

COMPETITIVE FIXED-PRICE DEFINED SCOPE OF WORK BID SOLICITATION TO COMPLETE SITE CLOSURE ACTIVITIES

**United Refining Company of Pennsylvania Kwik Fill Facility S-124
106 State Street (State Route 61)**

City of Sunbury, Northumberland County, Pennsylvania 17801

PADEP Facility ID No. 49-70507; PAUSTIF Claim No. 1998-0220(M)

February 5, 2013

The Pennsylvania Underground Storage Tank Indemnification Fund (PAUSTIF) is providing this Request for Bid (RFB) Solicitation, on behalf of the Claimant, United Refining Company of Pennsylvania (UPA), who hereafter is referred to as the Client or Solicitor, to prepare and submit a fixed-price proposal for a defined scope of work (SOW) to complete additional site characterization activities, additional remedial activities, and site closure activities at the UPA Kwik Fill Facility S-124 (the Site) necessary to obtain soil and groundwater attainment under the Statewide Health Standard (SHS) and to obtain Relief from Liability from the Pennsylvania Department of Environmental Protection (PaDEP) for the site.

The Solicitor reported a failed underground storage tank (UST) tightness test to the PaDEP in November of 1997 (Attachment 1a). As a result, corrective action under Chapter 245 was initiated in May of 1998 by Groundwater and Environmental Services, Inc. (GES), on behalf of the Solicitor, with an initial site characterization that consisted of a soil boring investigation, installation of four groundwater monitoring wells and subsequent groundwater monitoring, and a preliminary receptor survey. In May of 1998, the Solicitor also reported a suspected release to the PaDEP during the closure by removal of three 10,000-gallon UST systems at the site. Following receipt of laboratory analytical results from the UST closure sampling, the PaDEP was notified of a confirmed reportable release on June 28, 1998. A UST Closure Report (Attachment 1a) and an Initial Site Characterization Report (SCR; Attachment 1b) were prepared by GES on behalf of the Solicitor and submitted to the PaDEP in August of 1998. In the Initial SCR, GES concluded that groundwater delineation was not complete, and additional site characterization activities were conducted by GES in May of 1999 and in February-March of 2000. An Additional SCR (Attachment 1c) and an Additional SCR/Remedial Action Plan (RAP; Attachment 1d) were prepared by GES on behalf of the Solicitor and submitted to the PaDEP in August of 1999 and in June of 2000, respectively. The RAP specified vacuum-enhanced groundwater extraction (VEGE) as the remedial approach for the site. In correspondence dated May 25, 2001, the PaDEP approved the RAP with modifications, which were related to a supplemental sensitive receptor survey and preparation of an implementation schedule (Attachment 1a). In May of 2003, GES supervised the installation of three additional groundwater monitoring wells at the site. The remedial system operated from August 27, 2003 through January 23, 2006, and GES has continued quarterly groundwater monitoring at the site.

According to Mr. Scott Wonsettler of UPA, the site property owner, Erie Rental Properties, who leases the site property to UPA, has required that UPA obtain Relief from Liability for the site using the Residential, Used Aquifer (RUA) SHS.

The general SOW for this RFB is to 1) conduct monthly vac-out events for six (6) months, 2) eight (8) quarters of quarterly groundwater attainment monitoring of seven (7) wells and

prepare/submit quarterly Remedial Action Progress Reports (RAPRs), 3) conduct soil attainment sampling, 4) conduct a soil vapor assessment, and 5) prepare/submit a Remedial Action Completion Report (RACR) in accordance with Pennsylvania Code Title 25, Chapter 245.313.

The Solicitor has an open claim (claim number referenced above) with the PAUSTIF 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 continuing corrective action work described in this RFB will be provided by the PAUSTIF. Costs for work to complete site closure activities, including costs for the completion of work described in this RFB, will be reimbursed by the PAUSTIF at 100%. To date, sufficient claim funds should remain to reimburse reasonable, necessary and appropriate costs to complete the SOW described in this RFB.

Should your company elect to respond to this RFB Solicitation, to be considered for selection, **one hard copy of the signed bid package and one electronic copy (one PDF file on a compact disk (CD) included with the hard copy) must be provided directly to the Fund's third party administrator, ICF International (ICF), to the attention of Deb Cassel, Contracts Administrator, by the time and date shown below.** She will be responsible for opening the bids and providing copies to the Technical Contact and the Solicitor. Bid responses will only be accepted from those firms who attended the mandatory pre-bid site meeting. **The ground address for overnight/next-day deliveries is ICF International, 4000 Vine Street, Middletown, PA 17057, Attention: Deb Cassel. The outside of the shipping package containing the bid response must be clearly marked and labeled with "Bid – Claim #1998-0220(M)".** Please note that the use of U.S. Mail, FedEx, UPS, or other delivery method does not guarantee delivery to this address by the due date and time listed below for submission. Firms mailing bid responses should allow adequate delivery time to ensure timely receipt of their bid package.

The bid response must be received by 3:00 PM, on Tuesday, April 2, 2013. Bids will be opened immediately after the 3:00 PM deadline on the due date. Any bid packages received after this due date and time will be time-stamped and returned. If, due to inclement weather, natural disaster, or any other cause, the Fund's third party administrator, ICF's office is closed on the bid response due date, the deadline for submission will automatically be extended to the next business day on which the office is open. The Fund's third party administrator, ICF, may notify all firms who attended the mandatory site meeting of an extended due date. The hour for submission of bid responses shall remain the same. Submitted bid responses are subject to Pennsylvania Right-to-Know Law.

The ICF Claims Handler and the Technical Contact will assist¹ the Solicitor in evaluating the competitive bids received; however, it is the Solicitor who will ultimately select the successful bidder with whom it will negotiate a mutually agreeable remediation contract. Bid evaluation will consider, among other factors, proposed total cost, proposed unit costs, proposed schedule, discussion of technical and regulatory approach, qualifications, and contract terms and conditions. The technical approach will be the most heavily weighted evaluation criteria, however, proposed cost will be an important consideration. The Solicitor will inform the successful bidder by email. The unsuccessful bidders will be informed by email and by posting the name of the successful bidder on the PAUSTIF's website, following the full execution of the Remediation Agreement by the Solicitor and the successful bidder.

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

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

<u>Solicitor</u>	<u>ICF Claims Handler</u>	<u>Technical Contact¹</u>
Scott C. Wonsettler, P.G. United Refining Company of PA P.O. Box 688 Warren, PA 16365	Mr. Gerald Hawk ICF International 4000 Vine Street Middletown, PA 17057	David L. Reusswig, P.G. Groundwater Sciences Corporation 2601 Market Place Street Suite 310 Harrisburg, PA 17110 Email: dreusswig@groundwatersciences.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 email subject line must be "UPA Kwik Fill S-124 1998-0220(M) – RFB QUESTION". Bidders must neither contact nor discuss this RFB Solicitation with the Solicitor, PAUSTIF, 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 Tuesday, March 26, 2013.**

B. ATTACHMENTS TO THIS RFB SOLICITATION

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

- ATTACHMENT 1: SUPPORTING REPORTS, CORRESPONDENCE AND SITE DATA
- ATTACHMENT 2: SAMPLE FIXED-PRICE REMEDIATION AGREEMENT
- ATTACHMENT 3: STANDARDIZED BID COST SPREADSHEET

C. SITE SETTING AND BACKGROUND INFORMATION

The following figures, found at the end of this RFB document, have been prepared by the GES and the Technical Contact based on information provided by GES and collected by the Technical Contact:

- Figure 1: Site Location Map
- Figure 2: Site Map
- Figure 3: Aerial Photograph Showing Site and Surrounding Properties
- Figure 4: Site Vicinity Map
- Figure 5: Soil Boring/Sampling Location Map
- Figure 6: Dissolved-Phase Benzene Concentrations Contour Map – June 20, 2012
- Figure 7: Dissolved-Phase Ethylbenzene Concentrations Contour Map – June 20, 2012
- Figure 8: Dissolved-Phase MTBE Concentrations Contour Map – June 20, 2012
- Figure 9: Dissolved-Phase Naphthalene Concentrations Contour Map – June 20, 2012

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

with activities not conducted by GSC has not been independently verified by ICF or the Technical Contact.

Site Name/Address

Kwik Fill Facility S-124; 106 State Street (State Route 61), City of Sunbury, Northumberland County, Pennsylvania.

PAUSTIF Eligibility

Following the documented release from the unleaded gasoline UST systems in 2002, the Solicitor filed a claim with the Pennsylvania Underground Storage Tank Indemnification Fund (PAUSTIF) and eligibility was granted under PAUSTIF Claim No. 1998-0220(M). As required by the property owner, the Solicitor (who leases the property) has selected the RUA SHS as the remedial goal to be pursued to obtain a Relief from Liability (RfL) from the PaDEP, and the PAUSTIF has agreed to 100% reimbursement of Solicitor-approved reasonable, necessary and appropriate costs up to claim limits for the corrective action work described in this RFB.

Site Use Description

The site is currently operated as a Kwik Fill retail petroleum dispensing facility and a convenience store.

USTs and ASTs on Site

Currently, there are three 10,000-gallon gasoline USTs that replaced the three 10,000-gallon USTs removed in 1998. All other known registered, unregistered and abandoned UST systems have been removed from the site. Reportedly, no ASTs exist at the site. The gasoline distribution system, including all UST systems, is owned by UPA.

Historical and Current Constituents of Concern

The constituents of concern (COCs) at this site, for which a RfL will be necessary, are the substances on the PaDEP's Old Shortlist for unleaded gasoline (i.e., benzene, toluene, ethylbenzene, total xylenes, cumene, methyl tert-butyl ether (MTBE), and naphthalene).

