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APR 13 2009

ICF, Inc.  
PAUSTIF**COMPETITIVE BID SOLICITATION FOR  
SITE CHARACTERIZATION ACTIVITIES**

**Campbells Run Texaco  
Southeast Corner of the Intersection of Campbells Run Road and Boyce Road,  
Collier Township, Allegheny County, PA**

**PaDEP FACILITY ID #02-05278; USTIF CLAIM #1998-316(M)****April 9, 2009**

Your company has requested to receive this Request for Bid (RFB) Solicitation, which invites your firm to prepare and submit a competitive bid to characterize the subject site. **Please acknowledge the receipt of this document by sending an e-mail to Gerald Hawk at [jerryhawk@comcast.net](mailto:jerryhawk@comcast.net) (with copies to [jcramer@icfi.com](mailto:jcramer@icfi.com) and [lroach@groundwatersciences.com](mailto:lroach@groundwatersciences.com)) with the subject: "Campbells Run Texaco 1998-316(M) – RFB RECEIVED" by April 17, 2009.** Please include the company name and your contact information in the body of the e-mail.

A petroleum release at the site was discovered and confirmed in 1998. A Remedial Action Plan (RAP) was approved by the PA Department of Environmental Protection (PaDEP) on November 7, 2005. The Scope of Work for this RFB Solicitation is to perform additional site characterization activities and submit a Supplemental Site Characterization Report. The Solicitor, (Kehm Oil Company), has an open claim (claim number referenced above) with the Pennsylvania Underground Storage Tank Indemnification Fund (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 USTIF.

The corrective action work of this solicitation will generally include the following components (additional details provided later in this solicitation):

- Conduct a geophysical survey of the property;
- Install additional soil and bedrock monitoring wells;
- Conduct a professional land survey of facility and adjacent facility;
- Conduct a soil boring investigation;
- Perform a survey of the sanitary sewers, storm sewers, public water piping, new natural gas piping, and other subsurface utilities;
- Perform a receptor survey;
- Conduct aquifer testing (slug test) and groundwater sampling; and
- Complete and submit a Supplemental Site Characterization Report.

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 these two hard copy submittals, 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 ICF Claims Handler and the Technical Contact will

assist<sup>1</sup> 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 copies and electronic copy) must be provided as directed above no later than close of business (5 p.m. EST) on May 15, 2009.** Bid evaluation will consider, among other factors, estimated total cost, unit costs, schedule, discussion of technical approach, qualifications, and contract terms and conditions. The total cost will be the most heavily weighted evaluation criterion. The Solicitor will inform the successful bidder of its selection via e-mail by June 15, 2009 (30 days after deadline for submission). Confirmation of selection will follow via Certified U.S. Mail. The unsuccessful bidders will be informed by the Solicitor via First Class U.S. Mail.

**A. SOLICITOR, SITE OWNER'S REPRESENTATIVE, ICF CLAIMS HANDLER, AND TECHNICAL CONTACT INFORMATION**

Solicitor

George Kehm  
Kehm Oil Company  
1600 Oakdale Road  
PO Box 130  
Oakdale, PA 15071

Site Owner's Representative

Jeff Zuckerman  
2301 Main Street  
Pittsburgh, PA 1525  
412-781-0067

Technical Contact<sup>2</sup>

Lawrence F. Roach, P.G.  
Groundwater Sciences Corporation  
2601 Market Place Street  
Suite 310  
Harrisburg, PA 17110  
Phone: 717.901.8184  
Fax: 717.657.1611  
lroach@groundwatersciences.com

ICF Claims Handler

Gerald Hawk  
ICF International, Inc.  
4000 Vine Street  
Middletown, PA 17057  
Phone: 800.888.7843  
Fax: 717.944.8389  
jerryhawk@comcast.net  
Cc: jcramer@icfi.com

**NOTE:** 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 e-mail subject line must be "Campbells Run Texaco 1998-316(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 May 11, 2009.

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

<sup>2</sup> Subcontractor to ICF.

**B. ATTACHMENTS TO THIS RFB SOLICITATION**

Attachment 1	Previous Environmental Reports and Supporting Documents
Attachment 2	Standard Bid Format
Attachment 3	Standard Remediation Agreement (to be customized to this bid by the successful bidder)

**C. SITE LOCATION / BACKGROUND**

The following tables and figures are referenced in the sections below and are provided at the end of the RFB text. As noted, with the exception of Table 1a and Figure 2, these tables and figures have been prepared by the current consultant.

Table 1 – Soil Data – Source: United Environmental Group (UEG)

Table 1a – Soil Data – Source: UEG (2<sup>nd</sup> Quarter 2006 RAPR), compiled by Groundwater Sciences Corporation (GSC)

Figure 1 – Site Map – Source UEG

Figure 2 – Proposed Monitoring Well and Soil Boring Map – Source: GSC

Figure 3 – Geologic Cross-Section – Source UEG

Figure 4 – Site Detail Map – Source UEG

Figure 5 – ORC Installation Map – Source UEG

Figure 6 – Groundwater Contour Map (6/5/07) – Source UEG

Figure 7 – Benzene Isoconcentration Map (5/22/07) – Source UEG

Figure 8 – MTBE Isoconcentration Map (5/22/07) – Source UEG

Environmental site characterization activities are being conducted at this site in response to a confirmed release at the site. Specific site background information can be found in the documents provided in Attachment 1. The following information summarizes, and is derived from, relevant information provided in the previous environmental reports that are included as Attachment 1. If there is any conflict between the summary provided herein and the source documents, the bidder should differ to the source documents.

**Site Name / Address:**

Campbells Run Texaco / Southeast corner of the Intersection of Campbells Run Road and Boyce Road, Collier Township, Allegheny County, PA.

**Site Use Description:**

Site is a closed retail petroleum facility.

**Nature of Confirmed Release and Subsequent Activities:**

The following information is based on the documents provided in Attachment 1. This information has not been independently verified by ICF or the Technical Contact.

On July 28, 1998 the Robinson Township Municipal Authority notified all retail petroleum facilities along Campbells Run Road of gasoline fumes detected at their sewage treatment facility. A station attendant at the former Texaco retail petroleum facility (hereafter referred to as the Site) discovered product in Campbells Run Creek located adjacent to the Site. A

copy of the site detail maps provided to the PaDEP is included as Figures 1 and 4. These are rough schematics of the Site. An air photo is presented as Figure 2. United Environmental Group (UEG) was contacted, and conducted a tightness testing that same day. The tightness test failed. On July 29, 1998 UEG excavated a trench 17 feet below ground surface (bgs) that measured 30 feet long and 4 feet wide. On July 31, 1998 the trench was completed with perforated pipe installed along the bottom of the trench with three solid riser pipes (OW-1, OW-2, and OW-3, Figure 1) to the surface to facilitate sampling, treatment, and assessment activities. At least one of these pipes is still serviceable. The trench was backfilled with clean, permeable stone. Also on July 29, 1998, UEG collected surface water samples from Campbells Run Creek from above and below the Site to be analyzed for PaDEP unleaded gasoline constituents. The sample collected from above the Site was below laboratory detection limits while the sample from below the Site exceeded applicable Statewide Health Standards (SHS).

On August 5, 1998, gasoline odors were detected at the Robinson Township Municipal Authority's sewer treatment facility again. Gasoline odors were detected during an inspection of the sewer line running adjacent to the Site on Campbells Run Road on August 6, 1998. UEG, under the direction of the PaDEP, excavated a trench to a depth of 13 feet bgs and installed an observation well (OW-4, Figure 1) prior to backfilling with clean gravel. The location of the trench is not known.

It is believed that a total of 569 tons of soil was removed during the excavation of the two trenches. The soil was sampled on July 31, 1998 and subsequently disposed of at the Arden Landfill located in Washington County, PA. Two of the five post-excitation soil samples exceeded the SHS for benzene (Table 1).

On August 10, 1998, UEG began periodic removal of groundwater from the observation wells. The removal activity, performed by a vacuum truck, is later referred to as Enhanced Fluid Recovery (EFR).

On August 24, 1998, the observation wells were installed in the trenches and Campbells Run Creek was sampled again. Separate phase liquid (SPL) was observed in all four observation wells. The upstream sample collected from Campbells Run Creek was below laboratory detection limits for all analyzed constituents while the sample from downstream of the Site contained target constituents but below SHSs.

On September 2, 1998, UEG submitted to the PaDEP an Interim Remedial Action Report detailing the activities described above. By the date of the report, 6,681 gallons of petroleum contaminated groundwater and 253 gallons of SPL was removed from the observation wells. A site map showing the location of the interceptor trenches and observation wells is included at Figure 1.

#### *Underground Storage Tank Removal*

In October 1998 UEG initiated the closure of five underground storage tanks (USTs) and associated ancillary equipment. Four 4,000 gallon steel gasoline tanks and one 550-gallon steel used motor oil tank were removed from the ground along with an additional 685 tons of petroleum-contaminated soil. All USTs were inspected, cleaned, and disposed of as scrap by UEG. No holes were found in the USTs but corrosion pitting and holes were discovered in the regular unleaded gasoline product line. Twenty-two soil samples were collected according to PaDEP Closure Regulations for UST systems, August 1996 and API Bulletin

1604 – Recommended Practice for Abandonment or Removal of Used Underground Service Station Tanks, March 1987. No soil sample collected exceeded applicable SHSs. The soil was disposed of at the Washington, PA landfill. Due to the proximity of OW-4 to the UST field, OW-4 was destroyed during UST removal and soil excavation activities. The interceptor trench containing OW-3 and Campbells Run Creek were also sampled around this time to evaluate the effectiveness of the trench and associated EFR events in minimizing the release to Campbells Run. The interceptor trench sample exceeded SHS for all constituents while the upstream and downstream sample collected from Campbells Run Creek were below laboratory detection limits. The approximate location of the former USTs and dispensers can be seen on Figure 1.

#### *Site Characterization*

Site characterization activities were conducted by UEG and included the installation and sampling of eight monitoring wells (MW-1 through MW-8) and the collection of eight soil samples. One soil sample was collected during the installation of each monitoring well. These characterization activities were detailed in two separate combined Site Characterization Report/Remedial Action Plans (SCR/RAP) submitted to the PaDEP. The details of these SCR/RAPs are detailed below.

The first SCR/RAP was submitted to the PaDEP on May 1, 2001. Site characterization activities included the installation and sampling of three monitoring wells (MW-1, MW-2, and MW-3, Figure 4) and the collection of three soil samples.

Monitoring well MW-1 was installed to the northeast of the Site building along Campbells Run Road. Monitoring well MW-2 was installed near the intersection of Campbells Run Road and Boyce Road. Monitoring well MW-3 was installed to the southwest of the Site building along Boyce Road. The monitoring wells were installed with total depths ranging from approximately 14 to 17 feet bgs and completed in soil, just above bedrock. Ten feet of screen was placed in the bottom portion of each well. The upper portion of the screened interval of monitoring well MW-2 generally straddles the water table, however, historical water levels indicate that the water table is frequently just above the screened portion of MW-1 and may always be above the screened portion of MW-3.

One soil sample was collected during the installation of each monitoring well from the soil/bedrock interface. The soil samples collected from MW-1 and MW-3 contained unleaded gasoline constituents above the SHS. One groundwater sample was collected from monitoring wells MW-1 through MW-3 as part of site characterization. Groundwater concentrations in all three monitoring wells, as well as OW-3 (observation well/riser pipe installed in the down-gradient trench), contained unleaded gasoline constituents greater than the SHS.

UEG stated in the first combined SCR/RAP that “two 36[-inch]” sewage lines run along the edge of Campbells Run Road and Boyce Road” and that they were “convinced that these lines and the fill around them were points of accumulation and pathways for residual petroleum contamination”.

The first SCR/RAP proposed using all three monitoring wells as pumping wells for EFR events as the remedial choice. EFR events were proposed to be conducted on a bi-weekly basis.

The PaDEP acknowledged receipt of the combined SCR/RAP in correspondence dated May 30, 2001. The correspondence indicated that the PaDEP did not concur that the site had been adequately characterized and that the full extent and degree of soil and groundwater impacts had not been delineated and the appropriate remedial action had not been evaluated. PaDEP stated that "the interim remedial action of groundwater recovery and disposal should continue until a site Remedial Action Plan is submitted and approved by the Department".

