Request for Bid

Fixed-Price Defined Scope of Work

Continued Remedial Activities and Quarterly Groundwater Monitoring, Groundwater Attainment Demonstration, RACR Preparation, and Site Restoration Activities

Solicitor

Glenn & Ken's Auto Repair

1474 Old York Road, Abington Township, Montgomery County, Pennsylvania 19001

PADEP Facility ID #: 46-42436 PAUSTIF Claim #: 2007-0153(S)

Date of Issuance

April 15, 2014

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The Pennsylvania Underground Storage Tank Indemnification Fund (PAUSTIF), on behalf of the claimant who hereafter is referred to as the Client or Solicitor, is providing this Request for Bid (RFB) to prepare and submit a bid to complete the Scope of Work (SOW) for the referenced site. The Solicitor is the former owner and current operator of the Site. The PAUSTIF has determined that the claim reported by the Solicitor is eligible for coverage from the PAUSTIF subject to the applicable statutes and regulations. Reimbursement of Solicitor-approved, reasonable and necessary costs, not to exceed the claim aggregate limit, for the corrective action work described in this RFB will be provided by the PAUSTIF. The Solicitor is responsible to pay any applicable deductible and/or proration.

Each bid response will be considered individually and consistent with the evaluation process described in the PAUSTIF Competitive Bidding Fact Sheet, which can be downloaded from the PAUSTIF's website at http://www.insurance.pa.gov.

Calendar of Events

Activity	**Date and Time**
Notification of Intent to Attend Site Visit	April 29, 2014 by 5 p.m.
Mandatory Pre-Bid Site Visit	April 30, 2014 at 1 p.m.
Deadline to Submit Questions	May 16, 2014 by 5 p.m.
Bid Due Date and Time	May 23, 2014 by 3 p.m.

Contact Information

Technical Contact
David L. Reusswig, P.G. Groundwater Sciences Corporation 2601 Market Place Street Suite 310 Harrisburg, PA 17110 dreusswig@groundwatersciences.com

All questions regarding this Request for Bid (RFB) 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 "Glenn & Ken's, 2007-0153(S) – RFB QUESTION". Bidders must neither contact nor discuss this RFB with the Solicitor, the PAUSTIF, the Pennsylvania Department of Environmental Protection (PADEP), or ICF International (ICF) unless approved by the Technical Contact. Bidders may discuss this RFB with subcontractors and vendors to the extent required for preparing the bid response.

Requirements

Mandatory Pre-Bid Site Meeting

The Solicitor, the Technical Contact, or their designee will hold a mandatory site visit on the date and time listed in the calendar of events to conduct a site tour for one participant per bidding company. The Technical Contact may answer questions at the Site Meeting or may collect questions and respond via email. All questions and answers will be provided via email to all attendees. This meeting is mandatory for all bidders, no exceptions. This meeting will allow each bidding company to inspect the site and evaluate site conditions. **A notice of the bidder's intent to attend this meeting is requested to be provided to the Technical Contact via email by the date listed in the calendar of events with the subject "Glenn & Ken's, 2007-0153(S) – SITE MEETING ATTENDANCE NOTIFICATION".** The name and contact information of the company participant should be included in the body of the e-mail. Notification of intent to attend is appreciated; however, it is not required. Attendance at the Pre-Bid Site Meeting is mandatory.

Submission of Bids

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 PAUSTIF's third party administrator, ICF, to the attention of the Contracts Administrator.** The Contracts Administrator 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 companies that 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: Contracts Administrator. The outside of the shipping package containing the bid must be clearly marked and labeled with "Bid – Claim # 2007-0153(S)".** 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 in the Calendar of Events for submission. Companies mailing bids should allow adequate delivery time to ensure timely receipt of their bid.

The bid must be received by 3 p.m., on the due date shown in the Calendar of Events. Bids will be opened immediately after the 3 p.m. deadline on the due date. Any bids 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 PAUSTIF's third party administrator, ICF's office is closed on the bid due date, the deadline for submission will automatically be extended to the

next business day on which the office is open. The PAUSTIF's third party administrator, ICF, may notify all companies that attended the mandatory site meeting of an extended due date. The hour for submission of bids shall remain the same. Submitted bid responses are subject to the Pennsylvania Right-to-Know Law.

Bid Requirements

The Solicitor wishes to execute a mutually agreeable contract with the selected consultant ("Remediation Agreement"). The Remediation Agreement is included as Attachment 1 to this Request for Bid. The bidder must identify and document in their bid any modifications that they wish to propose to the Remediation Agreement language in Attachment 1 other than obvious modifications to fit this RFB (e.g., names, dates and descriptions of milestones). The number and scope of any modifications to the standard agreement language will be one of the criteria used to evaluate the bid. **Any bid that does not clearly and unambiguously state whether the bidder accepts the Remediation Agreement language in Attachment 1 "as is", or that does not provide a cross-referenced list of requested changes to this agreement, will be considered non-responsive.** This statement should be made in a Section in the bid entitled "Remediation Agreement". Any proposed changes to the agreement should be specified in the bid; however, these changes will need to be reviewed and agreed upon by both the Solicitor and the PAUSTIF.

The selected consultant will be provided an electronic copy (template) of the draft Remediation Agreement in Microsoft Word format to allow agreement-specific information to be added. The selected consultant shall complete the agreement-specific portions of the draft Remediation Agreement and return the document to the Technical Contact within 10 business days from date of receipt.

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 in the bid by the selected consultant will be the maximum amount to be paid by the Solicitor unless a change in scope is authorized and determined to be reasonable and necessary. There may be deviations from and modifications to this Scope of Work (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. NOTE: Any request for PAUSTIF reimbursement of the reasonable costs to repair or replace a well will be considered on a case-by-case basis.

The bidder shall provide its bid cost using the Bid Cost Spreadsheet (included as Attachment 2) with descriptions for each task provided in the body of the bid document. Please note if costs are provided within the text of the submitted bid and there is a discrepancy between costs listed in the Bid Cost Spreadsheet and in the text, the costs listed within the Bid Cost Spreadsheet will

be used in the evaluation of the bid and in the Remediation Agreement with the selected consultant. Bidders are responsible to ensure spreadsheet calculations are accurate. The technical score for bids will be based solely on those tasks represented as milestones included in the Bid Cost Spreadsheet and the total bid cost. Any optional bidder-defined tasks, milestones, or cost adders that are not requested as part of this RFB will not be considered by the Bid Evaluation Committee in the technical review and technical score for the bid.

In addition, the bidder shall provide:

1. The bidder's proposed unit cost rates for each expected labor category, subcontractors, other direct costs, and equipment;

2. The bidder's proposed markup on other direct costs and subcontractors (if any);

3. The bidder's estimated total cost by task consistent with the proposed SOW identifying all level-of-effort and costing assumptions; and

4. A unit rate schedule that will be used for any out-of-scope work on this project.

Each bid 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 Cost Spreadsheet will be assumed to be valid for the duration of the Remediation Agreement.

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 unless the RFB requests costing alternatives for specific items or services. Any bid 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 RFB is requesting a total fixed-price bid (unless the RFB requests costing alternatives for specific items or services). The PAUSTIF will not agree to assumptions (in bids or the selected bidders executed Remediation Agreement) referencing a level of effort and/or hours. Costs provided in your bid should be developed using your professional opinion, experience, and the data provided. The PAUSTIF will not reimburse costs for additional hours to complete activities included as part of the base bid/contract price.

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. A clear description, specific details, and original language of how the proposed work scope will be completed for each milestone. The bid should specifically discuss all tasks that will be completed under the Remediation Agreement and what is included (e.g., explain groundwater purging/sampling methods, which guidance documents will be followed, what will be completed as part of the site-specific work scope/SCR/RAP implementation). Recommendations for changes/additions to the Scope of Work proposed in this RFB shall be discussed, quantified, and priced separately; however, failure to bid the SOW "as is" may result in a bid not being considered.

3. A copy of an insurance certificate that shows the bidder's level of insurance consistent with the requirements of the Remediation Agreement. Note: The selected consultant shall submit evidence to the Solicitor before beginning work that they have 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 for the work to be performed.

4. The names and brief resumes/qualifications of the proposed project team including the proposed Professional Geologist and Professional Engineer (if applicable) who will be responsible for overseeing the work and applying a professional seal to the project deliverables (including any major subcontractor(s)).

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 Pennsylvania Chapter 245 projects is your company currently the consultant for in the PADEP Region where the site is located? Please list up to ten.
    c. How many Pennsylvania Chapter 245 Corrective Action projects involving an approved SCR, RAP and RACR has your company and/or the Pennsylvania-licensed Professional Geologist closed (i.e., obtained Relief from Liability 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.

6. A description of subcontractor involvement by task. Identify and describe the involvement and provide actual cost quotations/bids/proposals from all significant specialized subcontracted services (e.g., drilling/well installations, laboratory, vac-out, etc.). If a bidder chooses to prepare its bid without securing bids for specialty

subcontract services, it does so at its own risk. Added costs resulting from bid errors, omissions, or faulty assumptions will not be considered for PAUSTIF reimbursement.

7. A detailed schedule of activities for completing the proposed SOW including reasonable assumptions regarding the timing and duration of Solicitor reviews (if any) needed to complete the SOW. Each bid must provide a schedule that begins with execution of the Remediation Agreement with the Solicitor and ends with completion of the final Milestone proposed in this RFB. Schedules must also indicate the approximate start and end date of each of the tasks/milestones specified in the Scope of Work, and indicate the timing of all proposed key milestone activities (i.e. within 30 days of the contract being executed).

8. A 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. A description of your approach to working with the PADEP. Describe how the PADEP would be involved proactively in the resolution of technical issues and how the PADEP case team will be kept informed of activities at the site.

10. Key exceptions, assumptions, or special conditions applicable to the proposed SOW and/or used in formulating the proposed cost estimate. Please note that referencing extremely narrow or unreasonable assumptions, special conditions and exceptions may result in the bid response being deemed “unresponsive”.

General Site Background and Description

Each bidder should carefully review the existing information and documentation provided in Attachment 3. The information and documentation has not been independently verified. Bidders may wish to seek out other appropriate sources of information and documentation specific to this site. If there is any conflict between the general site background and description provided herein and the source documents within Attachment 3, the bidder should defer to the source documents.

