borings for the soil characterization described below shall be conducted using either Geoprobe[®] direct-push methods or HSA methods (using a combined HSA/AR rig) prior to drilling into bedrock using AR methods to complete bedrock monitoring well installations.

Appropriate soil characterization (including but not limited to soil type, color, moisture content, texture, depth to bedrock, etc.) shall be conducted prior to the well installation so that the wells are constructed at appropriate locations and screened at appropriate depth intervals. For all well locations, soil borings shall be screened continuously for VOCs at two-foot intervals using a photoionization detector (PID). For soil borings that exhibit no PID response throughout the entire soil column, one soil sample shall be collected at the water table if saturated soil exists or at the soil/bedrock interface if saturated soil is not encountered. For those soil borings that exhibit a PID response anywhere throughout the

soil column, a soil sample shall be collected that is representative of the depth or depth interval that exhibits the highest PID response. If saturated soil is encountered, then one soil sample shall also be collected at the water table interface. For the purpose of this RFB, the bidder should assume that one soil sample will be collected from each boring. All soil samples collected for laboratory analysis shall be collected in accordance with industry standard practices and shall be analyzed for the PaDEP's Old and New Shortlists of unleaded gasoline constituents (i.e., benzene, toluene, ethylbenzene, total xylenes, cumene, naphthalene, MTBE, 124TMB and 135TMB).

Following soil boring and soil characterization, bedrock monitoring wells shall be installed at the proposed locations (Figure 1). The intent of the proposed monitoring wells is to further evaluate groundwater quality in the bedrock aquifer and to attempt to delineate the dissolved-phase plumes. Boring logs from previously drilled wells and historical water level data indicates that there is no saturated material above the top of bedrock on-site, however, saturated soil conditions do exist off-site on the Sheetz property and on the Rosey's property.

The bedrock monitoring wells shall be installed with the following characteristics:

- 1) Continuous soil/overburden and bedrock characterization shall be conducted and boring logs shall be prepared for each well using appropriate classification systems;
- 2) 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;
- 3) 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;
- 4) The bedrock wells shall be drilled such that there is a surface casing to the top of bedrock (ungROUTED) and an inner protective casing set three (3) feet into the bedrock and grouted in the bedrock socket and the surface casing;
- 5) Hydrated bentonite chips, bentonite slurry or another acceptable sealant combination shall be used to seal the annulus (between the PVC and the protective casing) above the sand pack up to grade;
- 6) 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,
- 7) A monitoring well construction log shall be prepared for each well.

MILESTONE D – SURVEYING, DEVELOPMENT, AND INITIAL SAMPLING OF NEWLY INSTALLED BEDROCK MONITORING WELLS MW-1R, MW-2R, MW-3R, MW-109, MW-110, MW-111, MW-112, MW-113, MW-114, and MW-115

The newly installed wells shall be surveyed to include the elevations of the casing rims of the monitoring wells. The survey should establish a common elevation datum between the Marie's Service Station site and the other pertinent properties (i.e., the Sheetz and

Dagwood's Bar and Grille properties) to allow for a comprehensive groundwater elevation map to be prepared. This will require coordination and cooperation with the owners and consultants for the above-mentioned off-site properties. A professional survey by a Pennsylvania-licensed Professional Land Surveyor is not required.

The newly installed monitoring wells shall be developed in accordance with standard industry practices and applicable guidance. At least ten well volumes shall be removed from each well during development. According to KU, wells have had generally high yields and so, if evacuation does occur during development of the new wells, recovery should be fast enough to still allow for efficient well development.

Initial gauging and sampling of the newly installed monitoring wells shall be conducted 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.

If SPL is encountered in any of the wells, the well shall not be sampled and the SPL shall be removed using a bailer and placed in a 55-gallon drum (used only to containerize SPL) and stored on-site until the appropriate off-site disposal at a treatment facility. The volume of SPL removed from each well (in gallons) shall be documented and the total number of gallons of SPL removed from the site during the well development or quarterly groundwater sampling events shall be reported in the SCR and quarterly reports.

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). Non-dedicated purging and sampling equipment shall be decontaminated prior to purging and sample collection in accordance with generally accepted industry practices. All wells shall be purged using low-flow purging techniques as this is consistent with the purging method employed during previous sampling events by KU, thus, assuring that future sampling results reflect previous purging methods. During low-flow purging, groundwater shall be removed from the well until the low-flow parameters (such as pH, turbidity, dissolved oxygen, conductivity and temperature) stabilize, indicating that a sample representative of current aquifer conditions can be collected. Following the low-flow purging, groundwater samples shall be collected

Following the low-flow purging, the groundwater samples shall be collected using a dedicated bailer and transferred directly into laboratory-supplied sample containers. The samples shall be 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 using the approved laboratory methods capable of reporting to the PaDEP-established Practical Quantitation Limits.

All development water and purge water shall be handled and disposed of in accordance with applicable regulations or guidance.

MILESTONE E - COMPREHENSIVE GROUNDWATER GAUGING AND SAMPLING EVENT

At least two weeks but not more than eight weeks following the initial sampling event, the selected bidder shall conduct a comprehensive quarterly groundwater gauging and sampling event. This event will include gauging and confirmatory sampling of the newly installed on- and off-site monitoring wells (MW-1R, MW-2R, MW-3R, MW-109, MW-110, MW-111, MW-112, MW-113, MW-114, and MW-115), as well as gauging and sampling of all other on-site groundwater monitoring wells (MW-04, MW-05, MW-06, MW-07, MW-08), for characterization purposes. Water level measurements, purging, sampling and analyses shall be conducted in the same manner as described for Milestone D. The depth to water data collected during this comprehensive groundwater monitoring round shall be used to determine water level elevations so that a comprehensive groundwater elevation or potentiometric surface contour map for the bedrock aquifer can be developed and the direction of bedrock groundwater flow can be confirmed.