On August 16 and 17, 2001 four off-site monitoring wells (MW-4 through MW-7, Figure 4) were installed on the properties to the east and west of the Site. Monitoring well MW-4 was installed at approximately 26 feet bgs while MW-5, MW-6, and MW-7 were installed at approximately 30 feet bgs. Each monitoring well was completed with 10 feet of screen placed in the bottom of the wells. The SCR/RAP specifies that bedrock was encountered between depths of 15 feet and 18 feet bgs, indicating that the entire screened interval of each well was in bedrock and therefore below the saturated soil and below the water table. A cross section generated by UEG and provided in the SCR/RAP showing the bedrock-screened well construction of MW-4 and MW-6 is attached as Figure 3.

On June 28, 2004 one additional off-site monitoring well (MW-8, Figure 4) was installed. MW-8 was installed east of the Site, beyond MW-4, and was drilled to a depth of 15 feet bgs with 10 feet of screen placed in the bottom portion of the well in soil (similar to MW-1 through MW-3).

According to UEG, the geology consists of fifteen to eighteen feet of overburden consisting primarily of sandy silt or gravel underlain by claystone grading to sandstone.

The SCR/RAP indicated that one soil sample was collected from each monitoring well during its installation. The sample depth was based on the highest overall vapor concentration, measured using a photo-ionization detector, or from the soil/groundwater interface. It could not be determined from the report from what depth the samples were collected. Some of the soil samples collected from MW-4 through MW-8 were above SHS for unleaded gasoline constituents.

Requests were made by UEG to install one additional off-site monitoring well on the Champion Windows property located to the northeast of the Site, beyond Campbells Run Road. These requests were denied by the property owner. Despite correspondence to the property owner by the PaDEP, permission was apparently not granted and so this monitoring well was not installed.

The second combined SCR/RAP was submitted to the PaDEP in July 2005.

A table containing recent groundwater surface elevation measurements was included in the July 2005 SCR/RAP along with groundwater elevation contour maps. The measurements and contour maps indicate groundwater flow at the Site is towards Campbells Run Creek to the south.

#### *Remedial Action Plan*

UEG proposed in the second SCR/RAP to 1) excavate soils in the vicinity of MW-1 and MW-3 and the former tank fields, 2) add Oxygen Release Compound (ORC) to the open

excavation prior to backfilling with clean gravel backfill, and 3) continue EFR events on a bi-weekly basis. The SCR/RAP specified the SHS for soil and groundwater at the site.

In correspondence dated November 7, 2005 the PaDEP approved the RAP as submitted (it is inferred that the SCR was also approved as submitted). Quarterly groundwater monitoring began at the site on November 11, 2005 and is ongoing with the most recent samples collected in early February 2009.

#### *Additional Soil Excavation and Source Reduction*

According to the Second Quarter 2006 Remedial Action Progress Report (RAPR), between May 31, and June 3, 2006, the soil excavation described in the approved RAP was completed. A more or less rectangular excavation paralleling Boyce Road and measuring approximately 25 feet by 58 feet was dug along the western side of the Site building (Figure 5). The majority of the excavation was dug to seven feet bgs, however from southwest of the former dispenser island to in front of the garage bay doors the excavation was dug to 10 feet bgs. The lateral and vertical extent of the excavation was decided using a photo-ionization detector.

Four samples were collected from the excavation's corners at an unspecified depth. The south and west samples (corners closest to Campbells Run Creek) contained concentrations of benzene above the SHS (Attachment A). The north sample was below laboratory detection limits for all analyzed constituents while the east sample contained concentrations of unleaded gasoline constituents below the SHS. UEG stated in the Report that "it appears that the release of product from the leaking line in 1998 followed a thin cinder ash seam located within the subsurface fill at the site in a southern direction to a large cinder ash area located in front of the garage bay doors where it accumulated and remained prior to the excavation of petroleum impacted soil at the site". A table containing the excavation soil sampling results is provided as Table 1a.

In addition to the soil excavation, two trenches of unspecified length, width, and depth were dug immediately adjacent to MW-1 and MW-3. It does not appear from the Report that samples were collected from these trenches. Prior to backfilling with clean pea gravel, 1,000 pounds of ORC Advanced, in slurry form, was placed in the excavation and trenches. Approximately 541 tons of soil was removed from the site and disposed of at BFI Imperial Landfill in Imperial, PA.

#### *Recent Conditions*

Groundwater at the site remains impacted with dissolved-phase unleaded gasoline constituents above the SHS. Some wells that are intended to define the plume are completed below the water table and so extent of plume is not fully known in shallow soil groundwater system. However, it is or has been offsite in soil and bedrock. Groundwater concentrations in Campbell's Run creek remain below laboratory detection limits. The groundwater elevation contour map and dissolved-phase benzene and MTBE concentration contour maps provided by UEG in recent RAPRs are presented as Figures 6, 7, and 8, respectively but mix data from wells completed in the soil and bedrock, and wells that straddle the water table and those completed well below it.

In summary, remediation at the Site has included soil excavation and removal, the addition of ORC Advanced to open excavations, and what is described as groundwater pump and

treat in the form of EFR groundwater removal. To date, approximately 1,795 tons of petroleum impacted soil, at least 253 gallons of SPL, and well above 100,000 gallons of groundwater have been removed from the Site over the last ten years.

With regard to groundwater data, it should be noted that groundwater samples are collected following a purge of at least three well volumes using a vacuum truck. The use of a vacuum truck to purge a monitoring well prior to sampling may be responsible in large part for the fluctuations observed in the site monitoring well concentrations.

SPL has been removed from monitoring well MW-3 and OW-3 (located in the interceptor trench) and has been noted in the creek historically. These locations where SPL has been identified and the UST systems are separated by relatively large distances at the site, and so SPL must now or historically been present between these points. However, the interceptor trench is completed well below the water table and many of the monitoring wells are completed well below the water table. Therefore, the original extent of the SPL, any remaining SPL, and any smear zone created by the SPL where immobile SPL may be found have not been delineated.

The remedial method selected by UEG is in part EFRs in the interceptor trench and selected monitoring wells. It is the technical contact's understanding that a vacuum truck is used to remove fluids from these points for approximately an 8-hour period about every two weeks. The current consultant was directed to end EFRs and the use of a vacuum truck to purge the monitoring wells prior to sampling in October, 2008.

**USTs on Site:**

All of the UST systems have reportedly been closed by removal.

**Current and Historical Constituents of Concern:**

The constituents of concern (COCs) at this site are the substances on the old PaDEP short list for unleaded gasoline (benzene, cumene, ethylbenzene, MTBE, naphthalene, toluene, and total xylenes).

**D. OBJECTIVE / SCOPE OF WORK**

This RFB seeks competitive bids from qualified contractors to perform the additional characterization activities scoped below to investigate a confirmed petroleum release and submit a Supplemental SCR to the PaDEP. (Following this scope of work, a revised RAP will be prepared. This work is not part of this SOW.) The following Scope of Work has been developed by the Technical Contact based on the §245.309 Regulations and specific comments from the PaDEP case manager.

- 1. Site Access and Project Plans:** The claimant is no longer the site owner. The site owner has agreed in principle to allow access and contact information for the owner is provided above. The successful bidder must contact the owner's representative and obtain formal access to the site. The bidder must also prepare a Health and Safety Plan; Waste Management Plan; Field Sampling and Analysis Plan; PA One Call

Notification Plan and/or other plans that may be required by regulations or that may be necessary and appropriate.<sup>3</sup>

2. **Geophysical Survey:** A geophysical survey of the site (property) should be performed. The purpose of this survey is to help identify and locate the UST excavations, previous areas of soil excavation, unknown USTS, conveyance lines, and other underground utilities and features prior to the invasive characterization activities. It is anticipated that both electromagnetic (EM) and ground-penetrating radar (GPR) technologies would be employed.
  
3. **Engineering Evaluation of Utilities:** Conduct an engineering evaluation of underground storm sewers, sanitary sewers, beneath Boyce Road and Campbells Run Road adjacent to the site for a distance of 50 feet beyond the property line to the east and west along Campbells Run road and 50 feet beyond the property line to the south along Boyce Road. Please note that a relatively large diameter natural gas pipeline has recently been installed near the eastern property line of the subject site. Additionally, the evaluation should include any onsite laterals to these utilities which may have served or currently serve as preferential migration pathways for petroleum impacted water, potential SPL, or vapors. This evaluation should include:
  - a. a professional survey of invert of main conveyance pipe at manholes, manhole rim elevations and locations, configuration of laterals and main lines for sewers (should be incorporated into Item 3 below);
  - b. an assessment of construction material of utility;
  - c. an evaluation of utility bedding material (grain size) to the extent that this information is obtainable from plans or interviews (may be incorporated into Item 5 below); and
  - d. a review of available plans of the utilities beneath Boyce Road and Campbells Run Road and the subject site.
  - e. Location and depth of natural gas line

The purpose of this evaluation is to allow for the construction of as-built plans of the utilities beneath the site and adjacent streets.

4. **Licensed Professional Land Survey of Site / Base Map Preparation:** Subsequent to investigation activities, conduct a professional survey of the site by a Pennsylvania-licensed land surveyor. Survey should include all principal site features (e.g., creek, buildings, property boundaries, paved areas, gravel areas, conveyance lines (if known), and groundwater monitoring wells) and features identified in the engineering evaluation (Item 3). Base map shall also show uses of adjoining properties and shall include the locations and elevations of the tops of casing of the monitoring wells and the creek bed at upstream and downstream locations (required to complete Item 5).
  
5. **Groundwater Elevation Survey:** Following the completion of the professional land survey, two (2) comprehensive rounds of static water level measurements and total depth of well soundings shall be made in all site monitoring wells, OW-3, and all

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<sup>3</sup> In accordance with 25 PA Code §245.309. Successful bidder shall be responsible for contacting Pennsylvania One Call prior to conducting any invasive field work.

accessible wells on the adjacent properties. These measurement events shall be separated by at least thirty (30) days to ensure the measurements are independent. Access to the offsite properties must be obtained prior to entering the site (there have been no known issues with access for this activity in the past). Inclusion of this task in this Scope of Work and the request by the PaDEP should not be interpreted as access to the property being granted, but bidders should assume for the purpose of this bid that access will be granted upon request.

In addition to measuring the static water level in the monitoring wells, elevation data should be gathered for the water surface of Campbells Run Creek upstream and downstream.

This groundwater/surface water elevation data shall be used to create groundwater elevation and potentiometric surface contour maps which shall be included in the Supplemental SCR.

## **6. Onsite Monitoring Well Installation:**

### Soil Monitoring Wells

Additional groundwater characterization is required. Please assume for this RFB that three (3) additional overburden groundwater monitoring wells are required (MW-101, MW-103, and MW-105 on attached Figure 2). Two of these wells will be located to the north of the interception trench. The third well will be located on the site as close to the east side of the site building as practicable. For the purpose of this RFB assume that the monitoring wells shall be installed with the following characteristics:

- a. Conduct continuous geological characterization (boring logs) and screening of soil from borings using a photoionization ionization detector (PID). Continuous geological logs should be prepared by a Professional Geologist licensed in the Commonwealth for each boring using standard and consistent classification system procedures (e.g., Modified Burmister or USCS).
- b. Collection of discrete soil samples from a depth coincident with the water table and the soil/bedrock interface. One additional sample may also be collected at any depth interval with a PID response significantly greater than the typical reading for that boring and that is greater than 100 ppm. Historical data from existing wells and contemporaneous data from drilling and boring activities should be considered while sampling. Assume for the purpose of this RFB, that three (3) soil samples will be collected in total from each well. Soil samples will be collected in laboratory-provided containers in accordance with EPA Method 5035 and analyzed for the COCs (Old list of PaDEP unleaded gasoline substances – benzene, cumene, ethylbenzene, MTBE, naphthalene, toluene, and total xylenes) by EPA Method SW846 8260 by a PADEP-certified laboratory;
- c. Wells shall be constructed of 2-inch PVC with a maximum of 15 feet of well screen;
- d. Wells shall be installed a minimum of five (5) feet into the soil saturated zone;<sup>4</sup>
- e. The well screen shall straddle the unsaturated/saturated zone interface.
- f. The screen shall be entirely in soil; and

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<sup>4</sup> 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.