Site Name/Address

Glenn & Ken's Auto Repair, 1474 Old York Road, Abington Township, Montgomery County, Pennsylvania 19001. The location of the site is shown on the portions of the Ambler, Hatboro, Germantown and Frankford, Pennsylvania 7.5-minute USGS Quadrangles map provided as Figure 1.

Site Property Ownership and Operations History

The site property is currently owned by Mr. Theodoros Makris and Mr. Stephen Makris (hereinafter referred to as Makris), who also own the Kitchen Bar property immediately north of Wheatsheaf Lane. According to the Solicitor, the site property has operated as a petroleum dispensing facility since about 1955. The current USTs were installed in 1983. The site property is currently operated as a BP-branded gas/service station by the Solicitor, who leases the property from Makris. Several businesses operate from the site building including Glenn & Ken's Auto Repair, Auto Star Collision Center, Express Car and Truck Rental, and ARFA enterprises. A residence was located on the property until about 1955.

USTs and ASTs Currently on Site Property

Currently, two 6,000-gallon regular unleaded and one 6,000-gallon premium unleaded fiberglass USTs that were installed at the site in 1983 exist on the north side of the building and west of the present dispenser island. According to the Solicitor, the piping was replaced by Monridge Construction in the 1980s. At that time, the former Sunoco dispenser island adjacent to Old York Road was removed and new fiberglass piping and the dispenser islands were installed.

A heating oil AST exists on the south side of the building, and a 275-gallon used motor oil AST and a 275-gallon used antifreeze ASTs are present on the exterior of the west wall of the building.

Site Description

The site property is 0.448 acre in size and is located at 1474 Old York Road, Abington, Pennsylvania. The site is located at the intersection of Wheatsheaf Lane and Old York Road (PA State Route 611), on Tax Parcel No. 30-00-49444-00-8. According to the Montgomery County Recorder of Deeds, the site was constructed in 1955.

The site is currently occupied by a BP-branded service station which operates as a gas station, Glenn & Ken's Auto Repair. The site property currently consists of a single-story building with a store, two garage bays, and one garage bay that has been converted into an office. Two dispenser islands (each containing two gas pumps) are located north of the building and beneath a canopy. The UST pad is located west of the pump islands. In front of the building there is an abandoned underground oil/water separator tank. The site building is heated by heating oil contained in a 1,000-gallon AST located south of the site building. The site is supplied with public water and sewer and underground electric. The majority of the site property is covered by asphalt or concrete. A site plan showing pertinent site features is provided as Figure 2.

The site property is surrounded by commercial and residential properties. The site property is bounded to the north by Wheatsheaf Lane and Kitchen Bar Restaurant beyond that, to the northwest by Wheatsheaf Lane and a residential property beyond that, to the west by a residential property, to the south by Blockbuster Video, to the southeast by Old York Road and Abington Shopping Center beyond that, and to the east by Old York Road and Abington Town Center. An aerial map showing the site and surrounding properties is provided as Figure 3.

According to the USGS topographic map provided as Figure 1, the elevation of the site is approximately 320 – 340 feet above mean sea level (famsl). The site property slopes gently to the east. The nearest downgradient surface water source is a small, intermittent tributary to Pennypack Creek, which is approximately 1,000 feet northeast of the site.

According to the Pennsylvania Groundwater Information System database (Table 1), the closest private water supply wells are associated with the Abington Memorial Hospital, the closest of which is located approximately 1,500 feet southwest (cross-gradient) of the site (Figure 1).

Physiography, Topography, and Regional Geology/Hydrogeology

The site lies within the Atlantic Coastal Plain Physiographic Province, at an elevation of approximately 310 feet above mean sea level (famsl).

According to the *Geologic Map of Pennsylvania* (Pennsylvania Geologic Survey, 1980), the site is underlain by bedrock classified as the Felsic Gneiss, Pyroxene-bearing Formation, consisting of "light, medium-grained; includes rocks of probable sedimentary origin".

According to the *The Engineering Characteristics of the Rocks of Pennsylvania* (Department of Environmental Resources, Bureau of Topographic and Geologic Survey, 1982) the Felsic Gneiss, Pyroxene-bearing Formation has a median well yield of less than twenty gallons per minute (gpm). Joints provide a very low secondary porosity, and permeability is low. There is good surface drainage.

Site Geology

Based on observations made by Phoenix GeoEnvironmental, LLC (Phoenix) and Compliance Management International (CMI) during drilling activities, native soil at the site consists of saprolite composed of olive to light gray and orange clay derived from the thoroughly weathered felsic gneiss bedrock. The clay is underlain by alternating layers of brown, olive and tan laminae, which is underlain by alternating layers of white, tan, and olive laminae. By definition, saprolite is a soft, thoroughly weathered rock in which the structure of the unweathered metamorphic or igneous rock is preserved.

Bedrock was not encountered during drilling activities and is greater than 30 feet below grade (fbg), the maximum well depth at the site.

Site Hydrogeology

Based on the historical groundwater gauging data collected at the site (included in Attachment 3a), the shallow groundwater at the site exists under unconfined conditions and the depth to the water table is approximately 11–15 fbg. Shallow groundwater flow beneath the site is generally to the southeast. During the most recent groundwater gauging event, conducted by CMI on September 30, 2013, the depth to groundwater ranged from 12.63 feet below top of casing (fbtoc) (MW-3) to 15.79 fbtoc (MW-6), and the direction of groundwater flow was to the southeast. Groundwater elevation contour maps and dissolved-phase MTBE concentration contour maps for the March 6, 2013 (First Quarter 2013), June 4, 2013 (Second Quarter 2013),

September 30, 2013 (Third Quarter 2013), and December 9, 2013 (Fourth Quarter 2013) are provided as Figures 4 through 11.

Nature of Confirmed Release and Subsequent Site Characterization Activities

Site characterization was initiated following the discovery of petroleum-impacted soil and groundwater as part of a Phase I/II Environmental Site Assessment conducted by Phoenix in September of 2007 on behalf of Makris, owners of Alexander's Fine Food and Spirits, Inc. (Kitchen Bar), who were interested in purchasing the site property. On October 4, 2007, a reportable release of unleaded gasoline from the regulated unleaded gasoline UST system was confirmed and a Notice of Violation for the regulated UST release was sent by the PADEP to the Solicitor, dated October 15, 2007 (included in Attachment 3b). Following the purchase of the property by Makris, Chapter 245 site characterization was initiated by Phoenix on behalf of the Solicitor, who retained the cleanup liability for the release.

The following is a brief summary of corrective action activities at the site:

- On September 18, 2007, eight soil borings (B-1 through B-8; Figure 12) were drilled by Bassett Environmental Associates using a Geoprobe®, as part of a Phase I/II Environment Site Assessment (ESA) conducted by Phoenix on behalf of Makris, the then prospective buyer of the site property. These soil borings were completed around the perimeter of the USTs, dispensers and piping to assess soil quality. Soil samples were collected from all borings except B-1. All soil samples were analyzed for lead and the constituents included in the PADEP Old Shortlist of unleaded gasoline constituents (benzene, toluene, ethylbenzene, total xylenes, MTBE, cumene, and naphthalene). The soil sample collected from boring B-6 was also analyzed for semi-volatile organic compounds (SVOCs) because the boring was completed in the area of the former waste oil UST excavation. The soil sample collected from boring B-7 was also analyzed for the constituents (fluorene and phenanthrene) included in the PADEP Old Shortlist for heating oil constituents because the boring was completed in the former heating oil UST excavation. No waste oil or heating oil constituents were detected in soil at concentrations greater than applicable RUA MSCs. Two soil samples collected from boring B-8 contained MTBE concentrations greater than the applicable Residential, Used Aquifer (RUA) Medium-Specific Concentration (MSC).

  Temporary one-inch diameter PVC wells were installed in borings B-2, B-5 and B-8 (Figure 2). The analytical results (provided in Attachment 3c) showed that dissolved-phase benzene, chloromethane, 1,2-dichloroethane, MTBE, 1,2,4-trimethylbenzene (124-TMB) and 1,3,5-trimethylbenzene (135-TMB) were detected at concentrations greater than the applicable groundwater RUA MSCs.

- Based on the results of the Phase I/II ESA, the PADEP was notified on October 7, 2007 of a confirmed reportable release of gasoline at the site. The PADEP subsequently issued a Notice of Violation (NOV; dated October 15, 2007; Attachment 3b) to the Solicitor requiring site characterization and corrective action under Chapter 245.

- On December 18, 2007, ten subsequent soil borings (B-9 through B-18; Figure 12) were drilled by Odyssey Environmental Services, Inc. (Odyssey), under the supervision of Phoenix, for Chapter 245 site characterization. Samples were collected from sixteen of the eighteen borings (samples were not collected from borings B-11 and B-12). Analytical results (provided in Attachment 3c) indicated that soil collected from borings B-10, B-13 and B-15 contained unleaded gasoline constituents, including benzene, methyl tert-butyl ether (MTBE) and naphthalene, at concentrations greater than the applicable RUA MSCs.

- On December 19-20, 2007, Odyssey Environmental Services, Inc. (Odyssey), under the supervision of Phoenix, installed five on-site groundwater monitoring wells (MW-1 through MW-5; Figure 2) for groundwater characterization. The five groundwater monitoring wells were installed above bedrock to a maximum depth of 30 fbg and are screened across the water table. Groundwater samples were collected from wells MW-1 through MW-5 on January 8, 2008 and analyzed for the constituents included in the PADEP New Shortlist of unleaded gasoline constituents (benzene, toluene, ethylbenzene, total xylenes, MTBE, cumene, naphthalene, 1,2,4-trimethylbenzene (124-TMB) and 1,3,5-trimethylbenzene (135-TMB)). The MTBE concentrations in wells MW-1 and MW-2 are the only concentrations that were greater than the RUA MSC of 20 ug/l.