Based on soil characterization data collected in May of 1998 and included in Attachment 1f, benzene concentrations in the soil sample collected from soil boring MW-2 at five (5) feet below grade (fbg) were greater than the RUA SHS. Based on the additional soil characterization data collected in May of 1999, there was no other soil on- or off-site that contained concentrations of target unleaded gasoline constituents greater than the RUA SHS.

Based on groundwater characterization data collected at the site, all of the substances on the PaDEP's Old Shortlist for unleaded gasoline constituents (listed above), with the exception of cumene, were present in groundwater at concentrations greater than the RUA SHS at the time of the June 2000 groundwater characterization. Based on the most recent groundwater data collected on June 20, 2012 at the site and included in the Second Quarter 2012 RAPR, dissolved-phase concentrations of benzene, ethylbenzene, MTBE and naphthalene are greater than the RUA SHS both on- and off-site.

Site Description

The site is located at 106 State Street in the City of Sunbury, Northumberland County, Pennsylvania (Figure 1). The site is located on the northeast corner of the intersection between Route 61 and Green Street. The site currently consists of one dispenser island with four multi-product dispensers, three UST systems, a slab-on-grade building and a fenced enclosure containing a roll-off dumpster. The location of pertinent site features is included on Figure 2.

The site is located in a predominantly residential district of Sunbury, Pennsylvania. Surrounding properties include private residences (to the east, south and west) and a railroad owned by SEDA-COG and beyond that a water treatment facility (to the north). The area surrounding the site is relatively hilly with sloping to the north. The surface elevation of the site is approximately 440 feet above mean sea level. An aerial map and a site vicinity map, showing the site and surrounding properties, are included as Figures 3 and 4, respectively.

The site and surrounding properties are currently served by a public water supply and sewer system. Miscellaneous utility lines (storm sewer, sanitary sewer, water, electric) exist beneath and adjacent to the site. The nearest surface water body is Little Shamokin Creek, located approximately 300 feet to the north of the site. The main channel of Shamokin Creek is located approximately 700 feet to the west of the site and flows south toward the Susquehanna River.

The site and surrounding area receives potable water from the City of Sunbury Water Department. Their water source is the Susquehanna River, with intakes located approximately 1.5 miles west and northwest of the site. No private or public potable water supply wells are known to be located within 2,000 feet of the site.

Regional Geology and Hydrogeology

The site lies near the southern boundary of the Susquehanna Lowland Section of the Ridge and Valley Physiographic Province. According to *Groundwater Resources Report 58* (Taylor; Commonwealth of Pennsylvania, Department of Environmental Resources, Bureau of Topographic and Geologic Survey, 1984), the bedrock beneath the site consists of the Hamilton Group, which is comprised of the Marcellus and overlying Mahantango Formations. In general, these rocks consist of siltstone, fine-grained sandstone and dark, fissile shale. Reported well yields range from one (1) to 900 gallons per minute (gpm), domestic wells have a median yield of 10 gpm and non-domestic wells have a median yield of 65 gpm; 19 percent of the domestic wells have yields less than five gpm and 31 percent of the nondomestic wells have yields greater than 100 gpm.

Site Geology

Based on observations made during drilling by GES, the site is immediately underlain by orange-brown silty clay overlying weathered shale bedrock. Bedrock was encountered at approximately ten to nineteen fbg.

Site Hydrogeology

Based on historical groundwater gauging data collected by GES, depth to groundwater, which occurs under unconfined conditions, typically ranges from depths of three to twelve feet below top of casing (fbtoc). Natural groundwater flow direction at the site has generally ranged from northwest to southwest.

On February 23, 2000, GES performed rising head slug tests on monitoring wells MW-1, MW-2 and MW-12. Drawdown curves generated from the slug tests are provided in Appendix A in Attachment 1d. Based on the slug test results, hydraulic conductivity values ranged from 1.3 feet per day (MW-1) to 6.8 feet per day (MW-12), with the average hydraulic conductivity for the site calculated to be 3.1 feet per day.

Site Ownership and Operations History

There is no information provided in GES' reports that indicate when the site first operated as a gasoline dispensing facility. UPA owns the UST systems and leases the site property for the owner, Erie Rental Properties.

UST History and Closure Activities

Reportedly, there have been a total of six 10,000-gallon unleaded gasoline USTs at the site. The three USTs that currently exist at the site replaced the three USTs removed in 1998, as explained below. A site plan showing the locations of the USTs at the site is provided as Figure 2.

In June of 1998, UPC retained GES to provide oversight and documentation in conjunction with underground storage tank (UST) closure activities conducted at the site. The activities consisted of the excavation and closure of three 10,000-gallon steel unleaded gasoline USTs. Post-excavation soil sample analytical results indicated that none of the nine soil samples contained any petroleum hydrocarbon constituents at concentrations which exceed applicable PaDEP soil cleanup standards. Approximately 845 tons of potentially impacted soil, generated during the excavation of the USTs, was subsequently disposed of off-site. The UST Closure Report documenting this work was submitted to the PaDEP in August of 1998.

Nature of Confirmed Releases and Subsequent Site Characterization Activities

Site characterization was initiated following the confirmation of a failed tank tightness test on November 25, 1997 and a reportable release identified during the June 1998 UST closure activities.

Initial Site Characterization Activities

GES, on behalf of URC, initiated site characterization activities in 1998 following the confirmation of the failed tank tightness test and the 1998 UST closure activities. The initial characterization activities consisted of a soil boring investigation, installation of four groundwater monitoring wells (MW-1 through MW-4), collection and analysis of soil samples from the well boreholes, collection of liquid-level data, collection and analyses of groundwater samples from the monitoring wells, and completion of a preliminary receptor survey. Analytical results for four soil samples indicated that one of the

samples contained benzene at a concentration (6,500 micrograms per kilogram (ug/kg)) which exceeds the applicable PaDEP SHS. Groundwater samples collected from the four monitoring wells indicated that all four samples contained three or more petroleum hydrocarbons constituents at concentrations greater than the applicable PaDEP groundwater cleanup standards.

A groundwater sampling program was initiated at the site in November of 1998 following the installation of monitoring wells MW-1 through MW-4. During the November 1998 sampling event, separate-phase liquid (SPL) was detected in MW-2 and MW-3 at thicknesses of 0.28 feet and 0.36 feet, respectively. SPL recovery was subsequently initiated on a twice-monthly basis, and a holding tank was installed at the site to store recovered SPL. In February of 1999, the frequency of SPL recovery events was decreased to monthly due to decreasing SPL thicknesses. The groundwater sampling event for the first quarter of 1999 was cancelled with the permission of PaDEP due to the pending additional site characterization activities.

Details of the initial site characterization activities conducted by GES are provided in the August 1998 Initial SCR included as Attachment 1b. Based on the initial site characterization data collected and included in this report, GES concluded, and the PaDEP agreed, that additional site characterization activities were necessary to adequately delineate groundwater impacts at the site.

Additional Site Characterization Activities

Thirteen (13) soil borings (SB-1 through SB-13; Figure 5) were drilled at the site in May of 1999 by Parratt-Wolff, Inc. (PWI), under the supervision of GES. The soil borings were drilled in the vicinity of monitoring well MW-2 in order to delineate soil quality where a soil sample collected from the borehole for MW-2 exhibited soil concentrations greater than the applicable RUA Medium-Specific Concentrations (MSCs) (i.e., the SHS). A total of eighteen (18) soil samples, collected primarily from just above the bedrock surface, were submitted for laboratory analysis. Samples collected from the boreholes for soil borings SB-3, SB-6, SB-7, SB-8, and SB-12, as well as monitoring well MW-13 and MW-14, were submitted for laboratory analysis to further delineate the soil impacts noted in the borehole for monitoring well MW-2. The remaining samples, collected from the boreholes for monitoring well MW-5 through MW-12, were submitted for laboratory analysis to delineate the extent of soil impacts due to dissolved-phase hydrocarbon migration. The analytical results for the soil samples during the soil boring investigation and monitoring well installation indicated that none of the samples contained any petroleum hydrocarbon constituents at concentrations greater than the applicable RUA MSCs.

A total of ten (10) additional groundwater monitoring wells (MW-5 through MW-14) were installed at the site in May of 1999 by PWI, under the supervision of GES, in order to further delineate the extent of dissolved-phase impacts and SPL at the site (Figure 2). GES collected water level data from all fourteen wells and groundwater quality samples from wells MW-1 through MW-7, MW-9 through MW-12, and MW-14 on June 2, 1999. Due to its location within the travel lane of State Street, a groundwater sample was collected from monitoring well MW-8 shortly after the well was installed on May 19, 1999. Monitoring well MW-13 was not sampled due to the presence of SPL. Analytical results from the groundwater samples collected indicated that all target unleaded gasoline constituent concentrations were greater than the applicable RUA MSCs at the

site. Based on the groundwater analytical data collected during the additional site characterization activities, GES concluded that groundwater impacts at the site have been adequately delineated. GES also concluded, based on the gauging data collected that included the additional wells, that the groundwater flow direction at the site is toward the west/northwest, which differs from the southwesterly flow direction initially determined from liquid-level data obtained from monitoring wells MW-1 through MW-4.

GES conducted a remedial alternatives evaluation to evaluate the feasibility of various remedial technologies for this site. On July 29, 1999, a vacuum-enhanced groundwater extraction (VEGE) feasibility test was conducted at the site. GES concluded from the feasibility test data and the remedial alternatives evaluation that VEGE was the remedial technology best-suited to remediate absorbed-phase and dissolved-phase hydrocarbons for the conditions encountered at the site.

Slug tests on monitoring wells MW-1, MW-2 and MW-12 were conducted by GES in February of 2000 to determine the hydraulic conductivity of the unconfined zone. Based on these slug tests, the average hydraulic conductivity for the site was calculated to be approximately 3.1 feet per day (ft/day).