- g. Each monitoring well will be completed at the surface with a securable manhole, set in concrete flush with the ground surface.

#### Bedrock Monitoring Wells

Assume that two additional bedrock monitoring wells are required (MW-102 and MW-104). These wells will be located upgradient of the interceptor trench and will be "twins" to MW-101 and MW-103. For the purposes of this RFB assume that the monitoring wells shall be installed with the following characteristics:

- a. Conduct continuous geological characterization (boring logs);
- b. Wells shall be constructed of 2-inch PVC with a maximum of twenty (20) feet of well screen;
- c. 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. There may be SPL on the water table. The well will be drilled such that there is a surface casing to the top of bedrock (ungROUTED) and a protective casing set three (3) feet in to 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); and
- e. Each monitoring well will be completed at the surface with a securable manhole, set in concrete flush with the ground surface.

#### Soil and Bedrock Monitoring Wells

Subsequent to the monitoring well installations, the wells shall be developed in accordance with standard industry practices and applicable regulations and guidance. Additionally, the wells shall be surveyed by a professional surveyor to identify locations on the scaled base site plan and to determine top of casing elevations (elevation above mean sea level)(see Item 4 above).

7. **Soil Boring Drilling:** Additional soil sampling is required. Please assume for the purposes of this RFB that twenty (20) soil borings will be drilled. Most of these borings will investigate soil quality OUTSIDE the areas where soil excavation has been performed previously. Two of the twenty soil borings (U and V; Figure 2) will investigate the base of previous excavations. It is assumed that a simple examination of the ground surface with regard to gravel or paving coupled with schematic diagrams included in Attachment 1 will serve to identify the approximate boundary of previous excavations.

The borings should be advanced to the bedrock surface or direct-push refusal. If direct push refusal is encountered at a depth reasonably interpreted to be well above bedrock, a second attempt to reach bedrock will be made. Continuous geological logs should be prepared by a Professional Geologist licensed in the Commonwealth for each boring using standard and consistent classification system procedures (e.g., Modified Burmister or USCS). Soil samples should be screened at two-foot intervals with a photoionization detector (PID) (using headspace measurements). In addition to the petroleum analytical

samples, representative discrete soil samples should be collected and conveyed to a laboratory(s) for grain size analysis including quantification of silt and clay content and fraction organic carbon. Five geotechnical samples should be analyzed based on the stratigraphy and soil types observed during the soil sampling.

- a. For eighteen (18) soil borings (A, C through N, and P through T): Conduct continuous geological characterization (boring logs) and screening of soil from borings using a photoionization detector (PID). Collection of discrete soil samples from a depth coincident with the water table and the soil/bedrock interface. One additional sample may also be collected at any depth interval with a PID response significantly greater than the typical reading for that boring and greater than 100 ppm. Assume for the purpose of this RFB, that two (2) soil samples will be collected from each of nine (9) of the soil borings and three (3) soil samples will be collected from each of nine (9) of the soil borings. Soil samples will be collected in laboratory-provided containers in accordance with EPA Method 5035 and analyzed for the substances on the Old short list for unleaded gasoline (benzene, cumene, ethylbenzene, MTBE, naphthalene, toluene, and total xylenes) by EPA Method SW846 8260 by a PADEP-certified laboratory.
  - b. For soil borings U and V: Conduct continuous geological characterization (boring logs) and screening of soil from borings using a photoionization detector (PID). To the extent that there is native soil beneath the backfilled excavation, one sample will be collected at a depth that is coincident with the highest PID reading or other appropriate field determination (e.g., odor or staining). Soil samples will be collected in laboratory-provided containers in accordance with EPA Method 5035 and analyzed for the COCs by EPA Method SW846 8260 by a PaDEP-certified laboratory.
- 8. Monitoring Well Sampling and Analysis:** The 14 monitoring "wells" at the site (8 existing, the interceptor trench OW-3, plus the 5 additional monitoring wells in Item 6) shall be sampled quarterly if they have no measureable SPL and analyzed for the substances on the Old short list for unleaded gasoline (benzene, cumene, ethylbenzene, MTBE, naphthalene, toluene, and total xylenes). The samples shall be analyzed by EPA Method 8260 by a PaDEP-certified laboratory. QA/QC for this task shall include collecting and analyzing one trip blank (provided by laboratory) and one blind duplicate QA/QC groundwater sample for the COCs per sampling event

[During each quarterly sampling event, static water levels and SPL thickness shall be measured in each of the monitoring wells (see item 5)]. Wells shall be purged prior to sampling in accordance with standard industry practices and applicable regulations and guidance.

If SPL is encountered during the monitoring well sampling activities, the SPL thickness shall be measured before it is removed and properly containerized / stored and the Technical Contact shall be notified immediately.

For the cost estimation purposes, bidders shall assume that two quarterly sampling events will be conducted as part of this Scope of Work.

- 9. Receptor Survey:** Additional receptor information has been requested by the PaDEP. The following tasks must be completed:

- a. Collect upstream and downstream samples of Campbells Run Creek at the same time as the quarterly sampling.
  - b. Review the PA Groundwater Information System (PAGWIS) records available from the PA Topographic and Geologic Survey website. This task shall include plotting all recorded wells within a ½-mile radius of the Site on a map and including a copy of the database records for that search distance in an appendix to the Supplemental SCR.
  - c. Perform a Pennsylvania Natural Diversity Inventory (PNDI) environmental review to evaluate for the presence of special concern species and resources. This review can be performed over the internet at <http://www.gis.dcnr.state.pa.us/hgis-er/Login.aspx>.
- 10. Single Well Aquifer Test:** Single well aquifer testing should be performed on four of the monitoring wells (two (2) overburden and two (2) bedrock). Both rising head and falling head tests should be performed in accordance with standard industry practices and applicable guidance. The aquifer test data should be analyzed by a Professional Geologist licensed in the Commonwealth of Pennsylvania using standard industry practices and applicable guidance.
- 11. Waste Management and Disposal:** Bidder shall properly handle groundwater produced by well development and purging activities in accordance with industry standard practices and practices accepted by the Regional PaDEP Storage Tank Section. Bidder shall assume that they are responsible for segregating and containerizing soil cuttings in DOT-approved 55-gallon drums and transporting the drums to an on-site staging location. Bidder is also responsible for sampling and analyzing these cuttings to characterize and determine proper means of disposal as necessary (e.g., clean fill, landfill, or other appropriate means of disposal) and then coordinating the proper disposal of the soil. For this solicitation, please provide unit prices for disposal and assume that twenty-five (25) soil drums (non-hazardous).
- 12. Reporting:** Preparing a Supplemental SCR documenting the results of the successful bidder's site characterization work. The format and content of the report shall be generally consistent with 25 PA Code §245.309 and shall include, as applicable, recommended follow-up site characterization activities along with rationale. The report shall include groundwater potentiometric surface maps of soil and bedrock groundwater systems and plume maps of all constituents above the residential SHS, as well as posted soil results maps. The report will also include three scaled geologic cross sections with no projection. These cross sections will pass through; #1) Sewers, MW-1, MW-4/MW-105, MW-103/MW-104, interceptor trench, and Campbells Run Creek; #2) Sewers/manhole, MW-2, MW-3, MW-101/MW-102, and Campbells Run Creek; and #3) Sewers, MW-101/MW-102, Interceptor Trench, MW-103/MW-104, and MW-5. The Supplemental SCR shall be sealed by a Professional Geologist licensed in the Commonwealth of Pennsylvania. A draft Supplemental SCR shall be submitted electronically (in Adobe PDF format) and in hard copy to the Solicitor and ICF Claims Handler for review / comment prior to finalizing the Supplemental SCR. Once the successful bidder has addressed comments on the draft, the successful bidder shall finalize and issue report to PaDEP. All AutoCAD maps / plans included in the report

(e.g., site plan / base map, groundwater elevation maps, dissolved plume maps, and soil contaminant distribution maps) shall also be submitted electronically (in AutoCAD format) on CD to the Solicitor and ICF Claims Handler. Additionally, electronic copies of all data tables shall be submitted (in the format of the application used to create them (e.g., MS Excel) on CD to the Solicitor and ICF Claims Handler.

The Scope of Work as described above shall be conducted in accordance with industry standards / practices, and consistent with the PaDEP requirements and guidelines (e.g., PaDEP Groundwater Monitoring Guidance Manual, Document No. 383-3000-001 dated December 1, 2001).

Because site characterization is an iterative process with each phase of characterization being shaped by the results of the previous phase, it is anticipated that there may be deviations from and modifications to this Scope of Work during the project. These changes will be handled in accordance with Section E below.

Each bidder should carefully review the existing site information provided in Attachment 1 to this RFB and seek out other appropriate sources of information to develop a cost estimate and schedule leading up to and including preparing the Supplemental SCR. There is no prequalification process for bidding. Therefore, bids that demonstrate a command of existing site information and demonstrate an understanding of 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 contract (Remediation Agreement). A copy of the standard Remediation Agreement is included as Attachment 3 to this RFB solicitation. This sample agreement has been previously employed by other Solicitors on other USTIF-funded claims. The bidder must identify in the bid response 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 included 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 to this RFB Solicitation and its bid will not be considered further.** Any requested 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 costs shall be based on unit prices for labor, equipment, materials, subcontractors/vendors and other direct costs. The total cost quoted by the successful bidder will be the maximum amount to be paid by the Solicitor unless a change in scope is authorized and determined to be reasonable, necessary, and appropriate. As stated in Section D, it is anticipated that there may be deviations from and modifications to this Scope of Work during the project. The Remediation Agreement states that any significant changes to the Scope of Work will require approval by the Solicitor, USTIF, and PaDEP.

The bidder shall provide its bid using the format identified in Attachment 2 with brief descriptions provided for each task provided in the body of the bid document. An electronic version of Attachment 2 (in Microsoft Excel Format) has been provided on the accompanying CD (Attachment 1). 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 successful bidder's work to complete the Supplemental SCR 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, necessary, and appropriate.

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 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 duration of the Supplemental Site Characterization Activities contract.

#### **F. BID RESPONSE DOCUMENT**

Each bid response document must:

1. Include a demonstration of the bidder's understanding of the existing site information provided in this RFB, standard industry practices, and the objectives of the project.
2. Identify the bidder's approach to achieving project objectives efficiently.
3. Include a cost estimate and schedule for work up to and completing the Supplemental SCR.
4. Provide Fixed Price bid pricing using the standardized format in Attachment 2 including a rate schedule for any out-of-scope work. The following information relating to the bid pricing should be included on 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 markup on other direct costs and subcontractors (if any);
  - c. Estimated cost by task and total costs must be defined within the proposal text and on Attachment 2; and
  - d. The bidder's estimated total cost by task consistent with the proposed Scope of Work identifying all level-of-effort and costing assumptions.

5. Include documentation of the bidder's level of insurance consistent with the levels listed in Attachment 3<sup>5</sup>;
6. Identify the names of the proposed project team for the key project staff, including the proposed Professional Geologist and Professional Engineer (if applicable) of Record who will be responsible for overseeing the work and applying a professional geologist's seal to the project deliverables. The inclusion of brief resumes of key project team members is necessary.
7. Include answers to the following specific questions:
  - a. How many Chapter 245 Corrective Action projects in the State has your company and/or the Pennsylvania licensed P.G. closed (i.e., obtained relief from liability from the PaDEP) using the Site Specific Standards? Please list up to five.
  - b. How many Chapter 250 Corrective Action projects in the State has your company and/or the Pennsylvania licensed P.G. closed (i.e., obtained relief from liability from the PaDEP) using the Site Specific Standards? Please list up to five.
  - 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.
8. Identify and sufficiently describe subcontractor involvement by task.
9. Provide a detailed schedule of activities for completing the proposed Scope of Work inclusive of reasonable assumptions regarding the timing and duration of client and PaDEP reviews (if any) needed to complete the Scope of Work. Details on such items as proposed meetings and work product submittals shall also be reflected in the schedule.
10. Describe your approach to working with the PaDEP from project inception to submittal of the Supplemental SCR.
11. Describe how the Solicitor and ICF / 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.
12. Identify key assumptions made in formulating the proposed cost estimate. The use of overly narrow assumptions will negatively impact the bid.
13. Identify any exceptions or special conditions applicable to the proposed Scope of Work.
14. Include quotations from major subcontractors.
15. Identify all level-of-effort and costing assumptions.