- On May 22, 2008, Odyssey, under the supervision of Phoenix, installed two off-site groundwater monitoring wells (MW-6 and MW-7; Figure 2) in the Abington Towne Center parking lot, immediately across from Old York Road and downgradient of the site. These two wells were also installed above bedrock to a maximum depth of 30 fbg and screened across the water table. Groundwater monitoring wells MW-1 and MW-7 were sampled on June 6, 2008 and July 16, 2008. MTBE was the only dissolved-phase unleaded gasoline constituent analyzed that was greater than the RUA MSC (in wells MW-1, MW-2 and MW-6; Attachment 3c).

- A Site Characterization Report (SCR; dated August 5, 2008; Attachment 3c) that was submitted by Phoenix to the PADEP concluded that “the dissolved hydrocarbon plume has been delineated and that the MTBE plume will migrate beyond the property boundary and naturally attenuate over time”. In correspondence dated August 25, 2008 (Attachment 3b), the PADEP approved the SCR with a modification that the Bioscreen groundwater modeling results presented in the SCR be rerun and presented in the RAP

under the scenario that wells MW-1, MW-6 and MW-7 are side-gradient of the centerline of the plume.

- On October 3, 2008, eight additional soil borings (B-19 through B-26; Figure 12) were drilled in the southeastern portion of the site by Odyssey, under the supervision of Phoenix. The purpose of these soil borings was to delineate soil impacts southeast of the dispenser area, in the area of boring B-15, which contained soil with MTBE concentrations greater than the RUA MSC. The laboratory analytical report for these soil samples, along with field notes summarizing the soil descriptions for each boring and a summary table of the soil analytical results are included in Attachment 3d.

- A Remedial Action Plan (RAP; dated October 10, 2008; Attachment 3e) was submitted by Phoenix to the PADEP. The RAP specified the use of oxygen injection using the Matrix Oxygen Injection System to address the soil and groundwater impacts at the site. The RAP specified the Site-Specific Standard (SSS) for soil and the RUA Statewide Health Standard (SHS) for groundwater at the site. The PADEP approved the RAP in correspondence dated February 5, 2009 (Attachment 3b).

- The Matrix Oxygen Injection System was installed and activated at the site on June 9, 2009. The system operated from June 9, 2009 through January 21, 2013. The system consisted of twelve oxygen injection points (IP-1 through IP-12) within the source area (in the vicinity of the dispenser islands) and along the eastern property boundary, southeast of the dispenser island area (Figure 2). In 2010, CMI was retained by the Solicitor to continue corrective action activities at the site including continued operation of the oxygen injection system. However, due to a billing dispute between Phoenix and the electric company, the electric company deactivated the power to the remediation trailer and the system was shut down on January 21, 2013. CMI subsequently removed the remediation trailer from the site. According to CMI in a discussion between the Technical Consultant and Phil Gray of CMI on February 17, 2014, the injection points, manholes, and oxygen delivery tubing remain accessible and in good condition. Based on the historical groundwater monitoring data and the soil attainment data collected in 2012 (discussed below), it appears that sorbed-phase soil concentrations and dissolved-phase groundwater concentrations (particularly MTBE) have been reduced. However, the most recent groundwater data (included in Attachment 3a) shows that MTBE concentrations in groundwater samples collected from on-site POC well MW-2 continue to be greater than the RUA MSC and most recently have been about one order of magnitude higher than the RUA MSC of 20 ug/L.

- In October of 2012, CMI conducted systematic random soil attainment sampling based on a revised soil attainment work plan that was submitted by CMI to the PADEP (Attachment 3f). Soil attainment sampling was conducted at twelve locations within each

of two areas of concern (AOC-1 and AOC-2; Figure 13) and within a depth range of three to 16 fbg. The systematic random sampling data, provided in Attachment 3f, shows that three of twelve borings within AOC-1 contained soil concentrations greater than the NRUA MSC but were not ten times greater than the NRUA MSCs. Therefore, attainment of the Non-Residential Used Aquifer (NRUA) SHS (but not the RUA SHS) was demonstrated for soil in AOC-1, based on the "75%/10x" rule specified in the PADEP's *Technical Guidance Manual*. Soil collected from all twelve soil borings in AOC-2 were below the RUA MSC and so attainment of the RUA SHS was demonstrated for soil in AOC-2, based on the "75%/10x" rule specified in the PADEP's *Technical Guidance Manual*. Therefore, the selected remedial goal for soil at the site is the NRUA SHS. During a conference call between the Technical Contact and the PADEP on November 5, 2013, the PADEP stated that they had no objections to CMI's revised soil attainment sampling plan, and concurred that attainment of the NRUA SHS and the RUA SHS for soil had been demonstrated for AOC-1 and AOC-2, respectively. The PADEP also stated during the conference call that no institutional control in the form of an environmental covenant would be necessary under a SHS site closure using the NRUA MSCs for the demonstration of soil attainment at the site.

- Quarterly groundwater monitoring is ongoing. The four most recent quarterly Remedial Action Progress Reports (RAPRs) submitted by CMI, for the First, Second, Third and Fourth Quarters of 2013, are provided as Attachment 3a. As the historical groundwater analytical data included in these RAPRs shows, the dissolved-phase MTBE concentrations on- and off-site, particularly in on-site well MW-2 and off-site well MW-6, have decreased since the activation of the remedial system in 2009, but the concentrations are still greater than the RUA MSCs in point-of-compliance (POC) well MW-2 (see Figure 11). As a result, further reduction in groundwater concentrations within this well is necessary to demonstrate attainment of the RUA SHS for groundwater at the site.

Scope of Work

This RFB seeks competitive bids from qualified contractors to perform the activities in the Scope of Work (SOW) specified herein. The Technical Consultant has discussed the SOW with the PADEP Case Manager, Ms. Lauren Mapleton, and the PADEP has reviewed and commented on the SOW. The PADEP's comments have been considered and addressed in the preparation of this SOW.

Objective

The objective of this RFB is to: 1) perform additional active groundwater remediation using the Matrix oxygen injection system to demonstrate attainment of the RUA SHS for groundwater; 2) continue quarterly groundwater monitoring for fate and transport purposes during system operation; 3) conduct quarterly groundwater attainment monitoring following system shutdown; 4) conduct a vapor intrusion assessment; and, 5) prepare/submit a Remedial Action Completion Report (RACR) to the PADEP demonstrating attainment of the NRUA SHS for soil and the RUA SHS for groundwater.

At this time, the site property owner, who leases the site property to the Solicitor, has chosen to pursue the SHS as the remedial goal for soil and groundwater at the site. The NRUA MSCs will be used as the numerical standard for which attainment of the SHS for soil will be demonstrated, and the RUA MSCs will be used as the numerical standard for which attainment of the SHS for groundwater will be demonstrated. Relief from Liability would ultimately be obtained for the unleaded gasoline release without the use of institutional controls.

This RFB Solicitation is for a Defined SOW where a specific SOW is presented to the bidders who prepare their bids on the basis of that scope. 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.

Constituents of Concern (COCs)

The COCs for this site are the constituents included in the PADEP's New Shortlist of Unleaded Gasoline constituents: benzene, toluene, ethylbenzene, total xylenes, cumene, naphthalene, MTBE, 124-TMB and 135-TMB. Based on the most recent groundwater sampling event

conducted on December 9, 2013, dissolved-phase MTBE concentrations in POC well MW-2 are greater than the applicable RUA MSC.

General SOW Requirements

The bidder's approach to completing the SOW shall be in accordance with generally accepted industry standards/practices and all applicable federal, state, and local rules, regulations, guidance, and directives. The latter include, but are not limited to, meeting the applicable requirements of the following:

- The Storage Tank and Spill Prevention Act (Act 32 of 1989, as amended),
- Pennsylvania Code, Title 25, Chapter 245 - Administration of the Storage Tank Spill and Prevention Program,
- The Land Recycling and Environmental Remediation Standards Act of 1995 (Act 2), as amended),
- Pennsylvania Code, Chapter 250 - Administration of Land Recycling Program, and
- Pennsylvania's Underground Utility Line Protection Law, Act 287 of 1974, as amended by Act 121 of 2008.

During completion of the milestone objectives specified below and throughout implementation of the project, the selected consultant shall:[1]

- Conduct necessary, reasonable, and appropriate project planning and management activities until the project (i.e., Remediation Agreement) is completed. Such activities may include Solicitor communications/updates, meetings, record keeping, subcontracting, personnel and subcontractor management, quality assurance/quality control, scheduling, and other activities (e.g., utility location). Project planning and management activities will also include preparing and implementing plans for Health and Safety, Waste Management, Field Sampling/Analysis, and/or other plans that are necessary and appropriate to complete the SOW, and shall also include activities related to establishing any necessary access agreements. Project planning and management shall include identifying and taking appropriate safety precautions to not disturb site utilities; including but not limited to, contacting Pennsylvania One Call as required prior to any ground-invasive work. As appropriate, project management costs shall be included in each bidder's pricing to complete the milestones specified below.

[1] As such, all bids shall include the costs of these activities and associated functions within the quote for applicable tasks/milestones.

- Be responsible for coordinating, managing, and completing the proper management, characterization, handling, treatment, and/or disposal of all impacted soils, water, and derivative wastes generated during the implementation of this SOW. The investigation-derived wastes, including purge water shall be disposed of in accordance with standard industry practices and applicable laws, regulations, guidance, and PADEP directives. Waste characterization and disposal documentation (e.g., manifests) shall be maintained and provided to the Solicitor and the PAUSTIF upon request.

- 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 to current PADEP Regional Office guidance requirements in the region where the site is located.

- Be responsible for providing the Solicitor and facility operator with adequate advance notice prior to each visit to the property. The purpose of this notification is to coordinate with the Solicitor and facility operator to ensure that appropriate areas of the property are accessible. Return visits to the site will not constitute a change in the selected consultant's SOW or result in additional compensation under the Remediation Agreement.

Site –Specific Milestones

Milestone A: Remobilization, Reconnection and Reactivation of Matrix Oxygen Injection System

Bidders shall provide a fixed price to remobilize a Matrix Oxygen Injection System trailer to the site, reconnect the system trailer to the twelve existing oxygen injection points, and reactivate and optimize the remedial system.