On March 13-14, 2000, GES supervised the installation of ten (10) additional soil borings (SB-1 through SB-10; Figure 5). The soil borings were advanced primarily in the vicinity of wells MW-7, MW-12, MW-13, and MW-14 to further delineate SPL identified in these wells during previous site characterization. According to GES, these soil borings were also advanced to further characterize soil and determine the extent of hydrocarbon impacts in soil. Analytical results showed that the soil samples collected from borings SB-1, SB-5, SB-7, and SB-8 contained at least one target constituent at concentrations greater than the applicable RUA SHS.

On March 14-17, 2000, eight (8) additional monitoring wells (MW-15 through MW-22; Figures 2 and 5) were installed at the site under the supervision of GES. During monitoring well installation, two soil samples from each well were collected. All of the soil samples from the eight new wells were reported at concentrations below applicable RUA MSCs for unsaturated soil. Following the installation of the additional monitoring wells, a comprehensive groundwater monitoring event was conducted at the site. On April 18, 2000, all on- and off-site monitoring wells were gauged, and all on- and off-site monitoring wells were sampled with the exception of wells MW-7, MW-13 and MW-14, due to the detection of 0.01 feet of SPL in each of these wells. Monitoring wells MW-5, MW-8, MW-9, MW-19, MW-21, and MW-22 were reported as having concentrations at or below laboratory detection limits for all target analytes. The remaining wells were reported as having concentrations greater than the RUA MSCs for all parameters analyzed except for MTBE in wells MW-1, MW-17, and MW-20, naphthalene in well MW-4, and cumene in well MW-20, which were reported at or below laboratory detection limits. During this sampling event, the groundwater flow direction was determined to be toward the northwest.

In order to evaluate potential impact to sensitive receptors in the vicinity of the site and to determine the potential extent of the contaminants of concern, the dissolved-phase hydrocarbon plume was modeled utilizing the PaDEP-approved *Quick Domenico* application of "An Analytical Model for Multidimensional Transport of a Decaying Contaminant Species" (Domenico, 1987). The objective of the model was to simulate fate and transport of the unleaded gasoline constituents of concern at the site and to

more accurately predict movement and degradation in the subsurface over time. Additionally, GES conducted a risk assessment to evaluate potential exposure pathways and calculated site-specific, risk-based standards considered to be the maximum allowable concentrations of the target constituents of concern in soil and groundwater that would not cause excessive risk.

Details of GES's additional site characterization activities, along with historical soil and groundwater analytical data and other supporting documentation, are provided in their Additional SCR (submitted to the PaDEP and dated August 19, 1999), and their Additional SCR and RAP (dated June 28, 2000) included as Attachment 1c and Attachment 1d, respectively.

Remedial Action Plan

Based on the remedial alternatives evaluation and the feasibility testing summarized above and detailed in GES' June 2000 Additional SCR and RAP, VEGE was the selected remedial technology for the site to meet the site-specific standards developed by GES. However, as previously mentioned, the remedial goal for the site has been changed to the RUA SHS, as required by the site property owner. The VEGE system operated at the site from August 27, 2003 through January 23, 2006. The system was shut down by GES due to diminishing returns and GES' apparent conclusion that asymptotic conditions had been reached.

Most Recent Groundwater Data

The most recent groundwater data for the site is presented in the Second Quarter Remedial Action Progress Report (RAPR; dated August 1, 2012) included as Attachment 1g. The Second Quarter 2012 groundwater data shows that dissolved-phase concentrations of benzene, MTBE and naphthalene remain greater than the RUA MSCs on- and off-site. Dissolved-phase benzene, MTBE, and naphthalene concentration contour maps were prepared by GES for the Second Quarter 2012 groundwater sampling event conducted on June 20, 2012 and are included as Figures 6 through 9, respectively.

D. OBJECTIVE / SCOPE OF WORK

This RFB Solicitation is a defined scope of work (SOW) type where a specific SOW is presented to the bidders who prepare their bids on the basis of that scope. In the case of this RFB solicitation, the defined SOW has been reviewed by the PaDEP and is designed to obtain RfL, that is, to "close" the site, by demonstrating attainment of the RUA SHS for soil and groundwater using the RUA MSCs as the numerical standard for which attainment of the SHS is demonstrated. There are specific milestones outlined in this RFB designed to assist the bidder in preparing their bid. Each bid must detail the approach and specific methods for achieving the milestone objectives. In reviewing the quality of bids submitted under a defined SOW-type bid solicitation, there is an increased emphasis placed on cost.

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

- Milestone A: Conduct Monthly Vac-out Events on Wells MW-6 and MW-12 for Six (6) Months
- Milestone B: Conduct ten (10) quarterly groundwater gauging/sampling events on seven (7) wells and prepare/submit quarterly Remedial Action Progress Reports (RAPRs);
- Milestone C: Conduct systematic random soil attainment sampling;
- Milestone D: Conduct soil vapor assessment;
- Milestone E: Prepare and submit Remedial Action Completion Report (RACR)
- Milestone F: Well Decommissioning and Site Restoration

The submitted bid shall follow the milestone format outlined above. Bids shall include a detailed description of the fixed-price cost for each task including labor rates, time requirements and equipment costs. A Standardized Bid Cost Spreadsheet, to be completed and attached to the bid, is included as Attachment 2. The fixed-price cost for each of the milestones detailed below shall include all costs for preparation of any pertinent project guidance documents in accordance with Chapter 245 (e.g., health and safety plan, field sampling/analysis plan and quality assurance/quality control plan, etc.), project management scheduling and project coordination time deemed necessary to complete each milestone.

All activities shall be conducted in accordance with the Storage Tank Spill and Prevention Act and associated statutes and regulations for the Solicitor for the identified petroleum release at the site. Milestones are provided below to facilitate the preparation of a bid response and to maintain consistency among the bid responses for bid evaluation. Failure to bid the SOW “as is” may result in the bid not being considered.

In reviewing responses to this RFB Solicitation, the bid review committee will evaluate whether the bid is “technically sound”, defined as both 1) responsive to the RFB Solicitation in such a way that it is clear that the bidder understands the site conditions and the nature of the problem to be resolved (in this case, closure under the SHS by meeting the RUA MSCs), and 2) has proposed a technical solution that is reasonably capable of achieving site closure in conformance with PaDEP guidance and Chapter 245. Attributes of a bid response that is considered to be technically sound are: 1) the approach is well reasoned, organized and detailed; 2) the response demonstrates the bidder (without undue reliance on any documents provided by proposed subcontracted vendors) has read and understands the RFB including the technical and regulatory issues; 3) the bidders decision-making process and criteria are based on a complete conceptual site model, are site-specific to a high degree and are well and clearly documented independent of any vendor attachments; and 4) the bidder has indicated that they will use quantitative physical data and laboratory data as the foundation for monitoring and documenting successful progress toward cleanup of the site.

MILESTONE A: CONDUCT MONTHLY VAC-OUT EVENTS ON WELLS MW-6 AND MW-12 FOR SIX (6) MONTHS

The selected bidder shall implement a six-month vac-out program that will consist of monthly vac-outs events on wells MW-6 and MW-12. The purpose of the vac-outs is to remove impacted groundwater and soil vapor in the vicinity of wells MW-6 and MW-12 in an attempt to reduce dissolved-phase benzene and MTBE concentrations in these wells and initiate groundwater attainment sampling more quickly.

During each month monthly vac-out event, a vacuum shall be applied for six (6) to eight (8) hours on each well. Thus, the duration of the monthly vac-out event would be approximately two (2) days (one day to vac-out MW-6 and one day to vac-out MW-12). During the vac-out of each well, the groundwater within the well shall be removed using a vacuum truck. Well evacuation can be achieved by connecting a one-inch diameter drop tube to the bottom of the well. The well head shall be adequately sealed to alleviate the potential for short-circuiting of ambient air into the well from the surface. The total depth of wells MW-6 and MW-12 is approximately twenty-five (25) fbg. Well construction logs and groundwater concentration trend graphs for wells MW-6 and MW-12 are provided in Attachment 1f.

During each vac-out event, a vacuum shall be applied to each well for six (6) to eight (8) hours. Data collected during the vac-out of each well shall include:

- Vacuum applied to well;
- Start and stop time of vac-out for each well and total duration vacuum was applied to well; and,
- Total number of gallons of water removed from each well during vac-out (including evacuated water).

The selected bidder shall provide a quarterly fixed-price cost to conduct the monthly vac-out events. A detailed description of each vac-out event, all data collected from these activities, and all supporting documentation including disposal manifests, shall be presented in the RAPR (Milestone B) for the quarter in which the vac-out events were conducted.

MILESTONES B1 – B10: CONDUCT TEN (10) QUARTERLY GROUNDWATER GAUGING/SAMPLING EVENTS FOR SEVEN (7) WELLS AND PREPARE/SUBMIT QUARTERLY RAPRS

[PLEASE NOTE: During discussions between the Technical Contact and the PaDEP, the PaDEP concurred that groundwater attainment has been demonstrated for monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-7R, MW-8 (destroyed), MW-9, MW-10, MW-11, MW-16, MW-17, MW-18, MW-19, MW-20, MW-21 and MW-22 (destroyed), and sampling of these wells can be discontinued. Quarterly sampling of seven (7) wells (i.e., MW-1R, MW-6, MW-12, MW13, MW-14, MW-15 and MW-23), for which groundwater attainment demonstration is still necessary, shall continue.]