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<sup>5</sup> The successful 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.

**G. MANDATORY SITE VISIT**

**THERE WILL BE A MANDATORY SITE MEETING ON APRIL 28, 2009.** The Solicitor, the Technical Contact, or their designee will be at the site between 11:00 am and 1:00 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 ICF TECHNICAL CONTACT VIA E-MAIL BY APRIL 22, 2009 WITH THE SUBJECT "CAMPBELLS RUN TEXACO 1998-316(M) – SITE MEETING ATTENDANCE CONFIRMATION".** The name and contact information of the company participant should be included in the body of the e-mail.

**Table 1**  
**Soil Analytical Data**

Former Texaco  
Campbells Run and Boyce Roads  
Collier Township, PA  
PA Facility ID # 02-05278

Sample #	Date	Chemical of Concern (mp/kg)														TOX	PHC - GRO	ZHE	
		Benzene	Toluene	Ethylbenzene	Xylenes (Total)	Cumene	MTBE	Naphthalene	Pyrene	Benz(a)anthracene	Chrysene	Benz(a)fluoranthene	Benz(a)pyrene	Benzo (g,h,i)perylene	Indeno (1,2,3-cd)pyrene				Total Lead
SHS		0.5	100	70	1,000	110/230	2	10	13	0.09/0.38	0.19	0.09/0.12	0.02	0.028	0.09/0.36	450			
70 D*	7/31/1998	1.950	35.70	10.3	62.70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	35.5	<8	1,040	0.025
70 E*	7/31/1998	<0.100	3.62	2.5	17.28	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	90.5	<8	400	NS
70 F*	7/31/1998	0.360	3.47	0.707	4.60	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	21.0	<8	63.8	NS
70 G*	7/31/1998	0.532	2.47	0.683	4.72	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	18.3	<8	73	<0.025
70 H*	7/31/1998	0.105	3.08	0.868	6.08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	28.5	<8	49.1	NS
70 I*	7/31/1998	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	21.8	NS	NS	NS
84 A**	10/6/1998	0.185	0.059	0.243	0.66	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	23.2	<8	20.2	NS
84 B**	10/6/1998	0.348	0.151	0.340	0.946	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.79	<8	36.4	NS
84 C**	10/6/1998	0.159	0.094	0.159	0.444	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	31.9	<8	13.3	NS
84 D**	10/6/1998	0.206	0.058	0.198	0.482	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<8	10.5	NS
84 E**	10/6/1998	0.184	0.081	0.201	0.574	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	36	<8	14	NS
84 F**	10/6/1998	0.014	<0.010	0.021	0.072	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<8	4.77	NS
90 A***	10/30/1998	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS
90 B***	10/30/1998	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS
90 C***	10/30/1998	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS
90 D***	10/30/1998	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS
90 E***	10/30/1998	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS
90 F***	10/30/1998	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS
90 G***	10/30/1998	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS
90 H***	10/30/1998	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS
90 I***	10/30/1998	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS
90 J***	10/30/1998	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS
90 K***	10/30/1998	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS
90 L***	10/30/1998	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS
90 M***	10/30/1998	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS
90 N***	10/30/1998	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS
90 O***	10/30/1998	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS
90 P***	10/30/1998	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS
90 Q***	10/30/1998	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS
90 R***	10/30/1998	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS
90 S***	10/30/1998	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS
90 T***	10/30/1998	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS

NOTES: Analytical results compared to PADEP Act 2 Medium Specific Concentrations for regulated substances in soil  
 Bold print indicates constituent exceeded Act 2 limits  
 mg/kg = milligrams per kilogram  
 SHS = Statewide Health Standard  
 \* FC-1 Analyses for soil removed during the excavation of the interceptor trench  
 \*\* FC-1 Analyses for soil removed during UST system closure operations  
 \*\*\* Confirmatory soil samples collected from gasoline UST field excavation  
 \*\*\*\* Confirmatory soil samples collected from kerosene UST field excavation

**Table 1**  
**Soil Analytical Data**  
 Former Texaco  
 Campbells Run and Boyce Roads  
 Collier Township, PA  
 PA Facility ID # 02-05278

Sample #	Date	Chemical of Concern (mg/kg)																	
		Benzene	Toluene	Ethylbenzene	Xylenes (Total)	Cumene	MTBE	Naphthalene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (a) pyrene	Benzo (g,h,i) Pyrene	Indeno (1,2,3-cd) pyrene	Total Lead	TOX	PHC - GRO	ZHE
90 U****	10/30/1998	0.105	1.31	0.269	NS	<0.010	NS	0.342	<0.330	0.0970.12	0.19	0.0970.12	0.02	0.026	0.0970.36	450	NS	NS	NS
90 V****	10/30/1998	0.092	1.08	0.207	NS	<0.010	NS	0.262	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	<0.330	10.6	NS	NS	NS
MW-1	2/7/2001	0.549	0.747	1.16	5.53	<0.250	<0.250	0.409	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-2	2/7/2001	<0.250	<0.250	0.294	0.294	<0.250	<0.250	<0.250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-3	2/7/2001	8.28	86.9	24.9	146	2.57	8.16	6.51	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	8/16/2001	<0.250	<0.250	<0.250	<0.250	<0.250	0.991	<0.250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-5	8/16/2001	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-6	8/16/2001	0.442	5.85	1.5	9.63	<0.250	1.84	0.497	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-7	8/16/2001	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-8	8/28/2004	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

NOTES: Analytical results compared to PADEP Act 2 Medium Specific Concentrations for regulated substances in soil  
 Bold print indicates constituent exceeded Act 2 limits  
 mg/kg = milligrams per kilogram  
 SHS = Statewide Health Standard  
 \* FC-1 Analyses for soil removed during the excavation of the Interceptor trench  
 \*\* FC-1 Analyses for soil removed during UST system closure operations  
 \*\*\* Confirmatory soil samples collected from gasoline UST field excavation  
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**Table 1a**

**Campbells Run Texaco  
Intersection of Campbells Run Road and Boyce Road  
Collier Township, Allegheny County, PA**

PaDEP FACILITY ID #02-05278  
USTIF CLAIM #1998-316(M)

Source: UEG 2nd Quarter 2006 Remedial Action Progress Report

Sample Location	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Isopropylbenzene (mg/kg)	MTBE (mg/kg)	Naphthalene (mg/kg)
North Excavation	6/1/2006	ND(0.250)	ND(0.250)	ND(0.250)	ND(0.250)	ND(0.250)	ND(0.250)	ND(0.250)
East Excavation	6/1/2006	ND(0.250)	0.876	0.355	1.96	ND(0.250)	ND(0.250)	ND(0.250)
South Excavation	6/1/2006	0.797	ND(0.250)	0.453	1.03	ND(0.250)	0.685	ND(0.250)
West Excavation	6/1/2006	1.01	2.37	0.655	3.82	ND(0.250)	1.75	ND(0.250)

TABLE 2 - GROUNDWATER ANALYTICAL RESULTS

THE FOLLOWING ARE SAMPLE RESULTS FOR THE FORMER TEXACO CAMPBELL'S RUN AND BOYCE ROADS COLLIER TWP., PA  
 MW-1: WELL LOCATED NEAR EASTERN CORNER OF THE PROPERTY ALONG CAMPBELLS RUN ROAD

ACTION LEVEL WATER (ug/L)	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	CUMENE	MTBE	NAPHTHALENE	Notes or Comments for sample event
Sample Date								
4/13/2001	1,680	662	<50	8,270	<50	1,380	374	
11/16/2001	1,830	1,090	1,920	4,130	<500	875	<500	
9/20/2002	1,020	56	1,160	1,880	127	439	802	
12/13/2002	783	102	1,450	940	133	480	549	PRE-PUMP
12/13/2002	855	598	1,190	1,140	142	747	700	POST-PUMP
2/21/2003	3,023	493	1,870	5,800	<250	2,970	431	
5/16/2003	665	635	923	1,490	87	200	170	
8/18/2003	1,410	707	1,420	2,070	79	446	401	
11/11/2003	960	512	1,120	1,330	121	450	296	
2/17/2004	3,650	254	1,560	1,780	125	9,411	451	
5/25/2004	2,460	374	1,290	1,560	83	751	332	
8/17/2004	492	<50	940	1,440	82	963	565	
11/23/2004	2,580	460	1,820	3,760	146	2,930	420	
2/15/2005	79	<50	237	237	<50	207	67	
5/24/2005	110	<5	191	117	34	<5	32	
8/16/2005	126	19	199	184	27	50	70	
11/22/2005	61	24	91	130	13	43	21	
2/28/2006	263	81	424	579	42	71	112	
5/23/2006	393	6	318	<5	44	97	5	
8/29/2006	165	38	225	292	55	28	48	
11/21/2006	32	<5	60	23	14	<5	8	
2/27/2007	129	28	220	240	33	71	26	
5/22/2007	134	39	148	223	16	46	46	
8/30/2007	78	20	144	196	23	26	47	
11/21/2007	57	10	196	35	39	19	47	
3/11/2008	47	23	91	140	22	<5	10	
6/18/2008	74	<5	25	7	6	31	<5	
8/26/2008	57	<5	36	<5	6	39	<5	

**TABLE 2 - GROUNDWATER ANALYTICAL RESULTS**

**THE FOLLOWING ARE SAMPLE RESULTS FOR THE FORMER EXACO CAMPBELLS RUN AND BOYCE ROADS COLLIER TWP., PA**

**MW-2: WELL LOCATED NEAR NORTH CORNER OF THE PROPERTY ALONG BOYCE ROAD**

ACTION LEVEL WATER (ug/L)	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	CUMENE	MTBE	NAPHTHALENE	Notes or Comments for sample event
	5	1,000	700	10,000	1,100	20	100	
Sample Date								
4/13/2001	514	<50	296	265	<50	1,750	156	
11/16/2001	629	<500	708	708	<500	1,590	<500	
6/25/2002	<5	<5	<5	<5	<5	457	<5	
9/20/2002	49	<25	345	427	54	170	27	
12/13/2002	94	36	316	42	52	1,840	24	
2/21/2003	<250	<250	<250	<250	<250	572	<260	
5/16/2003	20	<5	<5	<5	<5	46	<5	
8/18/2003	49	<5	6	<5	8	829	<5	
11/11/2003	46	<5	9	7	7	537	<5	
2/17/2004	41	<5	<5	<5	<	684	<5	
5/25/2004	28	<5	<5	<5	<5	209	<5	
8/17/2004	229	<5	55	30	10	417	<5	
11/23/2004	13	<5	<5	5	<5	92	<5	
2/15/2005	33	<5	<5	<5	<5	331	<5	
5/24/2005	22	<5	<5	<5	<5	196	<5	
8/16/2005	<5	<5	<5	<5	<5	100	<5	
11/22/2005	<5	<5	<5	<5	<5	131	<5	
2/28/2006	41	<5	<5	<5	<5	207	<5	
5/23/2006	<5	<5	<5	<5	<5	49	<5	
8/29/2006	<5	<5	<5	<5	<5	32	48	
11/21/2006	<5	<5	<5	<5	<5	16	48	
2/27/2007	<5	<5	<5	<5	<5	43	<5	
5/22/2007	<5	<5	<5	<5	<5	160	<5	
8/30/2007	<5	<5	<5	<5	<5	25	<5	
11/21/2007	<5	<5	<5	<5	<5	22	<5	
3/11/2008	<5	<5	<5	<5	<5	17	<5	
6/18/2008	<5	<5	<5	<5	<5	54	<5	
8/26/2008	<5	<5	<5	<5	<5	31	<5	

**TABLE 2 - GROUNDWATER ANALYTICAL RESULTS**  
**THE FOLLOWING ARE SAMPLE RESULTS FOR THE FORMER TEXACO, CAMPBELL'S RUN AND BOYCE ROADS, COLLIER TWP., PA**  
**MW-3: WELL LOCATED ALONG NORTHWEST PROPERTY BOUNDARY NEAR BOYCE ROAD**