The system shall be configured such that oxygen is injected at all twelve injection points for the duration of ten minutes per four-hour cycle so that each point would receive 60 minutes of oxygen injection every 24 hours. Thus, oxygen shall be injected into injection points IP-1 through IP-4 for 10 minutes, and then 70 minutes later oxygen is injected into points IP-5 through IP-8. Finally, 70 minutes after that, oxygen is injected into points IP-9 through IP-12 for ten minutes. Then, 70 minutes later, the cycle is repeated.

Milestone B1 – B6: Six Quarters of Monthly Operation and Maintenance (O & M) of Matrix Oxygen Injection System

The selected bidder shall operate the remedial system for six quarters (18 months) to attempt to reduce dissolved-phase MTBE concentrations, particularly at and around POC well MW-2, to below the RUA MSCs. Bidders shall provide a quarterly fixed price to operate the system for six

quarters (18 months) and to conduct monthly system O & M. During system operation, the selected consultant shall conduct monthly system O & M. The selected consultant shall present updated monthly system O & M data, including but not limited to flow rates, pressures, and oxygen purity, in each quarterly RAPR.

Milestone B7 – B8 (Contingent Cost Adder): Two Additional Quarters of Monthly System O & M

For the purpose of this RFB, it is assumed that groundwater attainment demonstration will commence following six quarters of operation after the reactivation of the oxygen injection system. If such demonstration of attainment cannot be initiated within this defined schedule, the selected bidder shall continue operation of the oxygen injection system for up to two additional quarters (six months) (Milestones B7 and B8), or until the attainment demonstration can be initiated, whichever comes first, at the fixed quarterly price specified under Milestones B7 and B8.

Milestones C1 – C6: Six Quarters of Quarterly Groundwater Gauging/Sampling of Seven Groundwater Monitoring Wells (MW-1 through MW-7) for Fate and Transport Purposes, and Preparation/Submittal of Quarterly Remedial Action Progress Reports (RAPRs)

During system operation, six quarters of groundwater monitoring shall be conducted by the selected bidder for fate and transport purposes and to monitor the effectiveness of the oxygen injection system through monitoring of natural attenuation parameters, particularly dissolved oxygen and oxygen reduction potential (ORP), as well as dissolved-phase concentrations of unleaded gasoline constituents.

During each quarterly groundwater monitoring event, the selected bidder shall conduct gauging and sampling of the seven monitoring wells. Depth-to-water measurements shall be completed using a water level meter capable of measuring depth to water to the nearest 0.01 feet. The depth to water shall be recorded and then used to determine the water level elevation within the new well. Depth-to-water data (measured from the top of casing) shall then be subtracted from respective casing elevations to determine water level elevations relative to the arbitrary benchmark such that the groundwater elevation within the well can be determined.

Groundwater sampling and analysis shall be conducted in accordance with generally accepted practices as outlined in the PADEP's Groundwater Monitoring Guidance Manual, dated December 1, 2001 (Document # 383-3000-001).

Sampling equipment shall be decontaminated prior to sample collection in accordance with generally accepted industry practices. The well shall be purged using low-flow sampling techniques, as this is consistent with the purging method employed during previous sampling events, thus, assuring that future sampling results reflect historical purging methods. Low-flow purging shall be conducted in accordance with accepted industry practices. All monitoring wells shall be purged using low-flow techniques until stability parameters including pH, specific

conductivity, turbidity, DO, temperature, and ORP have stabilized. Stabilization of these parameters is achieved when three consecutive measurements taken no more than three minutes apart show no more than 10% variability, indicating that groundwater samples representative of aquifer conditions can be collected. These natural attenuation parameters, once stabilized, shall be recorded in the field and included in an updated table so that the parameters can be continuously evaluated over time.

All groundwater samples shall be collected directly into laboratory-supplied sample containers and kept chilled (i.e., < 4° C) through delivery to the analytical laboratory.

All samples shall be analyzed in accordance with the PADEP's New Shortlist of unleaded gasoline (i.e., benzene, toluene, ethylbenzene, total xylenes, cumene, naphthalene, MTBE, 124-TMB and 135-TMB) using the approved laboratory methods capable of reporting to the PADEP-established Practical Quantitation Limits.

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

The selected bidder shall present the groundwater monitoring data from each quarterly groundwater monitoring event in the form of a RAPR. The RAPR shall be submitted to the PADEP within thirty days following the end of each quarter. In additional to a written description of quarterly activities and a detailed written evaluation of remedial progress, each quarterly RAPR shall include:

- A USGS Quadrangle map showing site location;
- Site map (showing site boundaries and pertinent site features) (AutoCAD files will be provided to selected bidder by Technical Consultant);
- Monitoring well, soil boring and soil vapor point location map (showing existing and new locations);
- Updated remedial system O & M data;
- Updated historical groundwater elevation data;
- Updated historical groundwater analytical data;
- Groundwater elevation contour map for shallow groundwater (for the comprehensive sampling round(s);
- Groundwater concentration contour maps for all constituents found to be above the RUA MSCs in any sample; and,
- Laboratory analytical reports for groundwater with supporting chains of custody.

Please note that the first RAPR submitted to the PADEP shall include a brief section explaining that the remedial standard selected for the site has been changed to the Non-Residential Used Aquifer SHS for soil and the RUA SHS for groundwater at the site.

Milestones C7 – C8 (Contingent Cost Adder): Two Additional Quarters of Quarterly Groundwater Gauging/Sampling of Seven Groundwater Monitoring Wells (MW-1 through MW-7) for Fate and Transport Purposes, and Preparation/Submittal of Quarterly Remedial Action Progress Reports (RAPRs)

For the purpose of this RFB, it is assumed that groundwater attainment demonstration will commence following six quarters of operation of the oxygen injection system. If such demonstration of attainment cannot be initiated within this defined schedule, the selected bidder shall continue with up to two additional quarters (six months) (Milestones C7 – C8) of groundwater gauging/sampling and reporting, or until the attainment demonstration can be initiated, whichever comes first, at the fixed quarterly price specified under Milestones C7 and C8. Water level measurements in the monitoring wells, purging, sampling, analyses and preparation of the RAPRs shall be conducted in the same manner as described under Milestones C1 – C6.

Milestones D1 – D8: Eight Quarters of Quarterly Groundwater Attainment Gauging/Sampling of Seven Groundwater Monitoring Wells (MW-1 through MW-7) and Preparation/Submittal of Quarterly RAPRs

Under this Milestone, bidders shall provide a fixed price to complete eight quarters of groundwater attainment gauging/sampling of seven groundwater monitoring wells and preparation/submittal of quarterly RAPRs following the completion of Milestones A, B and C.

Water level measurements in the monitoring wells, purging, sampling, analyses and preparation of the RAPRs shall be conducted in the same manner as described under Milestones C1 – C6.

Milestone D9 – D10 (Contingent Cost Adder): Two Additional Quarters of Quarterly Groundwater Attainment Comprehensive Gauging and Sampling of Seven Groundwater Monitoring Wells (MW-1 through MW-7) and Preparation/Submittal of Quarterly RAPRs

If the remedial system has been shut down, demonstration of attainment has been initiated, and concentrations rebound to the point where it is apparent that attainment of the RUA SHS will not be demonstrated at the end of the eight quarters of attainment sampling, the selected bidder shall conduct up to two additional quarterly groundwater attainment gauging/sampling of seven groundwater monitoring wells (MW-1 through MW-7) (Milestones D9 – D10) and preparation/submittal of quarterly RAPRs. The selected bidder shall conduct Milestones D9 – D10 only if there remains a possibility that groundwater attainment can be demonstrated with up to two additional gauging/sampling events. Water level measurements in the monitoring wells, purging, sampling, analyses and preparation of the RAPRs shall be conducted in the same manner as described under Milestones C1 – C6.

Milestone E: Vapor Intrusion Assessment

The selected bidder shall conduct a soil vapor assessment to determine whether soil vapor intrusion into the occupied buildings on- and off-site is an issue. Three soil vapor points (SVP-1 through SVP-3) shall be installed at the locations shown on Figure 11. The three vapor monitoring points shall be installed to a depth of five fbg. Each point shall have one soil vapor collection point with a screened interval not to exceed six inches (from 5 to 4.5 fbg). One soil vapor sample shall be collected from each soil vapor monitoring point during each of two sampling events. Soil vapor point installation, sampling and analyses shall be conducted in accordance with the PADEP's *Technical Guidance Manual - Section IV.A.4. Vapor Intrusion into Buildings from Groundwater and Soil under Act 2 Statewide Health Standard (January 24, 2004).*

The vapor samples shall be analyzed for the PADEP's New Shortlist of unleaded gasoline constituents including benzene, toluene, ethylbenzene, total xylenes, cumene, naphthalene, MTBE, 124-TMB and 135-TMB using EPA Method TO15. The above-mentioned PADEP guidance shall be used to assist in evaluating the soil vapor sample results. The guidance specifies that soil vapor shall be compared to 100 times the Residential Indoor Air Medium-Specific Concentrations (MSCs) to account for attenuation effects.

Milestone F: Preparation and Submittal of a RACR

When the successful bidder is convinced that a demonstration of attainment of the RUA SHS can be made for groundwater, a RACR shall be prepared and submitted to the PADEP. The objective of the RACR is to obtain Relief from Liability for soil and groundwater with respect to the petroleum release at the Site using the NRUA SHS for soil and the RUA SHS for groundwater, with no institutional controls for the Site. As previously mentioned in this RFB, during conference calls between the Technical Contact and the PADEP, the PADEP has concurred that soil attainment of the NRUA SHS has been demonstrated for soil within area of concern AOC-1 at the site, and that no institutional control in the form of an environmental covenant will be necessary under a SHS site closure using the NRUA MSCs for the demonstration of soil attainment at this site.

The RACR shall contain the information required under 25 PA Code 245.313 and other applicable statutes, regulations, and guidance, including being signed and sealed by a Professional Geologist and/or a Professional Engineer registered in the Commonwealth of Pennsylvania as required by applicable PADEP regulations. Each bidder's project schedule shall provide two weeks for Solicitor and PAUSTIF review of the draft document. The final RACR shall address comments received from the Solicitor and PAUSTIF on the draft before it is submitted to the PADEP. The final RACR shall include a copy of the soil attainment documentation prepared by CMI and included in Attachment 3f of this RFB, as required by the PADEP. The RACR shall request Relief from Liability for the October 2007 petroleum release

by demonstrating compliance with the SHS without the use of any activity and use limitations, institutional controls, or engineering controls.