The successful bidder shall conduct ten (10) consecutive quarters of groundwater elevation gauging and sampling. The selected bidder shall conduct the first two quarterly gauging/sampling events (Milestones B1 and B2) during the two quarters in which the vac-out events are being conducted (under Milestone A). These initial two quarterly groundwater monitoring events will be conducted for fate and transport purposes while the vac-out program is carried out. These initial two quarterly groundwater monitoring events shall be conducted at least thirty (30) days following the date that the most recent monthly vac-out event was conducted. Each of the eight subsequent quarterly monitoring events (Milestones B3 – B10) shall be conducted as quarterly attainment gauging/sampling events following the vac-out program, in an attempt to demonstrate groundwater attainment of the SHS. Also, when applicable, the selected bidder shall conduct the quarterly gauging/sampling event at least thirty (30) days following the soil vapor sampling events described in Milestone D.

During each quarterly groundwater monitoring event, the selected bidder shall gauge all existing on- and off-site wells prior to sample collection, with the exception of monitoring wells MW-8 and MW-22, which were destroyed during subsequent paving of State Street (Route 61), and monitoring well MW-9 which is inaccessible due to safety concerns related to high traffic. Thus, each quarterly groundwater monitoring event shall include gauging of wells MW-1, MW-1R, MW-2 through MW-7, MW-7R, MW-10 through MW-21, and MW-23 (i.e., twenty-two (22) wells), and attainment sampling of monitoring wells MW-1R, MW-6, MW-12, MW-13, MW-14, MW-15 and MW-23 (i.e., seven (7) wells) (Figure 2). Groundwater elevation gauging, purging, sampling, and analysis shall be conducted in accordance with generally accepted practices as outlined in the PaDEP's Groundwater Monitoring Guidance Manual, dated December 1, 2001 (Document # 383-3000-001). Depth-to-water measurements shall be completed using a probe capable of distinguishing water and/or the presence or absence of SPL to the nearest 0.01 feet. The depth to water shall be recorded and then used to determine the water level elevations within each well. In the event that SPL is detected in a well, the groundwater elevation shall be corrected for product thickness.

All groundwater samples shall be collected in laboratory-provided containers and analyzed for the substances included in the PaDEP's Old Shortlist of unleaded gasoline constituents (i.e., benzene, toluene, ethylbenzene, total xylenes, cumene, MTBE and naphthalene) using EPA Method 8260 by a PADEP-certified laboratory.

Following each of the quarterly groundwater monitoring events, the successful bidder shall prepare quarterly Remedial Action Progress Reports (RAPRs) and submit the RAPR to the PaDEP no later than thirty (30) days following the end of each calendar quarter. Each quarterly RAPR shall include a description of all tasks performed during the quarter, a groundwater elevation data table, a groundwater chemistry data table, a groundwater elevation contour map, and groundwater concentration contour maps for those dissolved-phase constituents that show concentrations at the site greater than the RUA MSCs, and any additional data/documentation (e.g., vac-out data, groundwater laboratory reports; disposal manifests) collected during the quarter. ICF and the Technical Contact shall be copied on each of the quarterly RAPRs.

In the event that attainment of the SHS cannot be achieved for groundwater at the end of the eighth quarter of groundwater attainment monitoring (i.e., at the completion of Milestone B10), and fate and transport analysis demonstrates that additional attainment sampling is reasonable, the language in the Remediation Agreement will allow for up to four additional quarterly groundwater attainment monitoring events at the same quarterly fixed price established for Milestones B1 through B10, in order to demonstrate groundwater attainment at the site.

MILESTONE C: SOIL ATTAINMENT SAMPLING

Soil attainment sampling/demonstration in the area immediately north/northwest of the UST pad, as shown on Figure 5, shall be conducted. The bidder's proposed soil attainment demonstration for this area shall include the estimated volume of soil for which the RUA SHS is to be demonstrated, along with a description of the general systematic random approach to selecting soil sampling locations. For the purpose of this bid, bidders should assume that a total of twelve soil attainment samples will be collected to demonstrate soil attainment in this area.

All soil attainment samples shall be collected in laboratory-provided containers and analyzed for the substances included in the PaDEP's Old Shortlist of unleaded gasoline constituents (i.e., benzene, toluene, ethylbenzene, total xylenes, cumene, MTBE and naphthalene) using EPA Method SW846 8260 by a PADEP-certified laboratory.

MILESTONE D: SOIL VAPOR ASSESSMENT

A soil vapor assessment shall be conducted to determine whether soil vapor intrusion into the occupied buildings on- and off-site is an issue. Seven (7) soil vapor monitoring points (SVP-1 through SVP-7) shall be installed at the locations shown on Figure 2. The soil vapor monitoring points shall be installed to a depth of five fbg. Each point shall have one soil vapor collection point with a screened interval not to exceed six inches (from 5 to 4.5 fbg). One soil vapor sample shall be collected from each soil vapor monitoring point during each of two sampling events. Soil vapor point installation, sampling and analyses shall be conducted in accordance with the PaDEP's *Technical Guidance Manual - Section IV.A.4. Vapor Intrusion into Buildings from Groundwater and Soil under Act 2 Statewide Health Standard (January 24, 2004)*.

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

Details of the vapor intrusion assessment, including analytical results and a detailed evaluation of the vapor intrusion potential, shall be included in both the RAPR for the quarter in which this task was completed as well as in the RACR.

MILESTONE E: PREPARATION AND SUBMITTAL OF RACR

The selected bidder shall prepare a RACR in accordance with 25 Pa Code §245.313. The RACR shall be a stand-alone document with comprehensive data tables and figures. All files used in the preparation of this RFB, including CAD files, will be available to the successful bidder. The selected bidder shall prepare the RACR in draft form for review and comment by the Solicitor and the PAUSTIF. The bidders' schedules shall provide two weeks for this review. The selected bidder shall address all of the comments received by the Solicitor and the PAUSTIF before submission to the PaDEP.

The selected bidder shall prepare a RACR that documents and discusses the data obtained and the conclusions drawn from the completion of the work contained within this RFB. Tables, figures, and other attachments that support the text shall include but not be limited to the following:

- Updated comprehensive historical groundwater elevation data;
- Updated comprehensive historical groundwater analytical data;
- Site map (showing site boundaries and pertinent site features);
- Monitoring well, soil vapor monitoring point, and soil boring location maps (showing existing and new locations);

- Soil groundwater elevation contour maps including but not limited to the most recent quarter up to the submission of the RACR;
- Groundwater concentration contour (plume) maps for each constituent found to be above the SHS MSC including but not limited to the most recent quarter up to the submission of the RACR;
- Laboratory analytical reports for groundwater, soil and soil vapor with chains of custody documentation;
- Construction logs for new soil vapor monitoring points installed at the site; and,
- Soil vapor summary data table and a detailed evaluation of the potential for vapor intrusion into on- and off-site occupied buildings to determine whether the potential for a complete exposure pathway for vapor intrusion exists for on- and off-site occupied buildings. This evaluation shall be conducted by comparing the soil, soil vapor and groundwater data collected as part of the SOW to the PaDEP's Vapor Intrusion Guidance;
- Fate and transport supporting documentation, such as statistical trend analysis output data and graphs and other documentation to support attainment demonstration for groundwater; and,
- Systematic random sampling worksheets and other documentation supporting demonstration of the soil attainment.

MILESTONE F – WELL DECOMMISSIONING AND SITE RESTORATION

Following the PaDEP's written approval of the RACR, and following post-remediation care activities (if any), the site property shall be restored such that all groundwater monitoring and recovery wells are properly decommissioned, the surface is restored to its original condition, and any wastes, including but not limited to, stockpiled soil, containerized waste (e.g., soil waste, drill cuttings or purged groundwater), and granular activated carbon, are removed from the site for proper off-site disposal.

All well decommissioning activities shall be conducted in accordance with applicable PaDEP regulations and guidance.

ADDITIONAL REQUIREMENTS

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

- Complete necessary, reasonable, and appropriate project planning and management activities until the SOW specified in the executed Remediation Agreement has been completed. Such activities would be expected to include client communications/updates, meetings, record keeping, subcontracting, personnel and subcontractor management, quality assurance/quality control, scheduling, and other activities. Project planning and management activities will also include preparing and implementing any plans required by regulations or that may be necessary and appropriate to complete the SOW. This may include health and safety plans, waste management plans, field sampling and analysis plans, and/or access agreements. Project management costs shall be included in the fixed prices quoted for Milestones A through D, as appropriate.
- Be responsible for coordinating, managing, and completing the proper management, characterization, handling, treatment, and/or disposal of all

investigation-derived wastes in accordance with standard industry practices and applicable laws, regulations, guidance and PaDEP directives. Include these costs in Milestones A1 - A3, B1 - B8, and C as appropriate. Waste handling documentation shall be maintained and provided to the Solicitor upon request and should be included as an appendix to the respective quarterly RAPR.

All investigation derived wastes shall be handled and disposed of per PADEP's Regional Office guidance. It is the selected consultant's responsibility to conform with current PADEP Regional Office guidance requirements in the region where the site is located.

- Be responsible for providing the Solicitor and adjacent property owners with adequate advance notice prior to each visit to the property. The purpose of this notification is to coordinate appropriate access to the areas of the Site necessary to complete the SOW.
- Be responsible for keeping any/all site monitoring wells in good condition, with each well properly sealed and locked between each monitoring/sampling event. The selected consultant is responsible for repairing/replacing any seals, compression caps and/or locks that are or become defective during the period of the Remediation Agreement at its expense. If, during the mandatory pre-bid site meeting, any well surface completion(s) (i.e., concrete pad, manhole cover and/or bolts) is(are) identified to be in need of repair or replacement, each bidder shall provide its estimated cost to repair/replace said surface completion(s) in its bid. NOTE: Any request for PAUSTIF reimbursement of the reasonable costs to repair or replace wells and/or surface completions will be considered on a case-by-case basis.