ACTION LEVEL WATER (ug/L)	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	CUMENE	MTBM	NAPHTHALENE	Notes or Comments for sample event
Sample Date	5	1,000	700	10,000	1,100	20	100	
4/13/2001	1,270	<500	<500	1,560	<500	16,900	<500	
11/16/2001	9,110	56,200	5,200	30,200	<5,000	10,400	<5,000	
6/25/2002	5,070	21,800	1,580	11,800	<500	9,060	<500	
9/20/2002	7,360	34,600	2,950	16,800	137	6,940	608	
12/13/2002	4,630	33,600	3,320	22,000	200	6,750	982	PRE-PUMP
12/13/2002	7,110	36,200	3,560	21,100	174	5,960	889	POST-PUMP
2/21/2003	3,140	15,800	1,680	11,600	<500	2,300	<500	
5/16/2003	6,380	34,000	3,320	20,800	<250	2,850	525	
8/18/2003	2,900	26,700	2,710	18,900	<500	1,760	1,170	
11/11/2003	4,770	31,800	4,930	19,700	<250	3,100	1,050	
2/17/2004	6,370	34,300	4,630	26,000	238	3,040	1,320	
5/25/2004	3,940	26,000	3,040	18,200	<250	2,880	756	
8/17/2004	3,570	8,210	3,350	22,700	<500	3,570	987	
11/23/2004	743	2,540	896	4,610	<250	763	311	
2/15/2005	1,820	18,600	3,050	20,800	146	1,790	630	
5/24/2005	790	3,500	1,700	11,400	163	1,420	877	
8/16/2005	517	1,800	774	5,250	48	747	420	
11/22/2005	832	4,140	982	11,000	79	1,160	960	
2/26/2006	1,170	6,520	1,500	12,700	<250	893	720	
5/23/2006	934	5,070	1,520	11,600	112	1,120	954	
8/29/2006	838	4,430	1,470	8,570	113	781	346	
11/21/2006	831	5,120	1,540	11,600	102	670	974	
2/27/2007	621	6,020	1,620	12,900	97	460	849	
5/22/2007	821	679	1,900	11,900	99	715	1,260	
8/30/2007	576	6,970	1,910	12,800	<250	494	770	
11/21/2007	883	8,840	2,460	19,100	128	728	1,260	
3/11/2008	403	5,640	1,040	15,800	75	308	404	
6/18/2008	673	1,090	701	10,300	<500	931	<500	
8/26/2008	515	1,000	627	7,250	<50	716	850	

TABLE 2 - GROUNDWATER ANALYTICAL RESULTS									
THE FOLLOWING ARE SAMPLE RESULTS FOR THE FORMER TEXACO CAMPBELL'S RUN AND BOYCE ROADS, COLLIER TWP., PA									
MW-4: WELL LOCATED IN BETWEEN FORMER TEXACO BUILDING AND CARWASH ON MON VALLEY PETROLEUM PROPERTY									
	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES	CUMENE	MTBE	NAPHTHALENE	Notes or Comments for sample event	
ACTION LEVEL WATER (ug/L)	5	1,000	700	10,000	1,100	20	100		
Sample Date									
11/16/2001	<500	<500	<500	<500	<500	1,860	<500		
6/25/2002	<5	9	<5	<5	<5	<5	8		
9/20/2002	<5	<5	<5	<5	<5	587	<5		
12/13/2002	<5	<5	<5	<5	<5	425	<5		
2/21/2003	<50	<50	<50	<50	<50	415	<50		
5/16/2003	<5	<5	<5	<5	<5	65	<5		
8/18/2003	19	<5	<5	<5	<5	574	<5		
11/11/2003	<5	<5	<5	<5	<5	402	<5		
2/17/2004	<5	<5	<5	<5	<5	105	<5		
5/25/2004	<5	<5	<5	<5	<5	36	<5		
8/17/2004	472	1,130	890	4,630	70	107	214		
11/23/2004	<5	<5	<5	23	<5	<5	<5		
2/15/2005	<5	5	18	58	<5	<5	<5		
5/24/2005	7	<5	36	99	<5	120	12		
8/16/2005	<5	<5	<5	<5	<5	30	<5		
11/22/2005	<5	<5	<5	12	<5	102	15		
2/28/2006	<5	<5	<5	12	<5	28	15		
5/23/2006	<5	8	<5	23	<5	36	11		
8/29/2006	10	18	19	70	<5	812	<10		
11/21/2006	<5	<5	<5	<5	<5	184	<5		
2/27/2007	<5	<5	<5	<5	<5	135	<5		
5/22/2007	<5	<5	<5	<5	<5	92	<5		
8/30/2007	<5	<5	<5	<5	<5	244	<5		
11/21/2007	7	<5	<5	6	<5	170	<5		
3/11/2008	<5	<5	<5	7	<5	9	53		
6/18/2008	<5	<5	<5	31	<5	112	21		
8/26/2008	5	<5	<5	5	<5	124	38		

TABLE 2 - GROUNDWATER ANALYTICAL RESULTS									
THE FOLLOWING ARE SAMPLE RESULTS FOR THE FORMER TEXACO CAMPBELLS RUN AND BOYCER ROADS COLLIER TWP., PA.									
MW-5: WELL LOCATED ALONG SOUTHWEST BORDER OF MON VALLEY PETROLEUM PROPERTY NEAR GUARDRAIL									
ACTION LEVEL WATER	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	CUMENE	MTBE	NAPHTHALENE	Notes or Comments for sample event	
(ug/L)	5	1,000	700	10,000	1,100	20	100		
Sample Date									
11/16/2001	<5	<5	<5	<5	<5	<5	<5		
6/25/2002	21	6	<5	<5	<5	399	6		
9/20/2002	<5	<5	<5	<5	<5	<5	<5		
12/13/2002	<5	<5	<5	<5	<5	<5	<5		
2/21/2003	<5	<5	<5	<5	<5	<5	<5		
5/16/2003	<5	<5	<5	<5	<5	<5	<5		
8/18/2003	<5	<5	<5	<5	<5	<5	<5		
11/11/2003	<5	<5	<5	<5	<5	<5	<5		
2/17/2004	<5	<5	<5	<5	<5	<5	<5		
5/25/2004	<5	<5	<5	<5	<5	<5	<5		
8/17/2004	<5	<5	<5	<5	<5	<5	<5		
11/23/2004	<5	<5	<5	<5	<5	<5	<5		
2/15/2005	<5	<5	<5	<5	<5	<5	<5		
5/24/2005	<5	<5	<5	<5	<5	<5	<5		
8/16/2005	<5	<5	<5	<5	<5	<5	<5		
11/22/2005	<5	<5	<5	<5	<5	<5	<5		
2/28/2006	<5	<5	<5	<5	<5	<5	<5		
5/23/2006	<5	<5	<5	<5	<5	<5	<5		
8/29/2006	<5	<5	<5	7	<5	113	<10		
11/21/2006	<5	<5	<5	<5	<5	<5	<5		
2/27/2007	<5	<5	<5	<5	<5	<5	<5		
5/22/2007	<5	<5	<5	<5	<5	<5	<5		
8/30/2007	<5	<5	<5	<5	<5	<5	<5		
11/21/2007	<5	<5	<5	<5	<5	<5	<5		
3/11/2008	<5	<5	<5	<5	<5	<5	10		
6/18/2008	<5	<5	<5	8	<5	<5	<5		
8/26/2008	<5	<5	<5	<5	<5	<5	<5		

TABLE 2 - GROUNDWATER ANALYTICAL RESULTS									
THE FOLLOWING ARE SAMPLE RESULTS FOR THE FORMER TEXACO, CAMPBELL'S RUN AND BOYCE ROADS, COLLIER TWP., PA									
MW-6: WELL LOCATED NEAR SOUTH CORNER OF TUMBLEWEEDS RESTAURANT PROPERTY ALONG BOYCE ROAD									
ACTION LEVEL WATER (ug/L)	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	CUMENE	MTBE	NAPHTHALENE	Notes or Comments for sample event	
Sample Date	5	1,000	700	10,000	1,100	20	100		
11/16/2001	<5	<5	<5	<5	<5	<5	<5		
6/25/2002	<5	<5	<5	<5	<5	<5	<5		
9/20/2002	<5	<5	<5	<5	<5	<5	<5		
12/13/2002	<5	<5	<5	<5	<5	<5	<5		
2/21/2003	<5	<5	<5	<5	<5	<5	<5		
5/16/2003	<5	<5	<5	<5	<5	<5	<5		
8/18/2003	<5	<5	<5	<5	<5	<5	<5		
11/11/2003	<5	<5	<5	<5	<5	<5	<5		
2/17/2004	<5	<5	<5	<5	<5	<5	<5		
5/25/2004	<5	<5	<5	<5	<5	<5	<5		
8/17/2004	<5	<5	<5	<5	<5	<5	<5		
11/23/2004	<5	<5	<5	<5	<5	<5	<5		
2/15/2005	<5	<5	<5	<5	<5	<5	<5		
5/24/2005	<5	<5	<5	<5	<5	<5	<5		
8/16/2005	<5	<5	<5	<5	<5	<5	<5		
11/22/2005	<5	<5	<5	<5	<5	<5	<5		
2/28/2006	<5	<5	<5	<5	<5	<5	<5		
5/23/2006	<5	<5	<5	<5	<5	<5	<5		
8/29/2006	<5	<5	<5	<5	<5	<5	<10		
11/21/2006	<5	<5	<5	<5	<5	<5	<5		
2/27/2007	<5	<5	<5	<5	<5	<5	<5		
5/22/2007	<5	<5	<5	<5	<5	<5	<5		
8/30/2007	<5	<5	<5	<5	<5	<5	<5		
11/21/2007	<5	<5	<5	<5	<5	<5	<5		
3/11/2008	<5	<5	<5	<5	<5	<5	<5		
6/18/2008	<5	<5	<5	<5	<5	<5	<5		
8/26/2008	<5	<5	<5	<5	<5	<5	<5		

**TABLE 2 - GROUNDWATER ANALYTICAL RESULTS**

**THE FOLLOWING ARE SAMPLE RESULTS FOR THE FORMER TEXACO, CAMPBELLS RUN AND BOYCE ROADS, COLLIER TWP., PA**

**MW-7: WELL LOCATED NEAR WEST CORNER OF TUMBLEWEEDS RESTAURANT PROPERTY ALONG BOYCE ROAD**

ACTION LEVEL WATER (ug/L)	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	CUMENE	MTBE	NAPHTHALENE	Notes or Comments for sample event
	5	1,000	700	10,000	1,100	20	100	
Sample Date								
11/16/2001	<5	<5	<5	<5	<5	<5	<5	
6/25/2002	<5	<5	<5	<5	<5	<5	<5	
9/20/2002	<5	<5	<5	<5	<5	<5	<5	
12/13/2002	<5	<5	<5	<5	<5	<5	<5	
2/21/2003	<5	<5	<5	<5	<5	<5	<5	
5/16/2003	<5	<5	<5	<5	<5	<5	<5	
8/18/2003	<5	<5	<5	<5	<5	<5	<5	
11/11/2003	<5	<5	<5	<5	<5	<5	<5	
2/17/2004	<5	<5	<5	<5	<5	<5	<5	
5/25/2004	<5	<5	<5	<5	<5	<5	<5	
8/17/2004	<5	<5	<5	<5	<5	<5	<5	
11/23/2004	<5	<5	<5	<5	<5	<5	<5	
2/15/2005	<5	<5	<5	<5	<5	<5	<5	
5/24/2005	<5	<5	<5	<5	<5	<5	<5	
8/16/2005	<5	<5	<5	<5	<5	<5	<5	
11/22/2005	<5	<5	<5	<5	<5	<5	<5	
2/28/2006	<5	<5	<5	<5	<5	<5	<5	
5/23/2006	<5	<5	<5	<5	<5	<5	<5	
8/29/2006	<5	<5	<5	<5	<5	<5	<10	
11/21/2006	<5	<5	<5	<5	<5	<5	<5	
2/27/2007	<5	<5	<5	<5	<5	<5	<5	
5/22/2007	<5	<5	<5	<5	<5	<5	<5	
8/30/2007	<5	<5	<5	<5	<5	<5	<5	
11/21/2007	<5	<5	<5	<5	<5	<5	<5	
3/11/2008	<5	<5	<5	<5	<5	<5	<5	
6/18/2008	<5	<5	<5	<5	<5	<5	<5	
8/26/2008	<5	<5	<5	<5	<5	<5	<5	