Groundwater elevation contour maps and 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 SCR referenced below.

MILESTONE F – PREPARATION AND SUBMITTAL OF A SCR

The selected bidder shall prepare and submit a SCR in accordance with 25 Pa Code §245.310 and considering what has been submitted by KU. The selected bidder shall submit a complete and comprehensive SCR that encompasses all the relevant site characterization work conducted by the selected bidder and also by previous consultants. Prior to submission of the report to the PaDEP, the SCR shall be prepared in draft form for review and comment by the Solicitors and the USTIF. The bidders' schedules shall provide two weeks for this review. All of the comments received by the Solicitors and the USTIF shall be addressed in the final report before submission to the PaDEP. The selected bidder shall prepare and submit a SCR that documents and discusses the data obtained and the conclusions drawn from the completion of Milestones B through E. Tables, figures, and other attachments that support the text shall include the following:

- 1) Updated comprehensive historical groundwater elevation data;
- 2) Updated comprehensive historical groundwater analytical data;
- 3) Updated site survey map showing the location of the sanitary sewer line along Roosevelt Way and the data obtained from the engineering survey of the sanitary sewer line;
- 4) Updated site map showing site boundaries, existing and new monitoring well locations, and other pertinent site features including the newly surveyed sanitary sewer line;
- 5) Bedrock groundwater head potential contour maps (for the comprehensive sampling round);
- 6) Bedrock groundwater concentration contour maps for all constituents found to be above the RUA MSCs in any sample (for the comprehensive sampling round);

- 7) Laboratory analytical reports for groundwater samples, chains of custody, and field sampling documentation;
- 8) Well logs for new groundwater monitoring wells;
- 9) A current conceptual site model including a fate and transport analysis that adequately describes the current source(s) of contamination, fate and transport of contamination and potential receptors using the most recent data collected from the activities outlined in this RFB.
- 10) A conclusion that either site characterization/delineation of site impacts is complete and approval of the SCR is requested, OR a conclusion that site characterization/delineation of site impacts is not complete with a description of the additional activities recommended by the selected bidder to attempt to complete site characterization/delineation of site impacts.

The remedial goal, including the standard used to obtain Relief from Liability (Statewide Health Standard vs. Site-Specific Standard), for this site will be developed in part based on the results and conclusions presented in the SCR.

MILESTONES G1-G2 – CONDUCT TWO ADDITIONAL QUARTERS OF COMPREHENSIVE GROUNDWATER MONITORING AND PREPARATION/SUBMITTAL OF QUARTERLY GROUNDWATER MONITORING REPORTS

Following the submittal of the SCR, the selected bidder shall gauge and sample the same wells that were gauged and sampled as part of the comprehensive site characterization gauging/sampling event described in Milestone E. The selected bidder shall prepare and submit quarterly reports to the PaDEP that summarize the quarterly groundwater monitoring activities conducted at the site. A quarterly fixed-price cost shall be provided for this task. Each quarterly report shall include a write-up of activities performed, the results and conclusions, as well as historical groundwater elevation data, historical groundwater analytical data, a bedrock groundwater head potential contour map, groundwater concentration contour maps for all constituents found to be above the Residential, Used Aquifer Medium-Specific Concentrations in any sample, and copies of supporting laboratory analytical reports and chains of custody.

ADDITIONAL REQUIREMENTS

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 Solicitors upon request and shall be included as an appendix to the SCR. Waste disposal costs shall be included in the fixed prices quoted for Milestones C, D, E and G1-G2, as appropriate.

- Be responsible for providing the Solicitors and property tenants with adequate advance notice prior to each visit to the property. The purpose of this notification is to coordinate with the Solicitors 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 Solicitors wish to execute a mutually agreeable Fixed-Price Defined SOW contract (Remediation Agreement). A Draft Remediation Agreement is included as **Attachment 3** 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 3** 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 3 "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 Solicitors 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 Solicitors 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 Solicitors, USTIF, and PaDEP.

The bidder shall provide its bid using the Standardized Bid Spreadsheet included as **Attachment 2** with descriptions for each task provided in the body of the bid document. In addition to **Attachment 2**, 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 Solicitors 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 Solicitors require 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 Bid Spreadsheet in **Attachment 2** 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 2** 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 % mark-up on other direct costs and subcontractors (proposed mark-up % shall be less than or equal to 10% and shall be incorporated into bidder's proposed fixed-price cost for each milestone);
 - 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 3**³.
4. The names and resumes of the proposed project team for the key project staff, including the proposed licensed Professional Geologist of Record who will be responsible for overseeing the work and applying a professional seal to the project deliverables.

³ 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.

5. Responses to the following specific questions:
 - a. How many Chapter 245 projects has your company and/or the proposed Pennsylvania-licensed Professional Geologist worked on in the Southwest Region of Pennsylvania?
 - b. 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 Relief from Liability from the PaDEP) using any standard? Please list up to five projects.
 - c. 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 Solicitors, ICF and the USTIF will be kept informed as to project progress and developments, and how the Solicitors (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 AT 1:00 PM ON JUNE 6, 2011. The Solicitors, the Technical Contact, or their designee will be at the site 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 JUNE 2, 2011 WITH THE SUBJECT “MARIE’S 1996-0307(F) – SITE MEETING ATTENDANCE CONFIRMATION”.** The name and contact information of the company participant should be included in the body of the e-mail.