Please note that post-remediation care activities (if specified in the RACR) are not part of the SOW for this RFB and will be addressed following PADEP approval of the RACR.

Milestone G: Well Decommissioning, Remedial System Removal and Site Restoration

Following the PADEP's written approval of the RACR, and following post-remediation care activities (if any), the site property and affected off-site properties shall be restored such that all groundwater monitoring and recovery wells are properly decommissioned, the surface is restored to its original condition, all above-grade remediation equipment is removed from the site, 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 Information

In order to facilitate PAUSTIF's review and reimbursement of invoices submitted under this claim, the Solicitor requires that project costs be invoiced by the milestone tasks identified in the bid. Actual milestone payments will occur only after successful and documented completion of the work defined for each milestone. The selected consultant will perform only those tasks/milestones that are necessary to reach the Objective identified in this RFB. Selected consultant will not perform, invoice, or be reimbursed for any unnecessary work completed under a Milestone.

Any "new conditions", as defined in Attachment 1, arising during the execution of the SOW for any of the milestones may result in termination of or amendments to the Remediation Agreement. All necessary modifications to the executed Remediation Agreement will require the prior written approval of the Solicitor and the PAUSTIF. PADEP approval may also be required.

List of Attachments

1. Remediation Agreement
2. Bid Cost Spreadsheet
3. Site Information/Historic Documents
    a. 2013 RAPRs (Compliance Management International; 2013)
    b. PADEP Correspondence
    c. Site Characterization Report (Phoenix GeoEnvironmental, LLC; August 5, 2008)
    d. Additional Site Data
    e. Remedial Action Plan (Phoenix GeoEnvironmental, LLC; October 10, 2008)
    f. Soil Attainment Work Plan and Systematic Random Soil Attainment Sampling Data (Compliance Management International; 2012)

Tables

TABLE 1
PAGWIS Well Search Information

Former Glenn and Ken's Auto Repair
1474 Old York Road
Abington Township, Montgomery County, Pennsylvania 19001
PaDEP Facility ID # 46-42436
PAUSTIF Claim # 2007- 0153(S)

Well ID	Date Drilled	Type of Activity	Well Address	Well Zip Code	County	Quad name	Municipality
478300	12/17/2007	NEW WELL	1495 OLD YORK RD. ABINGTON PA.	19001	MONTGOMERY		
478301	12/17/2007	NEW WELL	1495 OLD YORK RD. ABINGTON PA.	19001	MONTGOMERY		
494795	12/17/2007	NEW WELL	1495 OLD YORK RD. ABINGTON PA.	19001	MONTGOMERY		
494440	12/17/2007	NEW WELL	1495 OLD YORK RD. ABINGTON PA.	19001	MONTGOMERY		
494754	12/17/2007	NEW WELL	1495 OLD YORK RD. ABINGTON PA.	19001	MONTGOMERY		
28477	10/14/1991				MONTGOMERY	FRANKFORD	ABINGTON TWP.
28475	10/14/1991				MONTGOMERY	FRANKFORD	ABINGTON TWP.
28476	10/14/1991				MONTGOMERY	FRANKFORD	ABINGTON TWP.
168270	10/1/1991	NEW WELL			MONTGOMERY	FRANKFORD	ABINGTON TWP.
168282	10/1/1991	NEW WELL			MONTGOMERY	FRANKFORD	ABINGTON TWP.
168284	10/1/1991	NEW WELL			MONTGOMERY	FRANKFORD	ABINGTON TWP.
168275	10/1/1991	NEW WELL			MONTGOMERY	FRANKFORD	ABINGTON TWP.
168283	10/1/1991	NEW WELL			MONTGOMERY	FRANKFORD	ABINGTON TWP.
168336	9/1/1992	NEW WELL			MONTGOMERY	HATBORO	ABINGTON TWP.
481108	8/10/2010	NEW WELL	1446 Easton Road Roslyn PA		MONTGOMERY		
476722	5/22/2008	NEW WELL	1495 OLD YORK RD. ABINGTON PA.	19001	MONTGOMERY		
478593	5/22/2008	NEW WELL	1495 OLD YORK RD. ABINGTON PA.	19001	MONTGOMERY		
487325	4/20/2010	NEW WELL	1446 Easton Road		MONTGOMERY		ABINGTON TWP.
487326	4/20/2010	NEW WELL	1446 Easton Road		MONTGOMERY		ABINGTON TWP.
487950	4/20/2010	NEW WELL	1446 Easton Road		MONTGOMERY		ABINGTON TWP.
487951	4/20/2010	NEW WELL	1446 Easton Road		MONTGOMERY		ABINGTON TWP.
28478	1/31/1992				MONTGOMERY	FRANKFORD	ABINGTON TWP.
168269	1/1/1992	NEW WELL			MONTGOMERY	FRANKFORD	ABINGTON TWP.
168341	1/1/1992	NEW WELL			MONTGOMERY	FRANKFORD	ABINGTON TWP.
168273	1/1/1992	NEW WELL			MONTGOMERY	FRANKFORD	ABINGTON TWP.
168268	1/1/1992	NEW WELL			MONTGOMERY	FRANKFORD	ABINGTON TWP.
168271	1/1/1992	NEW WELL			MONTGOMERY	FRANKFORD	ABINGTON TWP.
168272	1/1/1992	NEW WELL			MONTGOMERY	FRANKFORD	ABINGTON TWP.
168274	1/1/1992	NEW WELL			MONTGOMERY	FRANKFORD	ABINGTON TWP.

TABLE 1 (CONTINUED)
PAGWIS Well Search Information (Continued)

Former Glenn and Ken's Auto Repair
1474 Old York Road
Abington Township, Montgomery County, Pennsylvania 19001
PaDEP Facility ID # 46-42436
PAUSTIF Claim # 2007- 0153(S)

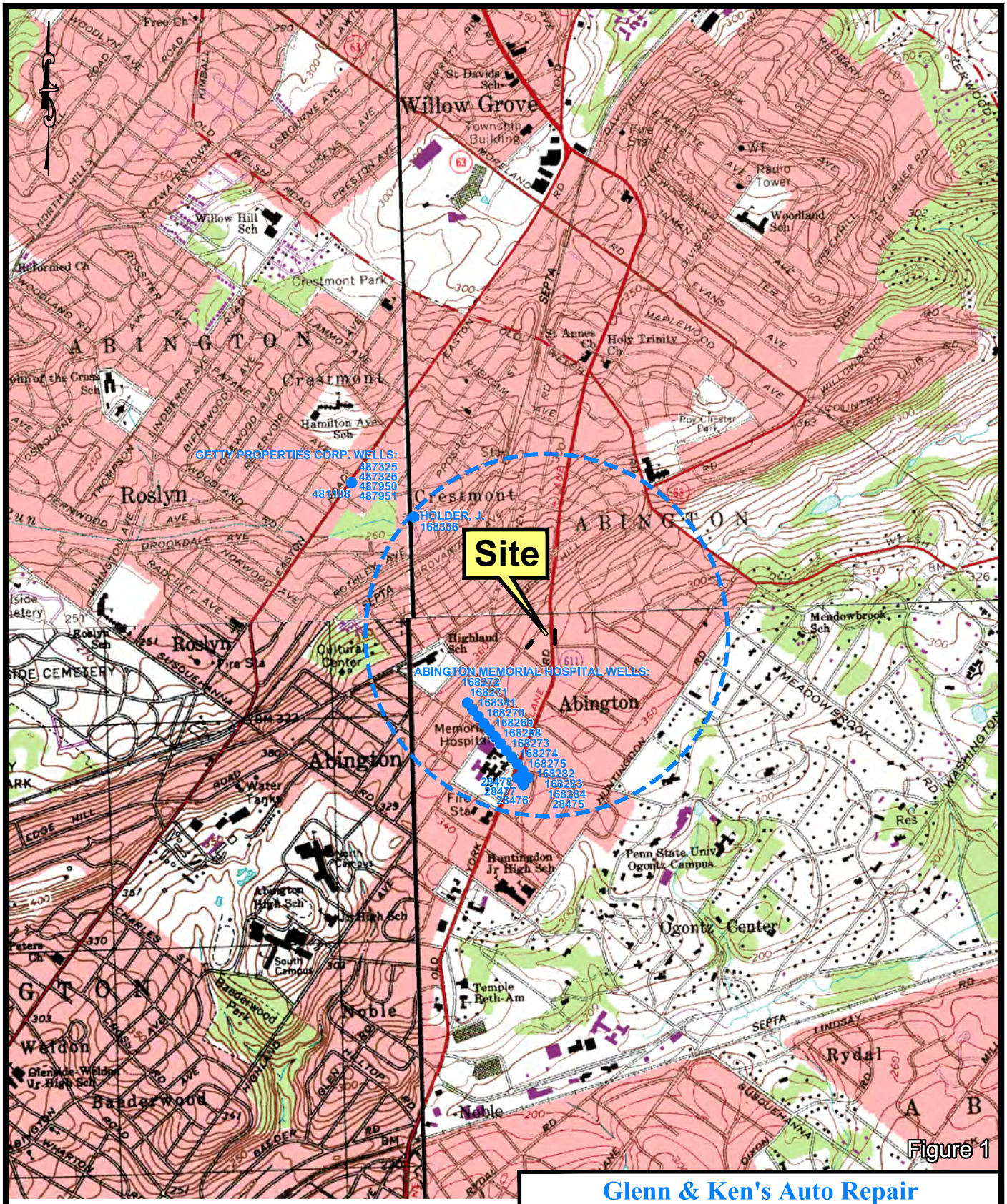
Latitude DD	Longitude DD	Drillers Well ID	Local Well Number	Driller	Licensee	Owner	Well Depth
40.12528	-75.11556	MW-1 ABINGTON		2483	ODYSSEY ENVIRONMENTAL SERVICES INC.	VENIOS	30
40.12528	-75.11556	MW-4 ABINGTON		2483	ODYSSEY ENVIRONMENTAL SERVICES INC.	VENIOS	30
40.12528	-75.11556	MW-3 ABINGTON		2483	ODYSSEY ENVIRONMENTAL SERVICES INC.	VENIOS	30
40.12528	-75.11556	MW-5 ABINGTON		2483	ODYSSEY ENVIRONMENTAL SERVICES INC.	VENIOS	30
40.12528	-75.11556	MW-2 ABINGTON		2483	ODYSSEY ENVIRONMENTAL SERVICES INC.	VENIOS	30
40.11861	-75.11917		MG 1281	188	C S GARBER & SONS INC	ABINGTON MEMORIAL HOSP	40
40.11861	-75.11889		MG 1279	188	C S GARBER & SONS INC	ABINGTON MEMORIAL HOSP	40
40.11833	-75.11917		MG 1280	188	C S GARBER & SONS INC	ABINGTON MEMORIAL HOSP	41
40.12083	-75.12111		3343N	188	C S GARBER & SONS INC	ABINGTON MEM. HOSPL.	41
40.11917	-75.11944		3356N	188	C S GARBER & SONS INC		40
40.11861	-75.11889		3358N	188	C S GARBER & SONS INC		40
40.11944	-75.11972		3349N	188	C S GARBER & SONS INC	ABINGTON MEM. HOSPL.	45
40.11889	-75.11917		3357N	188	C S GARBER & SONS INC		41
40.12917	-75.12444		3410N	130	F E BUEHLER & SON INC.	HOLDER JAY	220
40.13061	-75.12763	10227-1		2290	AMERIDRILL INC.	GETTY	20
40.12528	-75.11556	MW-7 ABINGTON		2483	ODYSSEY ENVIRONMENTAL SERVICES INC.	VENIOS	24
40.12528	-75.11556	MW-6 ABINGTON		2483	ODYSSEY ENVIRONMENTAL SERVICES INC.	VENIOS	27
40.13062	-75.12762	10091-3		2290	AMERIDRILL INC.	GETTY PROPERTIES	20
40.13062	-75.12762	10091-4		2290	AMERIDRILL INC.	GETTY PROPERTIES	20
40.13062	-75.12762	10019-1		2290	AMERIDRILL INC.	GETTY PROPERTIES CORP.	15
40.13062	-75.12762	10091-2		2290	AMERIDRILL INC.	GETTY PROPERTIES	20
40.11861	-75.11944		MG 1282	188	C S GARBER & SONS INC	ABINGTON MEMORIAL HOSP	59
40.12056	-75.12083		3342N	188	C S GARBER & SONS INC	ABINGTON MEM. HOSPL.	65
40.12111	-75.12139		7146N	188	C S GARBER & SONS INC	ABINGTON MEM. HOSPL.	60
40.12	-75.12028		3347N	188	C S GARBER & SONS INC	ABINGTON MEM. HOSPL.	50
40.12028	-75.12056		3341N	188	C S GARBER & SONS INC	ABINGTON MEM. HOSPL.	60
40.12139	-75.12167		3345N	188	C S GARBER & SONS INC	ABINGTON MEM. HOSPL.	63
40.12167	-75.12194		3346N	188	C S GARBER & SONS INC	ABINGTON MEM. HOSPL.	60
40.11972	-75.12		3348N	188	C S GARBER & SONS INC	ABINGTON MEM. HOSPL.	60