**TABLE 2 - GROUNDWATER ANALYTICAL RESULTS**

**THE FOLLOWING ARE SAMPLE RESULTS FOR THE FORMER TEXACO, CAMPBELLS RUN AND BOYCE ROADS, COLLIER TWP., PA**

**OW-3: WELL LOCATED IN INTERCEPTOR TRENCH DUG BETWEEN FORMER TEXACO AND CAMPBELLS RUN ROAD**

ACTION LEVEL WATER (ug/L)	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	CUMENE	MTBF	NAPHTHALENE	Notes or Comments for sample event.
Sample Date								
7/31/1998	136,000	1,170,000	244,000	1,390,000	29,600	84,000	56,400	
11/17/1998	12,100	55,400	9,510	78,000	1,340	5,640	4,020	
10/12/2000	2,570	402	2,360	6,560	<250	431,000	477	
11/24/2000	1,780	<1,000	2,040	5,890	<1,000	5,632	<1,000	
11/16/2001	991	<500	1,300	1,850	<500	3,900	<500	
9/20/2002	172	<25	<25	<25	<25	1,040	<25	
12/13/2002	204	<25	<25	55	<25	502	<25	
2/21/2003	131	<5	<5	8	<5	297	<5	
5/16/2003	1,220	<50	386	382	<50	2,370	<50	
8/18/2003	<5	<5	32	<5	<5	544	<5	
11/11/2003	93	<5	16	16	<5	180	<5	
2/17/2004	802	51	95	215	15	1,530	19	
5/25/2004	331	9	35	79	<5	771	7	
8/17/2004	88	<5	<5	<5	<5	228	<5	
11/23/2004	235	<25	198	98	50	322	<25	
2/15/2005	48	<5	<5	<5	<5	82	<5	
5/24/2005	192	6	19	11	<5	263	<5	
8/16/2005	304	6	109	13	11	198	<5	
11/22/2005	14	<5	<5	<5	<5	21	<5	
2/28/2006	1,440	116	307	128	<50	2,330	<50	
5/23/2006	672	<5	20	24	<5	928	<5	
8/29/2006	189	<5	45	11	<5	517	<5	
11/21/2006	53	<5	<5	<5	<5	369	<5	
2/27/2007	1,500	<25	191	26	<25	1,940	<25	
5/22/2007	1,230	<100	325	231	<100	1,050	<100	
8/30/2007	<5	<5	<5	<5	<5	<5	<5	
11/21/2007	18	<5	<5	<5	<5	17	<5	
3/11/2008	684	32	78	44	9	139	<5	
6/18/2008	109	<5	<5	<5	<5	93	<5	
8/26/2008	22	<5	15	<5	<5	23	<5	

**TABLE 2 - GROUNDWATER ANALYTICAL RESULTS**  
**THE FOLLOWING ARE SAMPLE RESULTS FOR THE FORMER TEXACO, CAMPBELLS RUN AND BOYCE ROADS, COLLIER TWP., PA**  
**SAMPLE COLLECTED FROM CAMPBELLS RUN UPGRADIENT OF SITE**

ACTION LEVEL WATER (ug/L)	BENZENE	TOLUENE	ETHYLBENZENE	TOTAL XYLENES	CUMENE	MTBE	NAPHTHALENE	Notes or Comments for sample event
Sample Date	5	1,000	700	10,000	1,100	20	100	
7/28/1998	<5	<5	<5	<5	<5	<5	<5	
8/24/1998	<5	<5	<5	<5	<5	<5	<5	
11/17/1998	<5	<5	<5	<5	<5	<5	<5	
10/12/2000	<5	<5	<5	<5	<5	<5	<5	
11/24/2000	<5	<5	<5	<5	<5	<5	<5	
4/13/2001	<5	<5	<5	<5	<5	<5	<5	
11/16/2001	<5	<5	<5	<5	<5	<5	<5	
9/20/2002	<5	<5	<5	<5	<5	<5	<5	
12/13/2002	<5	<5	<5	<5	<5	<5	<5	
5/25/2004	<5	<5	<5	<5	<5	<5	<5	
8/17/2004	<5	<5	<5	<5	<5	<5	<5	
11/23/2004	<5	<5	<5	<5	<5	<5	<5	
2/15/2005	<5	<5	<5	<5	<5	<5	<5	
5/24/2005	<5	<5	<5	<5	<5	<5	<5	
8/16/2005	<5	<5	<5	<5	<5	<5	<5	
11/22/2005	<5	<5	<5	<5	<5	<5	<5	
2/28/2006	<5	<5	<5	<5	<5	<5	<5	
5/23/2006	<5	<5	<5	<5	<5	<5	<5	
8/29/2006	<5	<5	<5	<5	<5	<5	<10	
11/21/2006	<5	<5	<5	<5	<5	<5	<5	
2/27/2007	<5	<5	<5	<5	<5	<5	<5	
5/22/2007	<5	<5	<5	<5	<5	<5	<5	
8/30/2007	<5	<5	<5	<5	<5	<5	<5	
11/21/2007	<5	<5	<5	<5	<5	<5	<5	
3/11/2008	<5	<5	<5	<5	<5	<5	<5	
6/18/2008	<5	<5	<5	<5	<5	<5	<5	
8/26/2008	<5	<5	<5	<5	<5	<5	<5	

**TABLE 2 - GROUNDWATER ANALYTICAL RESULTS**

**THE FOLLOWING ARE SAMPLE RESULTS FOR THE FORMER TEXACO, CAMPBELL'S RUN AND BOYCE ROADS, COLLIER TWP., PA**

**SAMPLE COLLECTED FROM CAMPBELL'S RUN DOWNGRADIENT OF SITE**

ACTION LEVEL WATER (ug/L)	BENZENE		TOLUENE		ETHYLBENZENE		TOTAL XYLENES		CUMENE		MTBE		NAPHTHALENE		Notes or Comments for sample event
	5	1,000	700	10,000	1,100	20	100								
Sample Date	29,200	325,000	79,300	425,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000		
7/28/1998	<50	124	<50	311	<50	<50	<50	<50	<50	<50	<50	<50	<50		
8/24/1998	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
11/17/1998	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
10/12/2000	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
11/24/2000	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
4/13/2001	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
11/16/2001	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
9/20/2002	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
12/13/2002	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
5/25/2004	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
8/17/2004	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
11/23/2004	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
2/15/2005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
5/24/2005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
8/16/2005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
11/22/2005	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
2/28/2006	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
5/23/2006	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
8/29/2006	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
11/21/2006	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
2/27/2007	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
5/22/2007	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
8/30/2007	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
11/21/2007	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
3/11/2008	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
6/18/2008	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		
8/26/2008	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		

OBSERVATION WELL LOCATIONS

SNYDERS LXXON PROPERTY



CAMBELL'S RUN CREEK

CAR WASH AREA

CAMPBELLS  
RUN  
ROAD

OW4

TANK  
FIELD

STATION

- OW 1
- OW 2
- OW 3

ISLAND

ISLAND

BAYER ROAD

BRIDGE

Figure 1  
Source: UEG

KEHM OIL CAMPBELLS RUN  
CAMPBELLS RUN & BAYER ROADS  
PITTSBURGH PA 15205



Figure 2

**Kehm Oil Company**

Campbell's Run Facility, Campbell's Run Road and Ridge Road, Pittsburgh, PA

**Monitoring Well and Soil Boring  
Location Map**

DRAWN BY: JPB	DATE: 2/17/09	DRAWING NO.
CHECKED & APPROVED BY: SRM		kehm8009-003-C1

**GROUNDWATER SCIENCES CORPORATION**

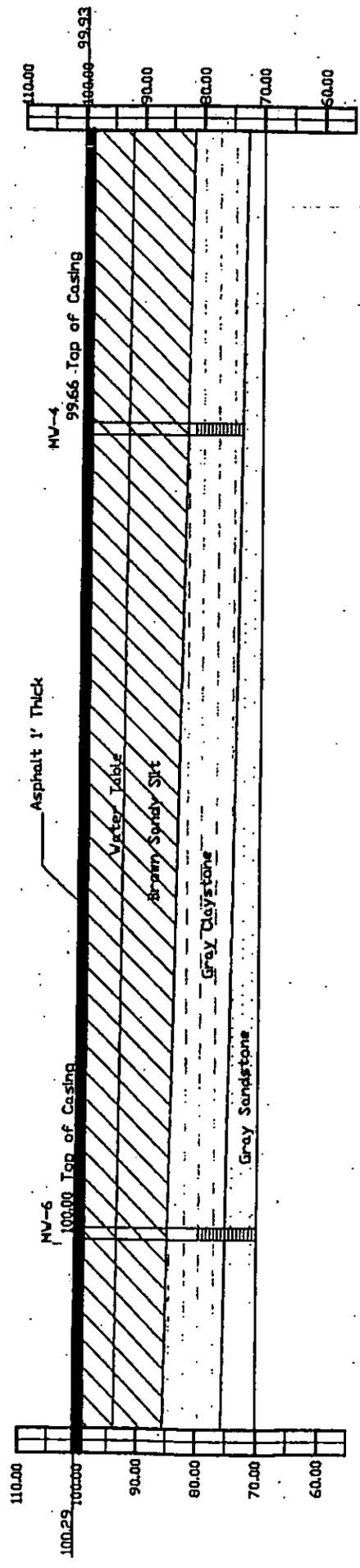
Approximate Scale  
0 10' 20'

**LEGEND**

- ▲ - Existing Monitoring Well (Completed in Soil)
- ▼ - Existing Monitoring Well (Completed Below Water Table in Bedrock)
- ◐ - Proposed Soil (Water Table) Monitoring Well
- ◑ - Proposed Bedrock Monitoring Well
- - Proposed Soil Boring
- ⊙ - Existing Manhole

*Note: All locations are approximate.*  
Aerial Source: USGS High Resolution Orthoimage, dated April-May 2005.