All work shall be conducted in accordance with standard industry practices, and be consistent with the applicable PaDEP laws, regulations, and guidelines.

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

E. TYPE OF CONTRACT / PRICING

The Solicitor wishes to execute a mutually agreeable Fixed-Price contract (Remediation Agreement). A site-specific Draft Remediation Agreement is included as Attachment 2 to this RFB Solicitation. This Draft Remediation Agreement contains site-specific language that has been reviewed and approved by the Solicitor. The bidder must identify in the bid response and document any modifications that they wish to propose to the Draft Remediation Agreement language in Attachment 2 other than obvious modifications to fit this RFB (e.g., names and dates). The number and scope of any modifications to the Draft Remediation 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 Draft Remediation Agreement language included in Attachment 2 "as is," or that does not provide a cross-referenced list of requested changes to this draft agreement will be considered non-responsive.** This statement should be made in a Section entitled

“Remediation Agreement”. Any proposed changes to the draft 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 PAUSTIF.

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

The bidder shall provide its bid using the Standard Bid Cost Spreadsheet included as Attachment 3 with descriptions for each Milestone provided in the body of the bid document. In the event that there is a discrepancy between the costs provided in the Standardized Bid Cost Spreadsheet and other parts of the submitted bid, the costs listed in the Standardized Bid Cost Spreadsheet will be used to evaluate the bid. It is the bidder’s responsibility to confirm that the calculations on the Standardized Bid Cost Spreadsheet are correct. In addition to Attachment 3, the bidder shall provide a unit rate schedule that will be used for any out-of-scope work on this project.

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

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

In order to facilitate the PAUSTIF’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 contract.

F. BID RESPONSE DOCUMENT

Each bid response document must include at least the following:

1. Demonstration of the bidder’s understanding of the site information provided in this RFB, standard industry practices, and objectives of the project.
2. Fixed-price bid pricing using the Standardized Bid Cost Spreadsheet (Attachment 3) and a unit rate schedule for any out-of-scope work. The following information must be

provided in the detailed costing spreadsheet and discussed in the body of the bid document:

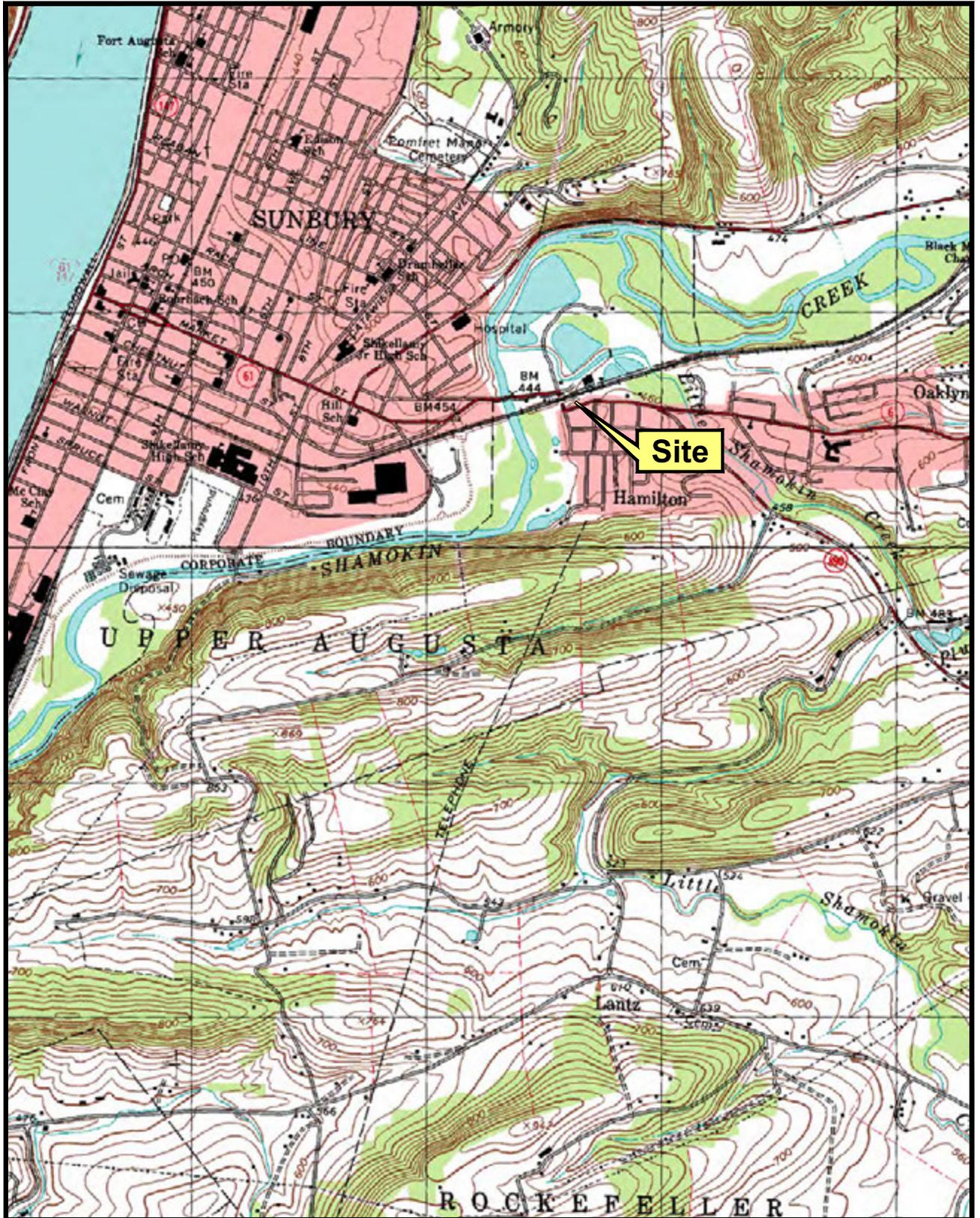
- a. The bidder's proposed unit cost rates for each expected labor category, subcontractors, other direct costs, and equipment;
 - b. The bidder's proposed markup on other direct costs and subcontractors (if any);
 - c. The bidder's estimated total cost by task consistent with the proposed SOW identifying all level-of-effort and costing assumptions.
3. Documentation of the bidder's level of insurance consistent with the levels listed in Attachment 3².
 4. The names and brief resumes of the proposed project team for the key project staff, including the proposed Professional Geologist of Record who will be responsible for overseeing the work and applying a professional seal to the project deliverables.
 5. Responses to the following specific questions:
 - a. Does your company employ a Pennsylvania-licensed Professional Geologist that is designated as the proposed project manager? How many years of experience does this person have?
 - b. How many Chapter 245 projects is your company currently consultant for in the PaDEP Northwest Region of Pennsylvania? Please list up to five projects.
 - c. How many Chapter 245 Corrective Action projects involving an approved SCR, RAP and RACR in the State has your company and/or the Pennsylvania-licensed Professional Geologist closed (i.e., obtained RfL from the PaDEP) using any standard?
 - d. Has your firm ever been a party to a terminated PAUSTIF-funded Fixed-Price (FP) or Pay-for-Performance (PFP) contract without attaining all of the Milestones? If so, please explain, including whether the conditions of the FP or PFP contract were met.
 6. Sufficient description of subcontractor involvement by task.
 7. Detailed schedule of activities for completing the proposed SOW.
 8. Description of how the Solicitor, ICF and the PAUSTIF will be kept informed as to project progress and developments, and how the Solicitor (or designee) will be informed of and participate in evaluating technical issues that may arise during this project.
 9. Key assumptions made in formulating the proposed cost estimate. The use of overly narrow assumptions will negatively impact the bid.

² The selected bidder agrees and shall submit evidence to the Solicitor before beginning work that bidder has procured and will maintain Workers Compensation; commercial general and contractual liability; commercial automobile liability; and professional liability insurance commensurate with the level stated in the Remediation Agreement and commensurate with industry standards for the work to be performed.

10. Exceptions or special conditions applicable to the proposed SOW.
11. Quotations from major subcontractors.

E. MANDATORY SITE VISIT

THERE WILL BE A MANDATORY SITE MEETING ON TUESDAY, FEBRUARY 19, 2013, STARTING AT 1:00 PM. The Solicitor, the Technical Contact, or their designee will be at the site between 1:00 PM and 2:00 PM to answer questions and conduct a site tour for one participant per firm. This meeting is mandatory for all bidders – no exceptions. This meeting will allow each bidding firm to inspect the site and evaluate site conditions. **A CONFIRMATION OF YOUR INTENT TO ATTEND THIS MEETING IS REQUESTED TO BE PROVIDED TO THE TECHNICAL CONTACT VIA E-MAIL BY MONDAY, FEBRUARY 18, 2013 WITH THE SUBJECT “KWIK-FILL S-124 CLAIM NO. 1998-0220(M) – SITE MEETING ATTENDANCE CONFIRMATION”.** The name and contact information of the company participant should be included in the body of the e-mail.