TABLE 1 (CONTINUED)
PAGWIS Well Search Information (Continued)

Former Glenn and Ken's Auto Repair
1474 Old York Road
Abington Township, Montgomery County, Pennsylvania 19001
PaDEP Facility ID # 46-42436
PAUSTIF Claim # 2007- 0153(S)

Depth to Bedrock	Saltwater Zone	Yield Measurement Method	Well Yield	Static Water Level	Water Level After Yield Test	Length of Test	Well Use	Water Use
		VOLUMETRIC WATCH & BUCKET	5	26	40	0.5	WITHDRAWAL	OTHER
		VOLUMETRIC WATCH & BUCKET	15	24	40	0.5	WITHDRAWAL	OTHER
		VOLUMETRIC WATCH & BUCKET	2	22	41	0.5	WITHDRAWAL	OTHER
16		VOLUMETRIC WATCH & BUCKET	2	22	41	0.5	MINE	
14		VOLUMETRIC WATCH & BUCKET	5	26	40	0.5	MINE	
3		VOLUMETRIC WATCH & BUCKET	4	15	40	0.5	MINE	
29		VOLUMETRIC WATCH & BUCKET	15	24	45	0.5	MINE	
1		VOLUMETRIC WATCH & BUCKET	4	15	41	0.5	MINE	
112		ESTIMATED	5	50	220	0.5	WITHDRAWAL	DOMESTIC
		VOLUMETRIC WATCH & BUCKET	1	10		1		
		VOLUMETRIC WATCH & BUCKET	1	10		1		
		VOLUMETRIC WATCH & BUCKET	1	5		1		
		VOLUMETRIC WATCH & BUCKET	1	10		1		
		ESTIMATED	7	20	59	0.17	WITHDRAWAL	OTHER
3			30	20	65		MINE	
31		ESTIMATED	20	20	60		MINE	
46		ESTIMATED	100	20	50		MINE	
16		ESTIMATED	7	20	60		MINE	
35		ESTIMATED	60	20	63		MINE	
40		ESTIMATED	20	20	60		MINE	
11		ESTIMATED	10	22	60		MINE	

Figures



LEGEND

- 1/2-mile Radii

HOLDER, J. 168336 - Well ID Number and Well Owner

Source: Portions of the Ambler (1992), Hatboro (2001), Germantown (1998) and Frankford (1998), PA 7.5-minute USGS Quadrangles

Scale

0 1000' 2000'

Glenn & Ken's Auto Repair

1474 Old York Road, Abington, Montgomery County, PA 19001

Site Location Map Showing Surrounding Private Wells

DRAWN BY: MHM/JPB	DATE: 2/18/14	DRAWING NO.
CHECKED & APPROVED BY: DLR		glenn12009-001-A1

GROUNDWATER SCIENCES CORPORATION

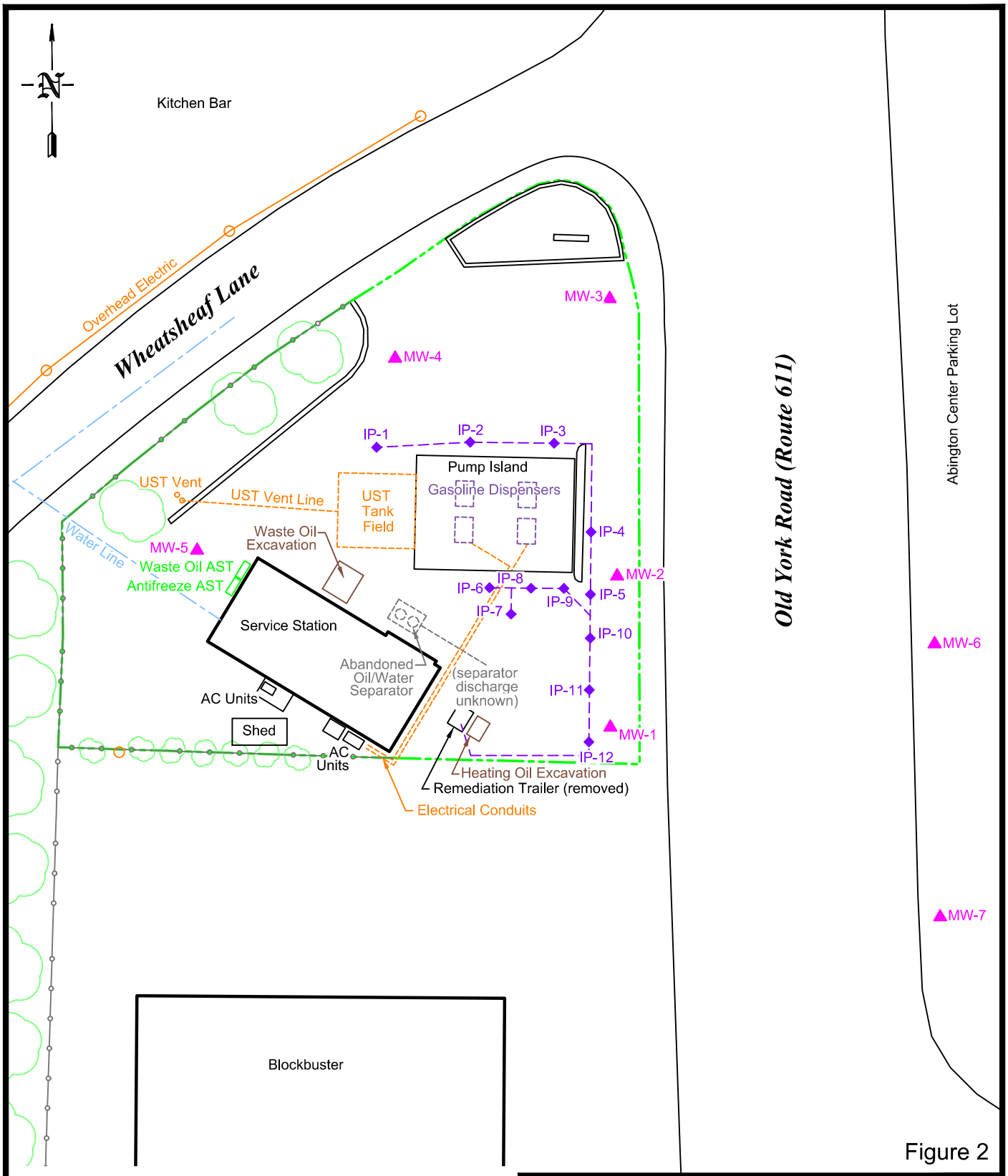


Figure 2

LEGEND

- Property Line
- ▲ - Monitoring Well Location (2007-2009)
- ◆ - Oxygen Injection Point (2009)
- Oxygen Injection Trench

Note: All locations approximate.