Figure 3 - Geologic Cross-Section



Former Texaco  
Campbells Run Road  
Collier Township, PA 15205

Figure 3  
Source: UEG

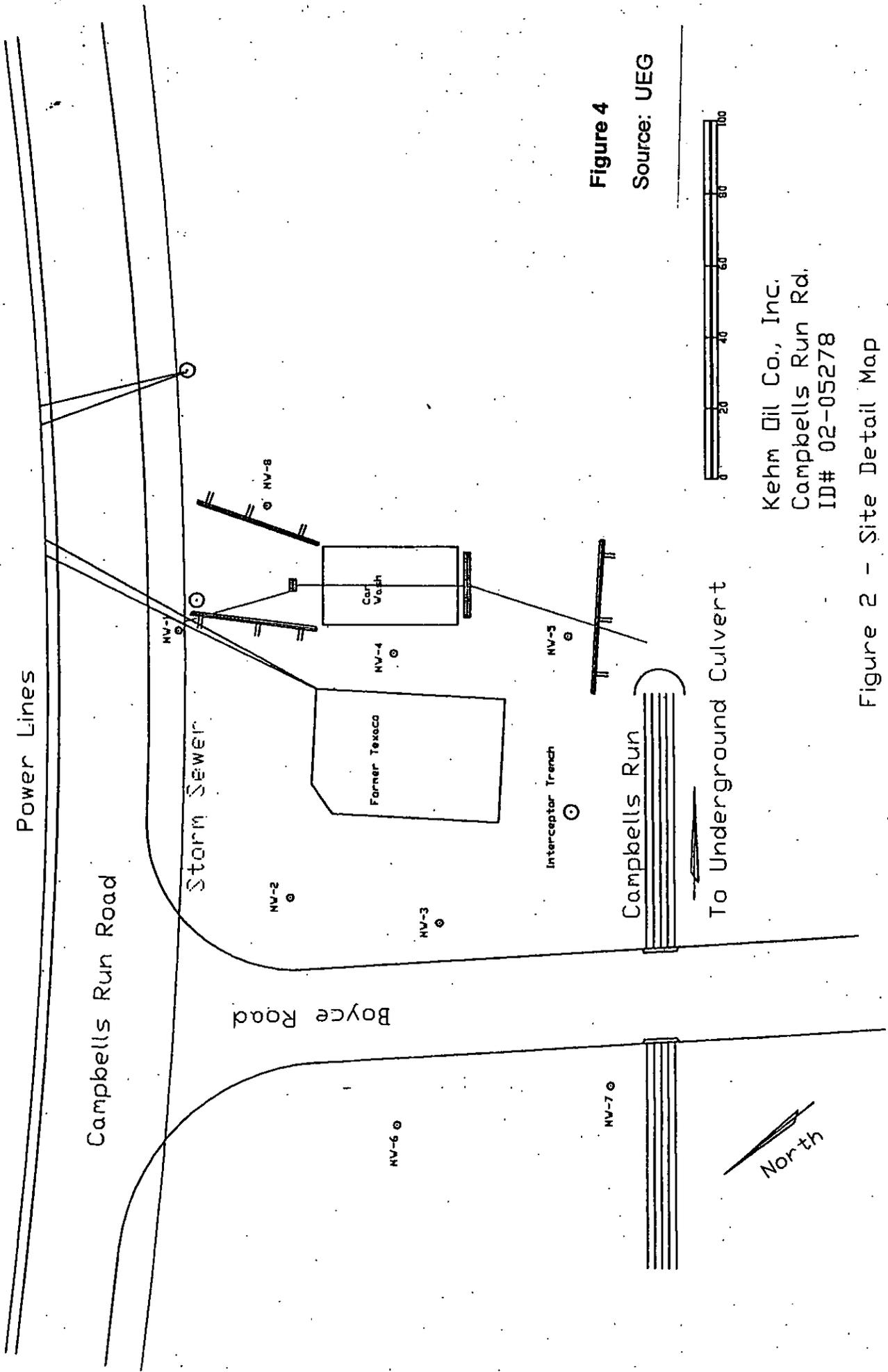


Figure 4  
Source: UEG

Kehm Oil Co., Inc.  
Campbells Run Rd.  
ID# 02-05278

Figure 2 - Site Detail Map

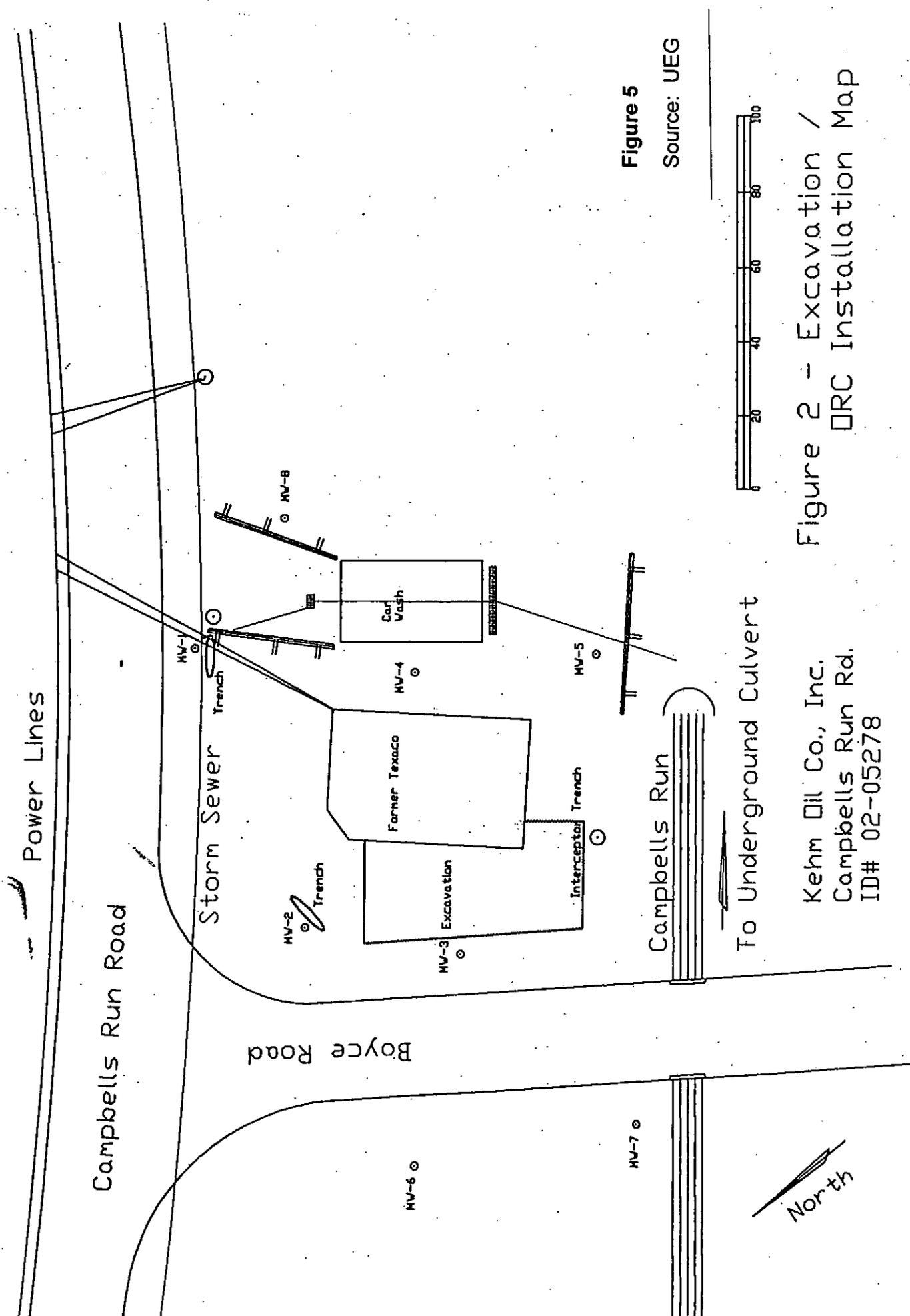


Figure 5

Source: UEG

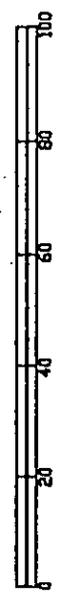


Figure 2 - Excavation /  
ORC Installation Map

Kehm Oil Co., Inc.  
Campbells Run Rd.  
ID# 02-05278

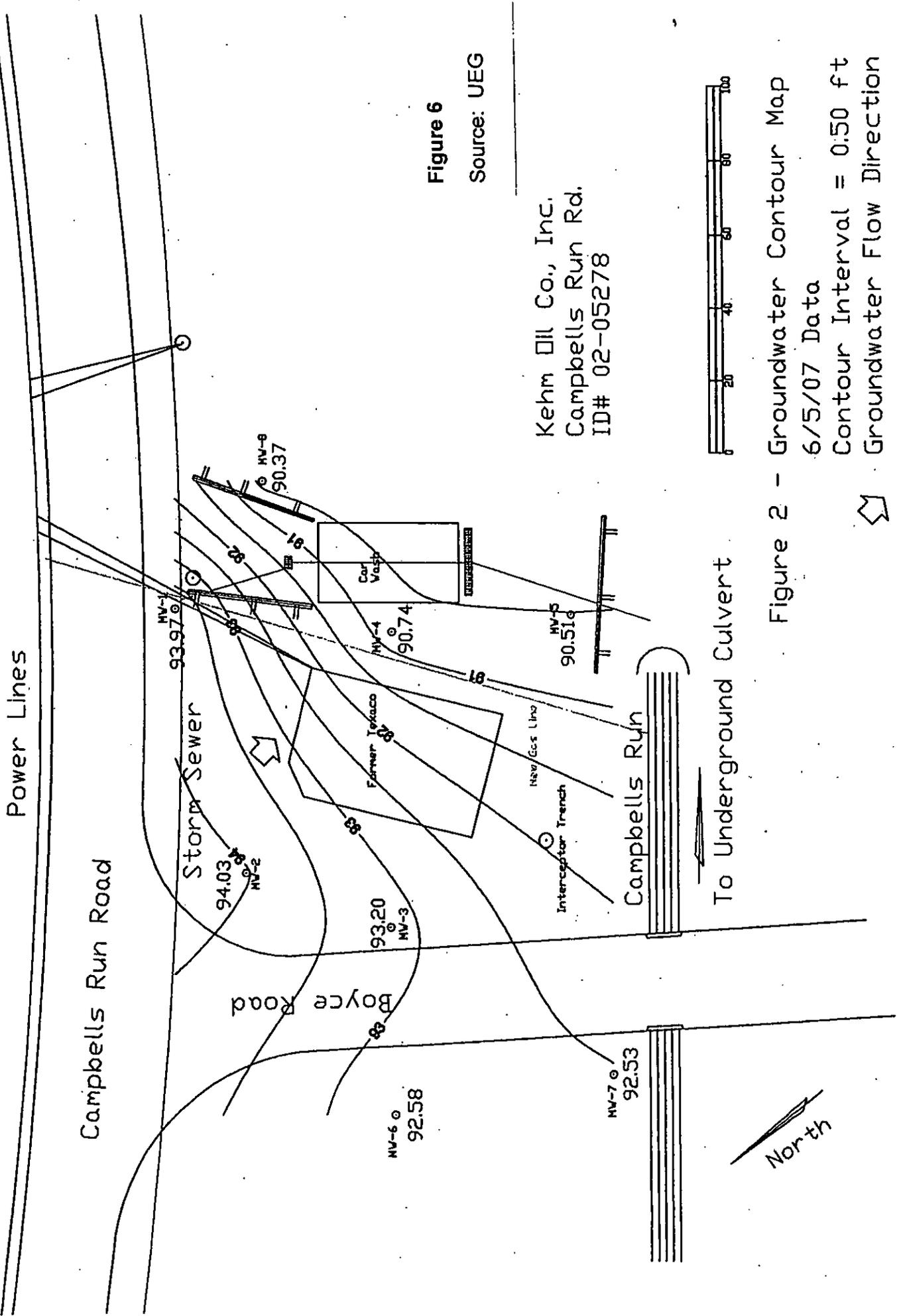


Figure 6

Source: UEG

Kehm Oil Co., Inc.  
Campbells Run Rd.  
ID# 02-05278

To Underground Culvert

Figure 2 - Groundwater Contour Map  
6/5/07 Data  
Contour Interval = 0.50 ft  
Groundwater Flow Direction