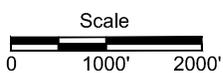
Portion of the Sunbury, PA
7.5-minute USGS Quadrangle
(1999)

Figure 1

Kwik Fill #S-124

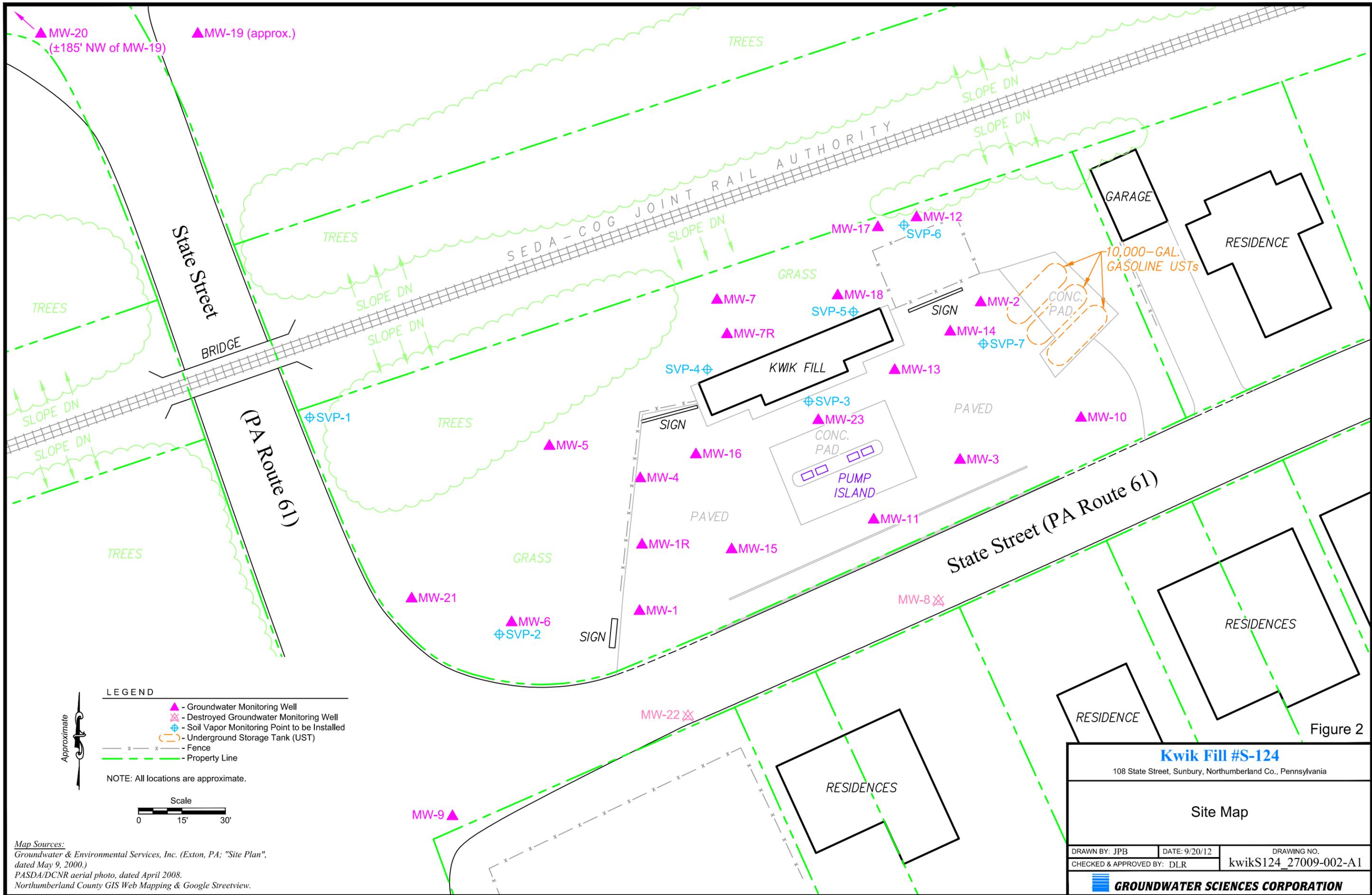
108 State Street, Sunbury, Northumberland Co., Pennsylvania

Site Location Map



GROUNDWATER SCIENCES CORPORATION

kwik124_27009-001-B1 / 9-20-2012



- LEGEND**
- ▲ - Groundwater Monitoring Well
 - ⊗ - Destroyed Groundwater Monitoring Well
 - ⊕ - Soil Vapor Monitoring Point to be Installed
 - - Underground Storage Tank (UST)
 - x - x - Fence
 - - - Property Line

NOTE: All locations are approximate.



Map Sources:
 Groundwater & Environmental Services, Inc. (Exton, PA; "Site Plan", dated May 9, 2000.)
 PASDA/DCNR aerial photo, dated April 2008.
 Northumberland County GIS Web Mapping & Google Streetview.

Kwik Fill #S-124
 108 State Street, Sunbury, Northumberland Co., Pennsylvania

Site Map

DRAWN BY: JPB	DATE: 9/20/12	DRAWING NO.
CHECKED & APPROVED BY: DLR	kwikS124_27009-002-A1	

GROUNDWATER SCIENCES CORPORATION

Figure 2



Figure 3

Kwik Fill #S-124

108 State Street, Sunbury, Northumberland Co., Pennsylvania

Aerial Map Showing Site and Surrounding Properties

DRAWN BY: JPB	DATE: 9/20/12	DRAWING NO.
CHECKED & APPROVED BY: DLR		kwikS124_27009-008-A1

053-00-047-001
IND.

WASTEWATER TREATMENT FACILITY

STATE STREET (PA ROUTE 61)

057-00-041-126
IND.

RES.

057-01-047-13

057-01-047-129
RES. 210 214

057-01-047-128
RES. 200

RAILROAD

057-01-047-127
RES.

057-00-046-001
COMM./RES. 1585 1587

057-00-046-001-A
COMM./RES. 1553

RAILROAD

057-01-047-125
SITE
(COMM.) 100

054-05-009-040
IND.

STATE STREET (PA ROUTE 61)

057-01-047-099
RES. 200 203 207 132 133

057-00-046-001-B
COMM./RES.

057-01-047-079
RES. RES.

057-01-047-100
RES. 125 127 129

057-01-047-123
COMM./RES. 101

057-01-047-106
RES. 115 117

057-01-047-102
RES.

GREEN STREET

057-01-047-107
RES. 106

057-01-047-098
RES.

057-01-047-080
RES.

Figure 4

LEGEND

- Property Line (approx.)
- RES. - Residential Property
- COMM. - Commercial Property
- IND. - Industrial Property

Approximate Scale
0 60'

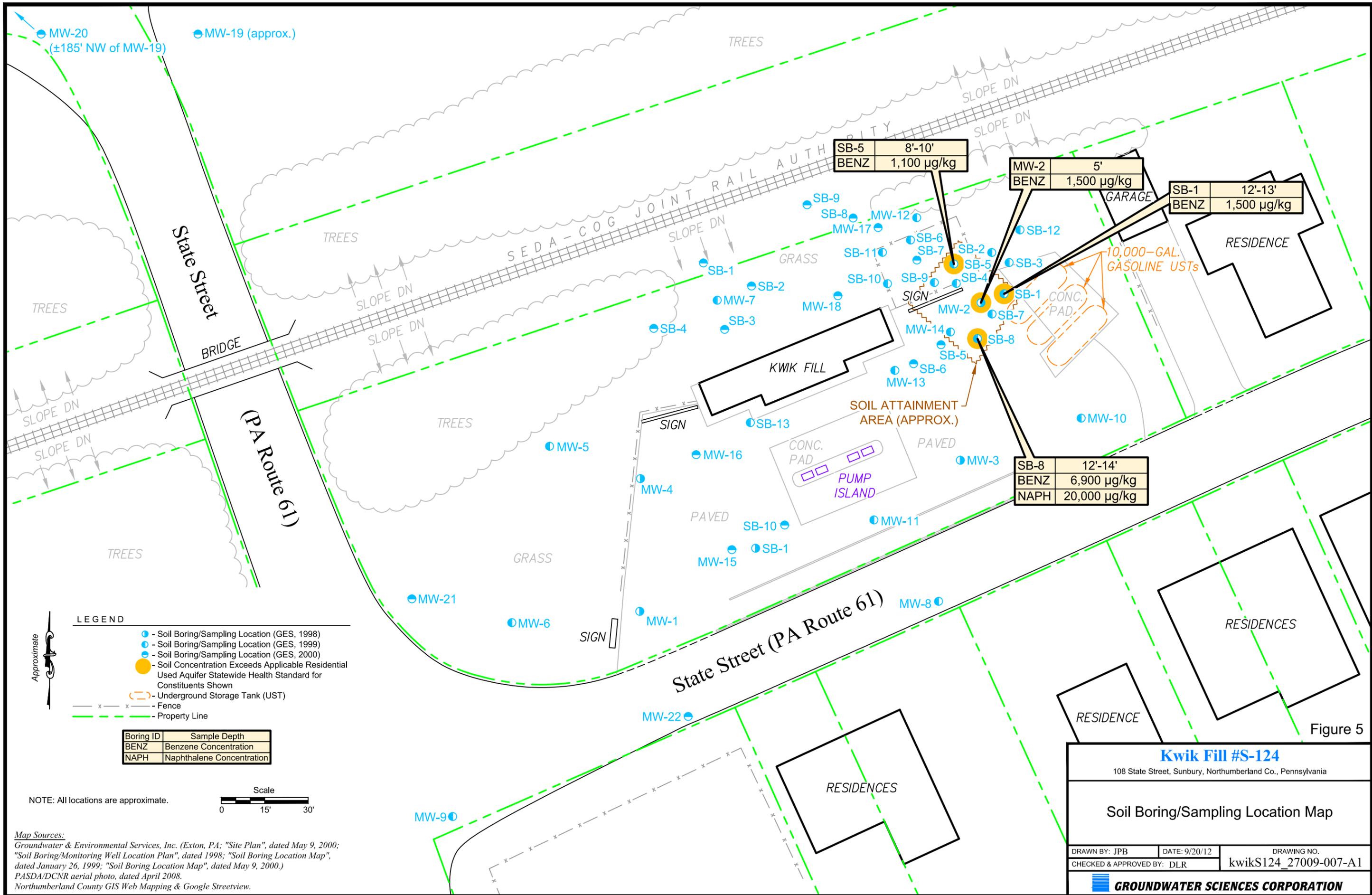
Map Source:
Northumberland County GIS Web Mapping (online)