Map Sources:
USGS High Resolution Orthoimage, Montgomery Co., PA (2010); Fig. 2: Groundwater Contour, and Fig. 3: Oxygen Injection System Plan (CMI, North Whales, PA).

Approximate Scale
0 20' 40'

Glenn & Ken's Auto Repair
1474 Old York Road, Abington, Montgomery County, PA 19001

Site Plan

DRAWN BY: M/J/MHM	DATE: 2/26/14	DRAWING NO.
CHECKED & APPROVED BY: DLR		glenn12009-002-B1

GROUNDWATER SCIENCES CORPORATION

Figure 3

LEGEND

- Property Line (approx.)

Scale

0 50' 100'

Map Source:
USGS High Resolution Orthoimage
PA_X33_Y088, Montgomery County, PA (2010)

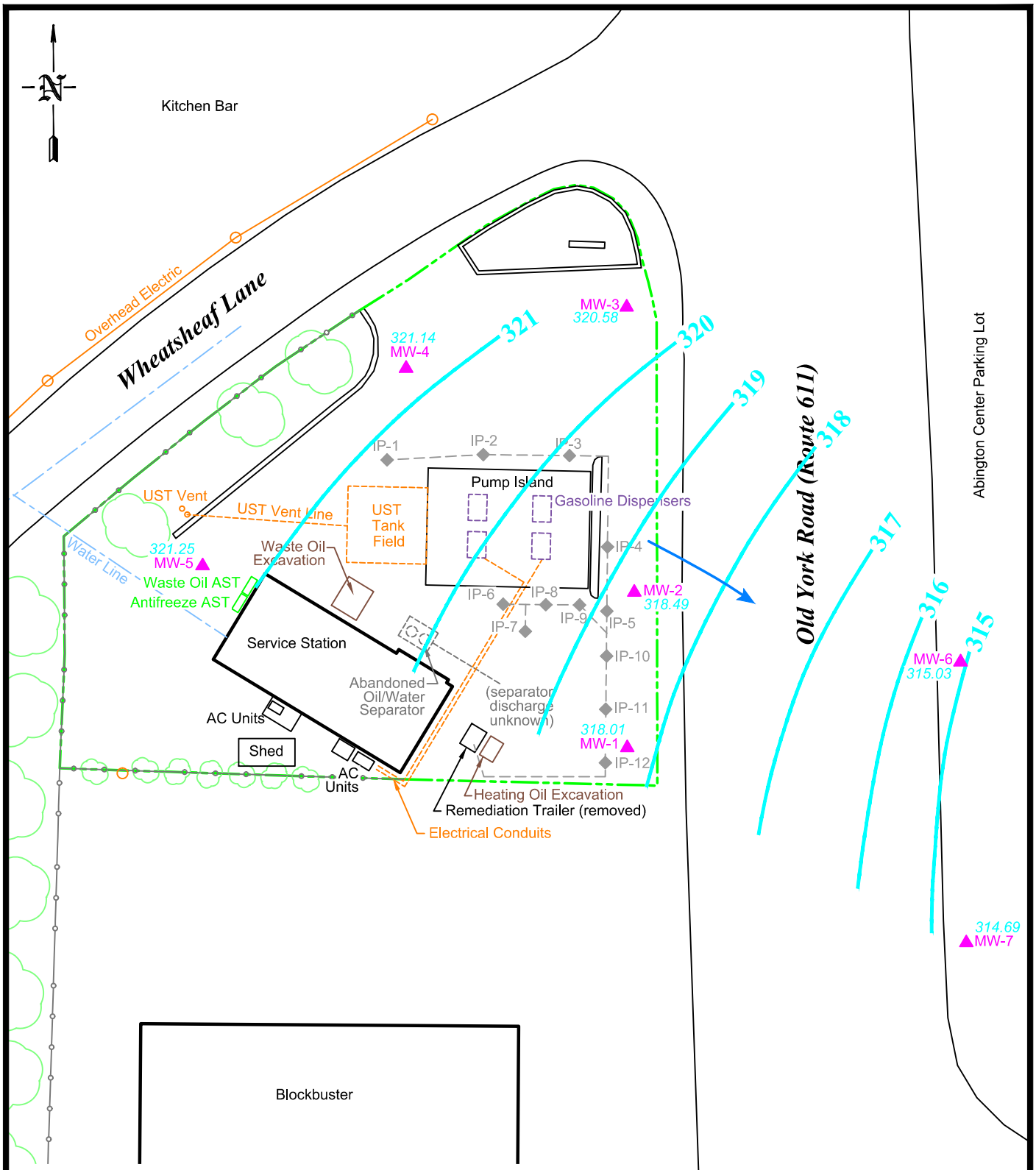
Glenn & Ken's Auto Repair

1474 Old York Road, Abington, Montgomery County, PA 19001

Aerial Map Showing Site and Surrounding Properties

DRAWN BY: MHM/JPB	DATE: 2/17/14	DRAWING NO.
CHECKED & APPROVED BY: DLR		glenn12009-001-A4

GROUNDWATER SCIENCES CORPORATION



LEGEND

315 - Groundwater Elevation Contour (feet amsl; approx.)

315.03 - Groundwater Elevation (feet amsl)

- Approximate Groundwater Flow Direction

- Property Line

▲ - Monitoring Well Location (2007-2009)

◆ - Oxygen Injection Point (2009)

Note: All locations approximate.

Map Sources:

USGS High Resolution Orthoimage, Montgomery Co., PA (2010); Fig. 2: Groundwater Contour, (CMI, North Whales, PA).

Approximate Scale

0 20' 40'

Figure 4

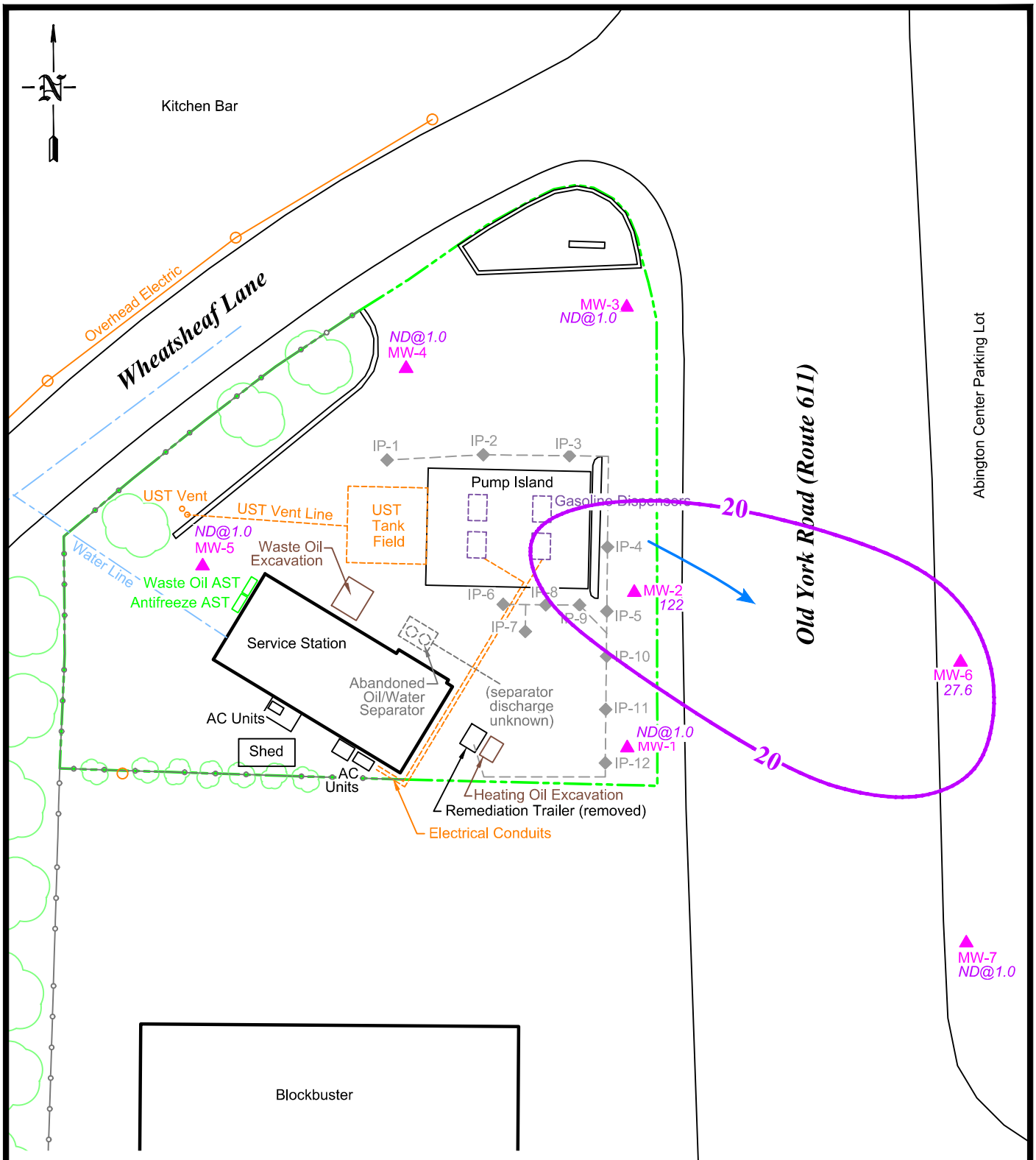
Glenn & Ken's Auto Repair

1474 Old York Road, Abington, Montgomery County, PA 19001

Groundwater Elevation Contour Map
March 6, 2013

DRAWN BY: M/J/MHM	DATE: 2/26/14	DRAWING NO.
CHECKED & APPROVED BY: DLR		glenn12009-003-A2

GROUNDWATER SCIENCES CORPORATION



LEGEND

MTBE - Methyl Tert.-Butyl Ether

20 - MTBE Concentration Contour (µg/l; approx.)

1.6 - MTBE Concentration (µg/l)

ND@1.0 - Not Detected at Laboratory Detection Limit 1.0 µg/l

- Property Line

▲ - Monitoring Well Location (2007-2009)

◆ - Oxygen Injection Point (2009)

- Approximate Groundwater Flow Direction

Note: All locations approximate.