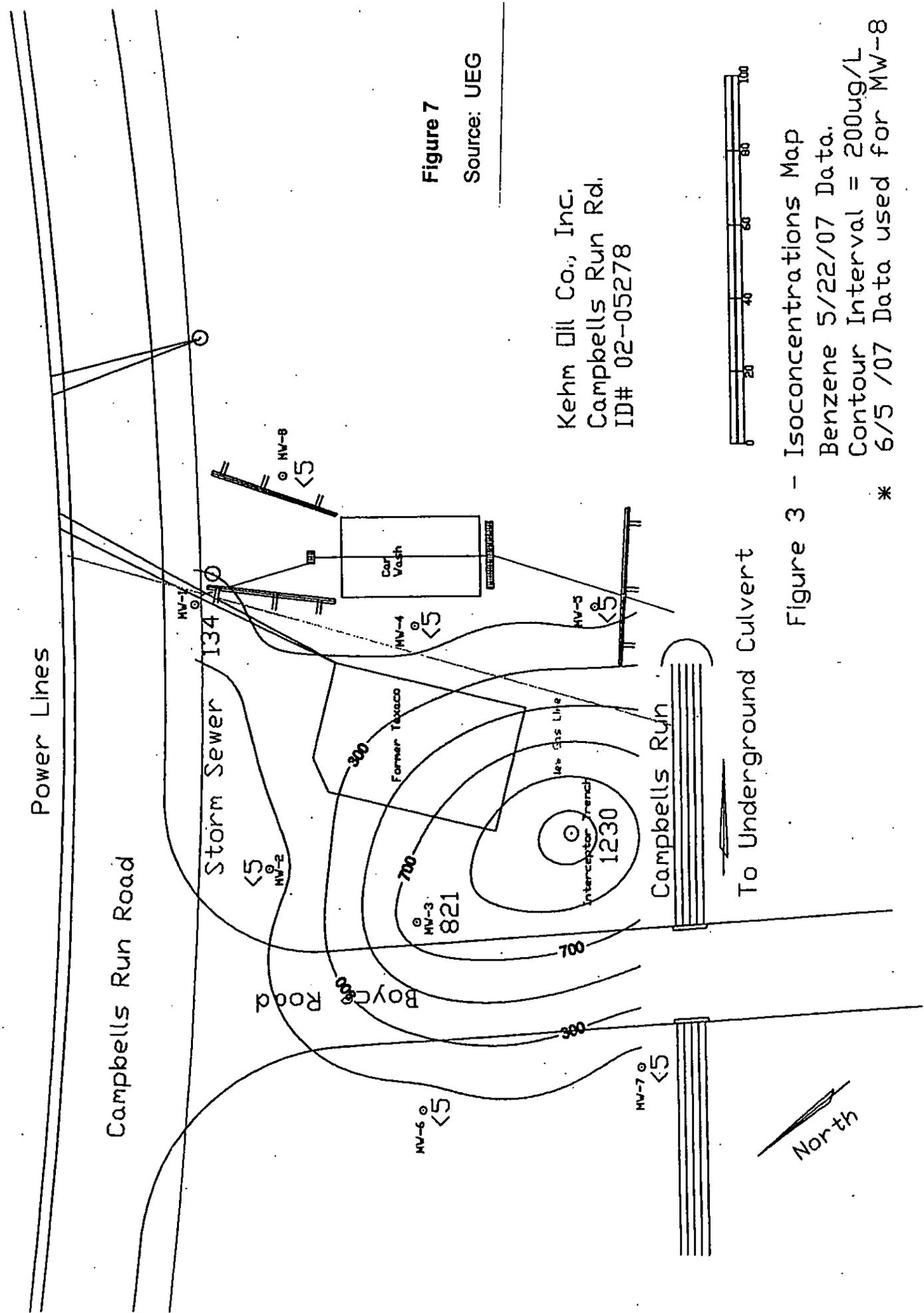


Figure 7  
Source: UEG

Kehm Oil Co., Inc.  
Campbell's Run Rd.  
ID# 02-05278

Figure 3 - Isoconcentrations Map  
Benzene 5/22/07 Data.  
Contour Interval = 200ug/L  
\* 6/5 /07 Data used for MW-8

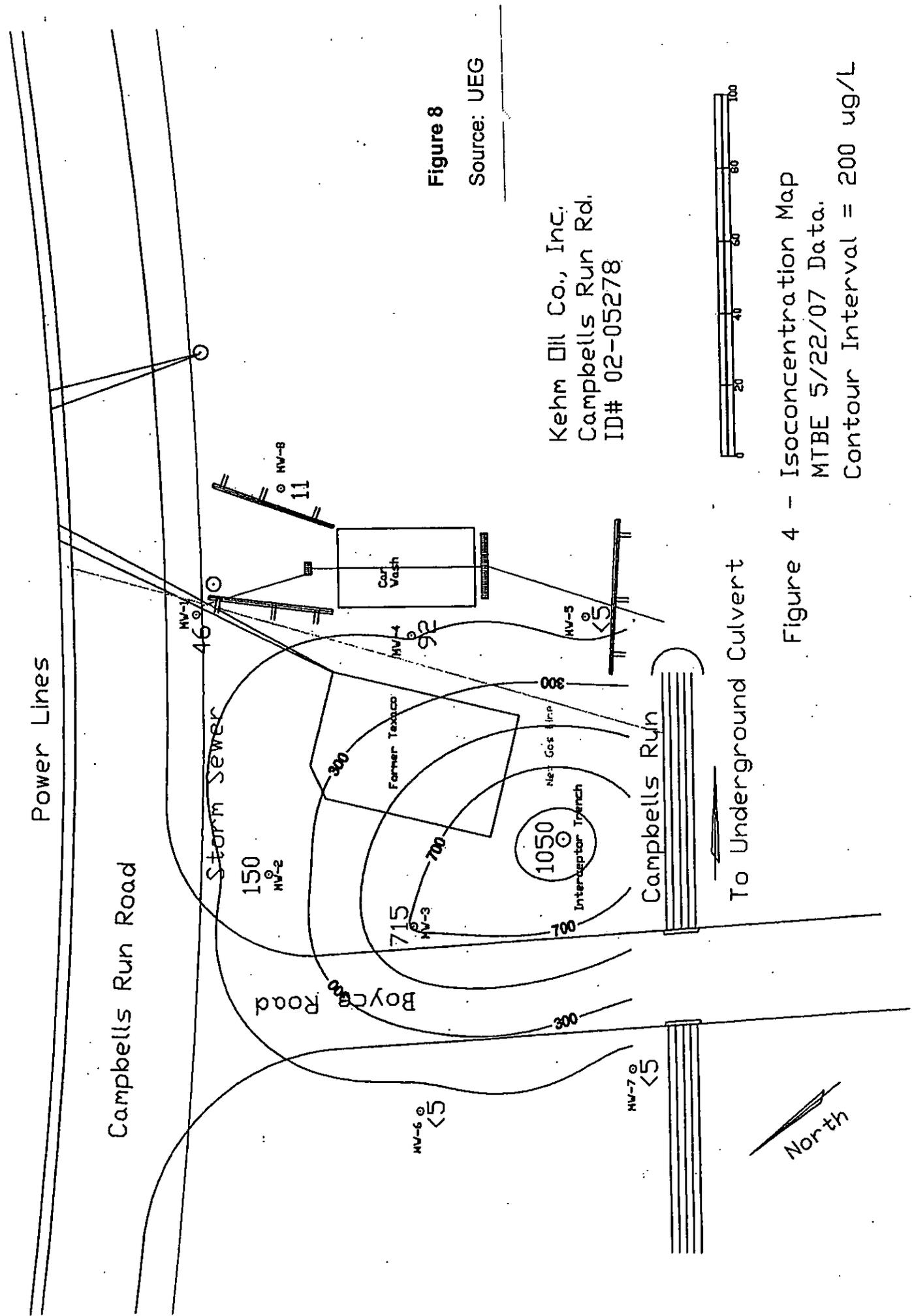


Figure 8

Source: UEG

Kehm Oil Co., Inc.  
Campbells Run Rd.  
ID# 02-05278

Figure 4 - Isoconcentration Map  
MTBE 5/22/07 Data.  
Contour Interval = 200 ug/L

**ATTACHMENT 1**

**Historical Project Documents**

(Provided on the accompanying compact disk)

**ATTACHMENT 2**

**Standardized Bid Format**

(Provided on the accompanying compact disk)

# ATTACHMENT 2 - Standard Bid Format

## Total Fixed Price Bid Sheet

### Campbells Run Texaco

Campbells Run Rd and Boyce Rd, Collier Township, Alleghany County PA  
PADEP Facility ID #02-05278; USTIF Claim #1998-316(M)

1.) SITE ACCESS PROJECT PLANS \$ \_\_\_\_\_

2.) GEOPHYSICAL SURVEY OF SITE \_\_\_\_\_

3.) ENGINEERING EVALUATION OF UTILITIES \$ \_\_\_\_\_

4.) LICENSED PROFESSIONAL LAND SURVEY OF SITE / BASE MAP PREPARATION \$ \_\_\_\_\_

5.) GROUNDWATER ELEVATION SURVEY \$ \_\_\_\_\_

a.) 2 rounds at \$ \_\_\_\_\_ per round

6.) MONITORING WELL INSTALLATION \$ \_\_\_\_\_

a.) Three soil wells installed and developed at \$ \_\_\_\_\_ per well \*

b.) Two bedrock wells installed and developed at \$ \_\_\_\_\_ per well \*

7.) SOIL BORING DRILLING \$ \_\_\_\_\_

a.) 20 borings at \$ \_\_\_\_\_ per boring \*

b.) 47 soil samples at \$ \_\_\_\_\_ per sample

c.) 5 Geotechnical samples at \$ \_\_\_\_\_ per sample

8.) MONITORING WELL SAMPLING AND ANALYSIS \$ \_\_\_\_\_

a.) Two quarters at \$ \_\_\_\_\_ per quarter \*\*

9.) RECEPTOR SURVEY \$ \_\_\_\_\_

10.) SINGLE WELL AQUIFER TEST \$ \_\_\_\_\_

11.) WASTE MANAGEMENT AND DISPOSAL \$ \_\_\_\_\_

a.) Assume 25 55-gallon soil drums at \$ \_\_\_\_\_ per drum

b.) Groundwater \$ \_\_\_\_\_

12.) REPORTING \$ \_\_\_\_\_

**TOTAL FIXED PRICE** \$

#### OPTIONAL/ADDITIONAL

If SPL is encountered during quarterly activities it must be bailed.  
Price per drum for SPL transport and disposal. \$ \_\_\_\_\_

\* = Includes well/boring log

\*\* = Assuming no SPL is detected

NOTE: Please attach a current rate schedule to this bid sheet

**ATTACHMENT 3**

**Standard Remediation Agreement**

**DRAFT****REMEDIATION AGREEMENT**

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

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

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

**RECITALS**

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

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

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

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

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

**1. Recitals Incorporated**

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

**2. Responsibilities of Consultant**

- a. Consultant shall, as an independent contractor to Client, perform the Scope of Work.
- b. The Scope of Work shall be performed in accordance with all applicable federal, state, and local rules and regulations, including the requirements of the Storage Tank and Spill Prevention Act (Act 32 of 1989, as amended) and Pa. Code, Title 25, Chapter 245, meeting and demonstrating attainment of the Standard (as defined in Exhibit A) established under the Land Recycling and Environmental Remediation Standards Act (Act 2 of 1995) and Pa. Code, Chapter 250 (Administration of Land Recycling Program). The Scope of Work will be completed consistent with Remedial System Design [or Insert name of Appropriate Document], dated [Insert Date] and Response to Telephone Conversation [or Insert name of Appropriate Document] of [Insert Date] that contained clarifications on the Remedial System Design [or Insert name of Appropriate Document] dated [Insert Date]. Both documents are included for reference as Exhibit D of this Agreement. Any significant modification to the Scope of

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

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

**3. Responsibilities of Client**

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

**4. Period of Performance**

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

**5. Standard of Care**

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

**6. Fees and Payment**

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

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

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

**7. Insurance**

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

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

**8. Performance Product and Warranty**

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

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

**9. Equipment Loss or Damage**

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

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

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

**11. Cancellation**

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

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years prior to the execution of this agreement for more than two consecutive quarters, provided that this increase is not attributed directly to the remedial actions being conducted or the deactivation of the remedial actions;

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

**12. Indemnity**

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

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indemnify and hold Consultant harmless from and against any Claims arising out of or related to (i) the negligent acts or omissions, or violations of Law, of Client and (ii) regulated substances, including petroleum, that are present at, released to or from, treated at, or removed from, the site.

**13. Closure**

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

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

**14. Governing Law and Assignment**

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

**15. Modification**

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

**16. Integration**

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

**17. Order of Precedence**

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

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

**18. Notice**

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Any notice, request, demand or communication which is or may be required to be given hereunder shall be deemed given when sent by registered or certified mail, return receipt requested, postage prepaid, to the following addresses:

If to Client: [Insert Facility Name]  
Attn: [Insert Point of Contact]  
[Insert Street Address]  
[Insert Township Name], Pennsylvania [Insert Zip Code]

If to Consultant: [Insert Environmental Consulting Firm Name or Acronym]  
Attn: [Insert Point of Contact]  
[Insert Point of Contact Job Title]  
[Insert Street Address]  
[Insert Township Name], Pennsylvania [Insert Zip Code]

IN WITNESS WHEREOF the parties have caused this Agreement to be executed by its duly authorized representative in two identical counterparts on the day and year first above written.

For: [Insert Facility Name]

For: [Insert Environmental Consulting Firm Name or Acronym]

By: \_\_\_\_\_  
Date

By: \_\_\_\_\_  
Date

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

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## EXHIBIT A SCOPE OF WORK

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

**Location:** [Insert Facility Address]

**Goals:**

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

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

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

**Strategy/Scope of Work:**

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

- [Insert Site Specific Information or "None"]

**Site Specific Assumptions:**

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

- [Insert Site Specific Assumptions or "None"]

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

**Milestones:**

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

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

**Additional Measures:**

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

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

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

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## EXHIBIT C PAYMENT REQUEST SCHEDULE

{INSERT SITE-SPECIFIC INFORMATION INTO THIS TABLE}

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

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**EXHIBIT D  
SUPPORTING DOCUMENTS**