Kwik Fill #S-124
108 State Street, Sunbury, Northumberland Co., Pennsylvania

Map Showing Site and Surrounding Properties

DRAWN BY: JPB	DATE: 9/20/12	DRAWING NO.
CHECKED & APPROVED BY: DLR	kwikS124_27009-008-A2	

GROUNDWATER SCIENCES CORPORATION



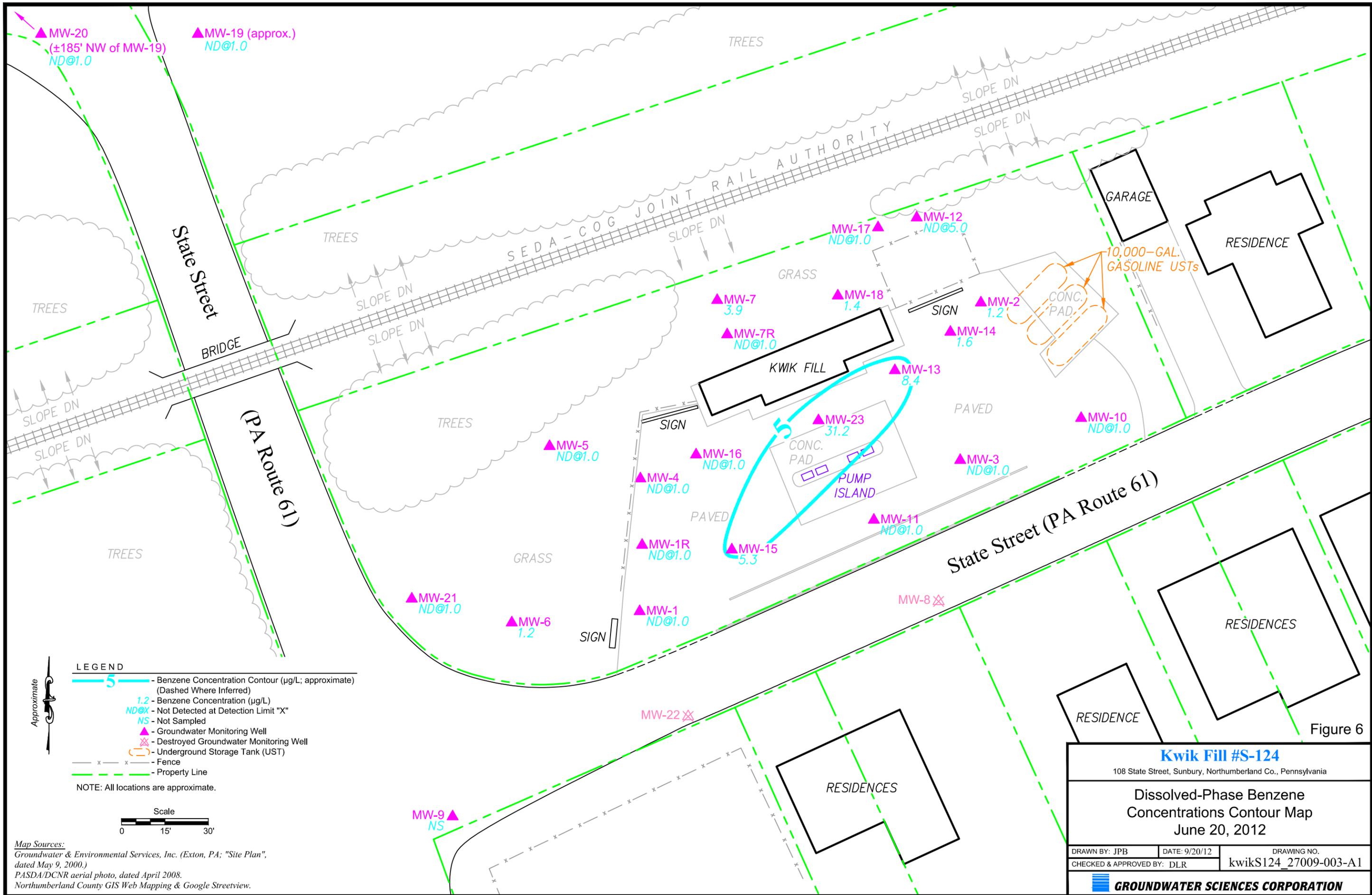
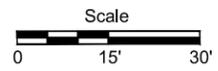


Figure 6

LEGEND

- 5 - Benzene Concentration Contour (µg/L; approximate) (Dashed Where Inferred)
- 1.2 - Benzene Concentration (µg/L)
- ND@X - Not Detected at Detection Limit "X"
- NS - Not Sampled
- ▲ - Groundwater Monitoring Well
- ⊗ - Destroyed Groundwater Monitoring Well
- Underground Storage Tank (UST)
- x - x - - Fence
- - - - - Property Line

NOTE: All locations are approximate.



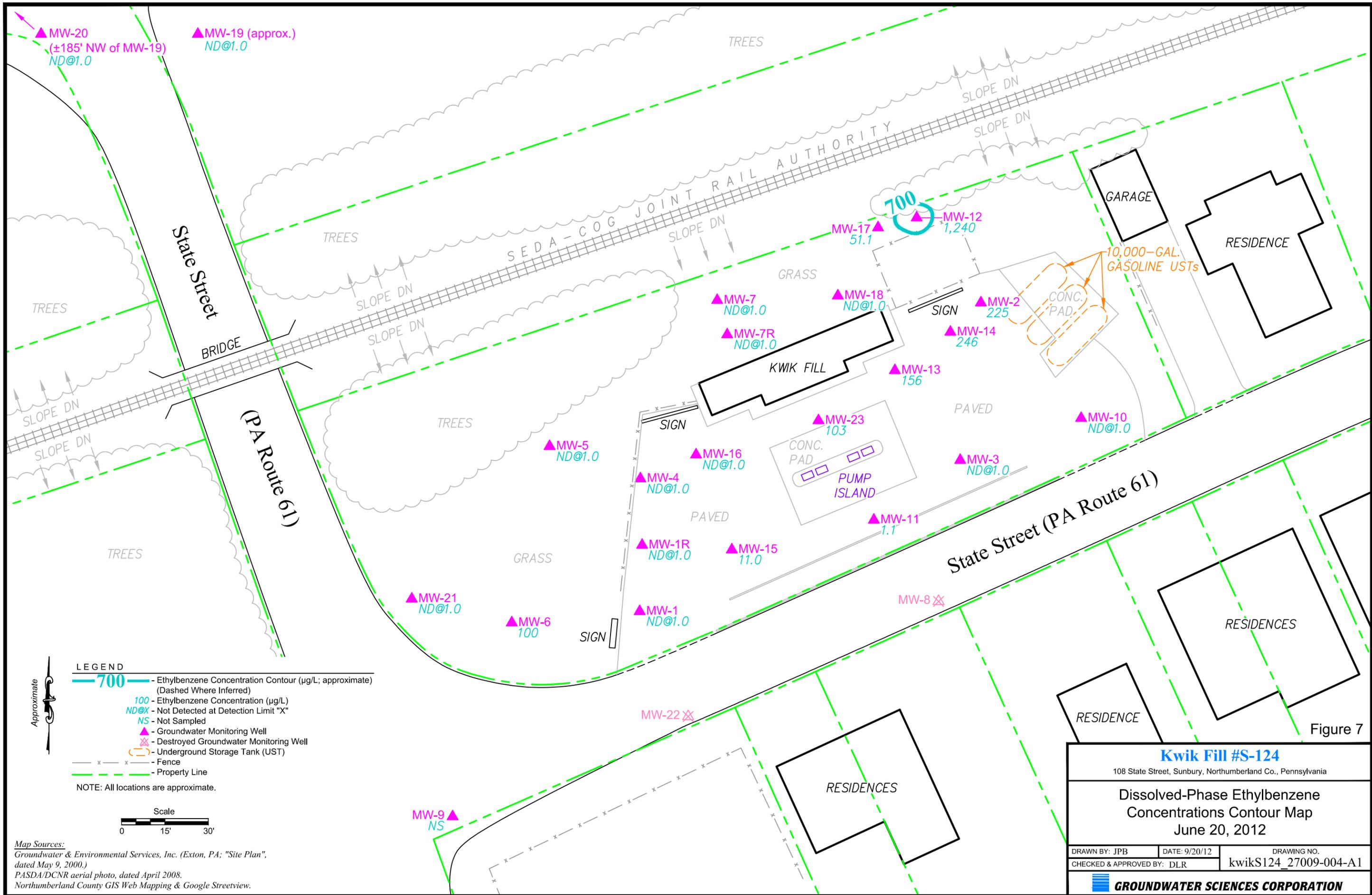
Map Sources:
 Groundwater & Environmental Services, Inc. (Exton, PA; "Site Plan", dated May 9, 2000.)
 PASDA/DCNR aerial photo, dated April 2008.
 Northumberland County GIS Web Mapping & Google Streetview.

Kwik Fill #S-124
 108 State Street, Sunbury, Northumberland Co., Pennsylvania

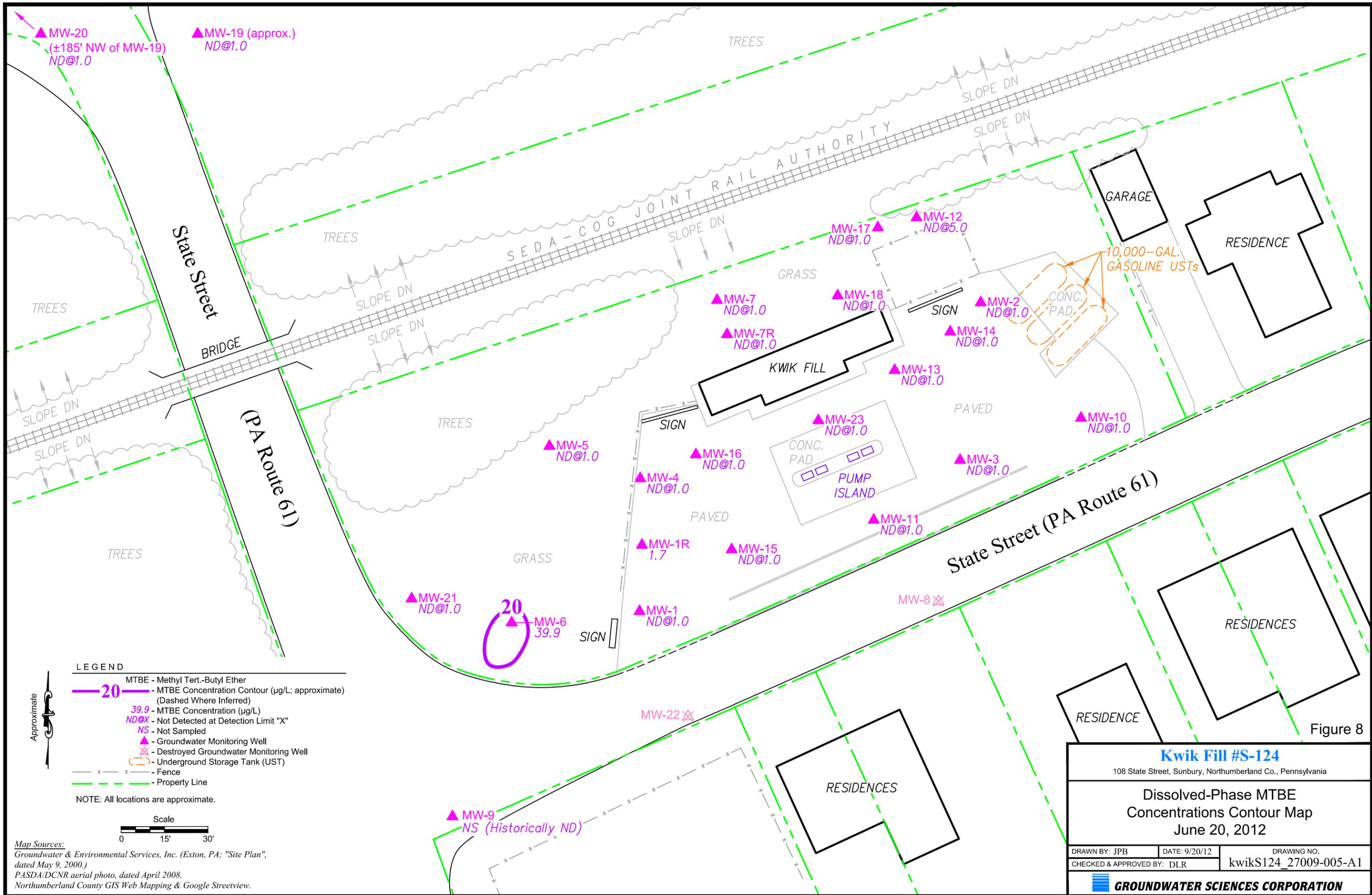
Dissolved-Phase Benzene Concentrations Contour Map
 June 20, 2012

DRAWN BY: JPB	DATE: 9/20/12	DRAWING NO.
CHECKED & APPROVED BY: DLR	kwikS124_27009-003-A1	

GROUNDWATER SCIENCES CORPORATION



Map Sources:
 Groundwater & Environmental Services, Inc. (Exton, PA; "Site Plan", dated May 9, 2000.)
 PASDA/DCNR aerial photo, dated April 2008.
 Northumberland County GIS Web Mapping & Google Streetview.



- LEGEND**
- - - 20 - MTBE - Methyl Tert.-Butyl Ether
 - - - - MTBE Concentration Contour (µg/L; approximate) (Dashed Where Inferred)
 - 39.9 - MTBE Concentration (µg/L)
 - ▲ ND@X - Not Detected at Detection Limit "X"
 - NS - Not Sampled
 - ▲ - Groundwater Monitoring Well
 - ⊗ - Destroyed Groundwater Monitoring Well
 - Underground Storage Tank (UST)
 - x - x - - Fence
 - - - - - Property Line

NOTE: All locations are approximate.

Scale
0 15' 30'

Map Sources:
Groundwater & Environmental Services, Inc. (Exton, PA); "Site Plan", dated May 9, 2000.
PASDA/DCNR aerial photo, dated April 2008.
Northumberland County GIS Web Mapping & Google Streetview.

Kwik Fill #S-124
108 State Street, Sunbury, Northumberland Co., Pennsylvania

**Dissolved-Phase MTBE
Concentrations Contour Map
June 20, 2012**

DRAWN BY: JPB	DATE: 9/20/12	DRAWING NO.
CHECKED & APPROVED BY: DLR	kwikS124_27009-005-A1	

GROUNDWATER SCIENCES CORPORATION

Figure 8

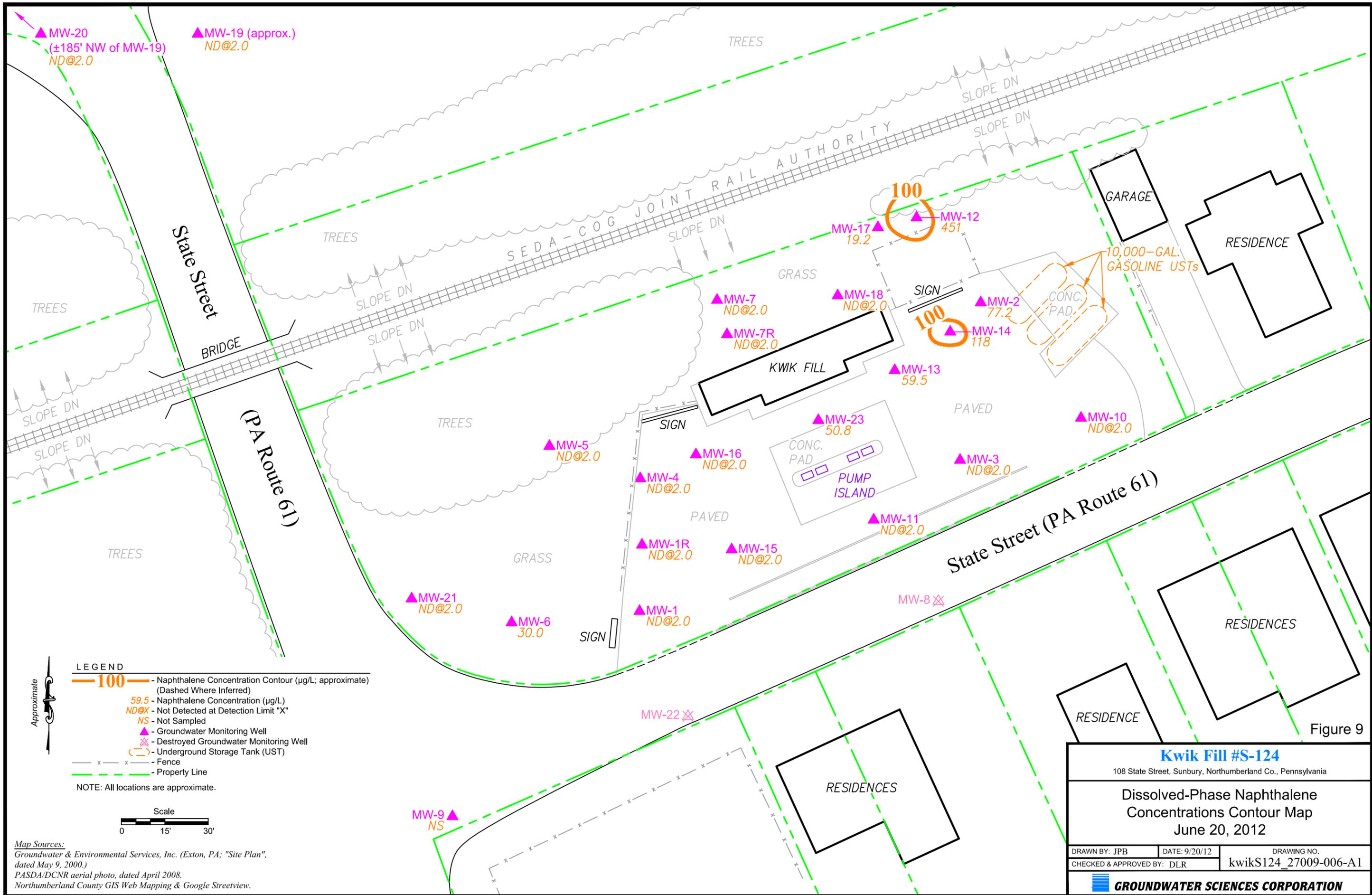


Figure 9

Kwik Fill #S-124
 108 State Street, Sunbury, Northumberland Co., Pennsylvania

Dissolved-Phase Naphthalene Concentrations Contour Map
 June 20, 2012

DRAWN BY: JPB	DATE: 9/20/12	DRAWING NO.
CHECKED & APPROVED BY: DLR	kwikS124_27009-006-A1	

GROUNDWATER SCIENCES CORPORATION

Map Sources:
 Groundwater & Environmental Services, Inc. (Exton, PA); "Site Plan", dated May 9, 2000.
 PASDA/DCNR aerial photo, dated April 2008.
 Northumberland County GIS Web Mapping & Google Streetview.