Map Sources:

USGS High Resolution Orthoimage, Montgomery Co., PA (2010); Fig. 2: Groundwater Contour, (CMI, North Whales, PA).

Approximate Scale

0 20' 40'

Figure 5

Glenn & Ken's Auto Repair

1474 Old York Road, Abington, Montgomery County, PA 19001

MTBE Concentration Contour Map
March 6, 2013

DRAWN BY: M/J/MHM	DATE: 2/26/17	DRAWING NO.
CHECKED & APPROVED BY: DLR		glenn12009-006-D1

GROUNDWATER SCIENCES CORPORATION

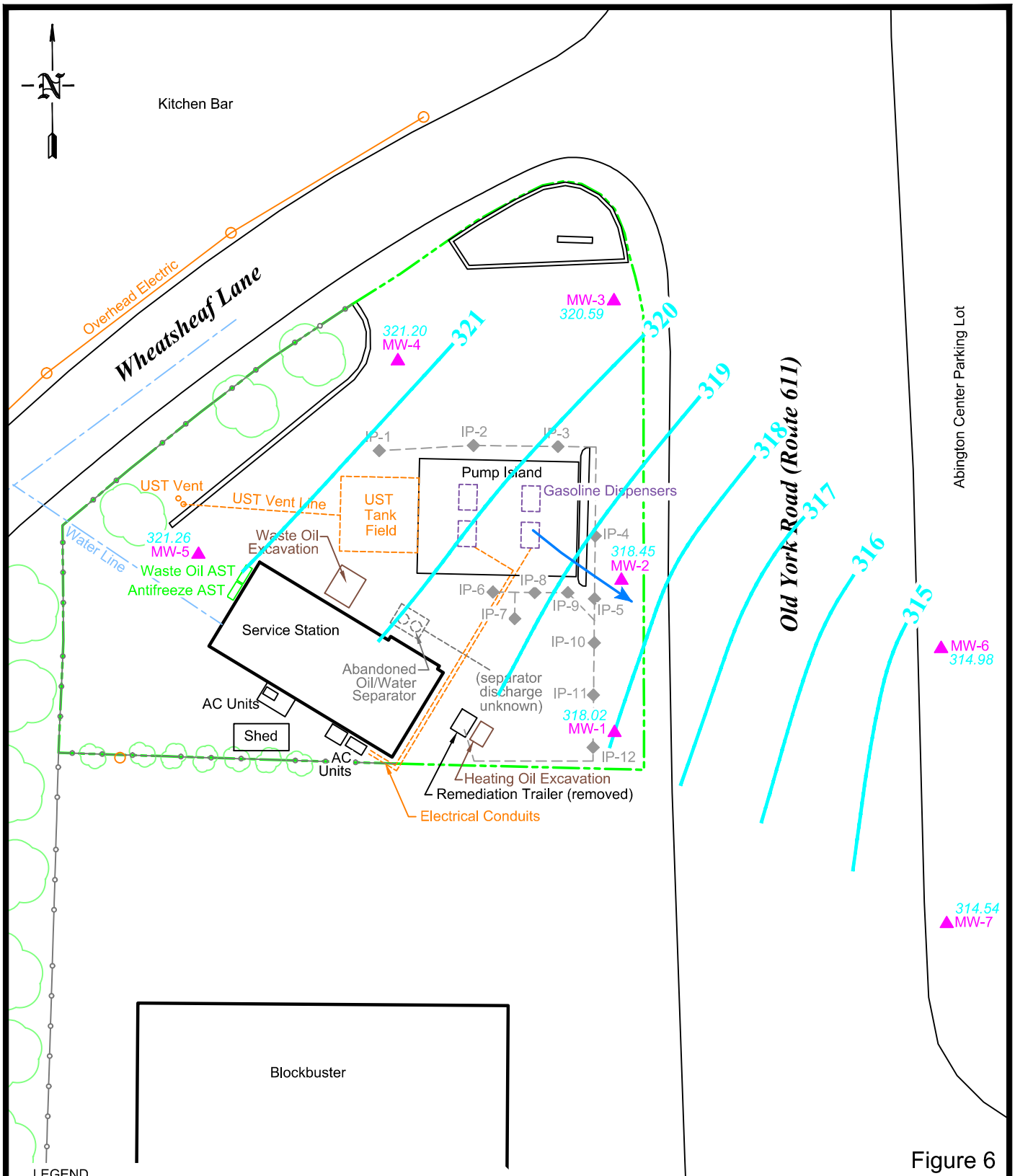


Figure 6

LEGEND

315 - Groundwater Elevation Contour (feet amsl; approx.)

315.02 - Groundwater Elevation (feet amsl)

- Approximate Groundwater Flow Direction

- Property Line

▲ - Monitoring Well Location (2007-2009)

◆ - Oxygen Injection Point (2009)

Note: All locations approximate.

Map Sources:

USGS High Resolution Orthoimage, Montgomery Co., PA (2010); Fig. 2: Groundwater Contour, (CMI, North Whales, PA).

Approximate Scale

0 20' 40'

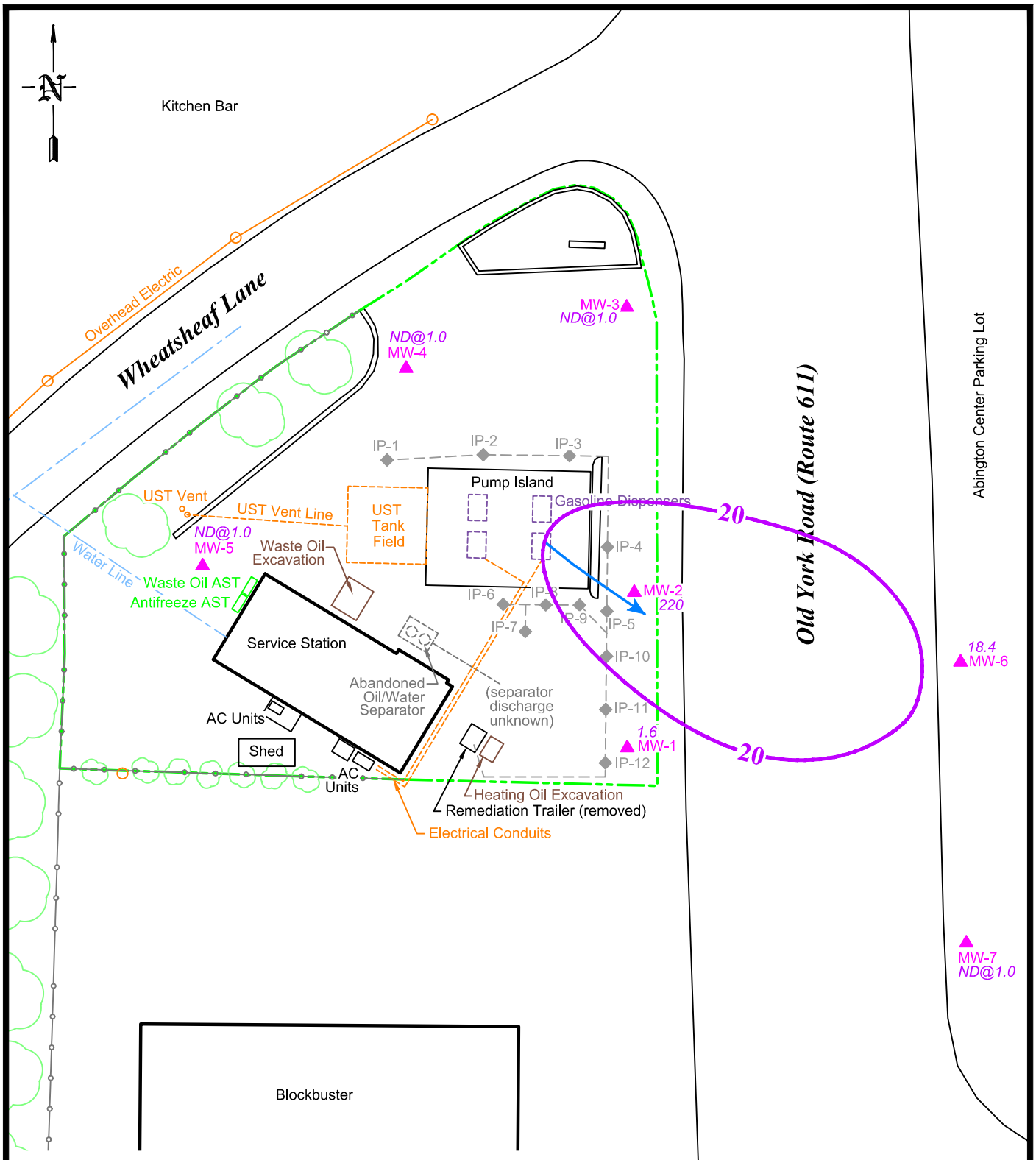
Glenn & Ken's Auto Repair

1474 Old York Road, Abington, Montgomery County, PA 19001

Groundwater Elevation Contour Map
June 4, 2013

DRAWN BY: MHM/JPB	DATE: 2/26/14	DRAWING NO.
CHECKED & APPROVED BY: DLR		glenn12009-003-B2

GROUNDWATER SCIENCES CORPORATION



LEGEND

MTBE - Methyl Tert.-Butyl Ether

20 - MTBE Concentration Contour (µg/l; approx.)

1.6 - MTBE Concentration (µg/l)

ND@1.0 - Not Detected at Laboratory Detection Limit 1.0 µg/l

- Property Line

- Monitoring Well Location (2007-2009)

- Oxygen Injection Point (2009)

- Approximate Groundwater Flow Direction

Note: All locations approximate.

Map Sources:

USGS High Resolution Orthoimage, Montgomery Co., PA (2010); Fig. 2: Groundwater Contour, (CMI, North Whales, PA).

Approximate Scale

0 20' 40'

Figure 7

Glenn & Ken's Auto Repair

1474 Old York Road, Abington, Montgomery County, PA 19001

MTBE Concentration Contour Map
June 4, 2013

DRAWN BY: M/J/MHM	DATE: 2/26/14	DRAWING NO.
CHECKED & APPROVED BY: DLR		glenn12009-006-E1

GROUNDWATER SCIENCES CORPORATION

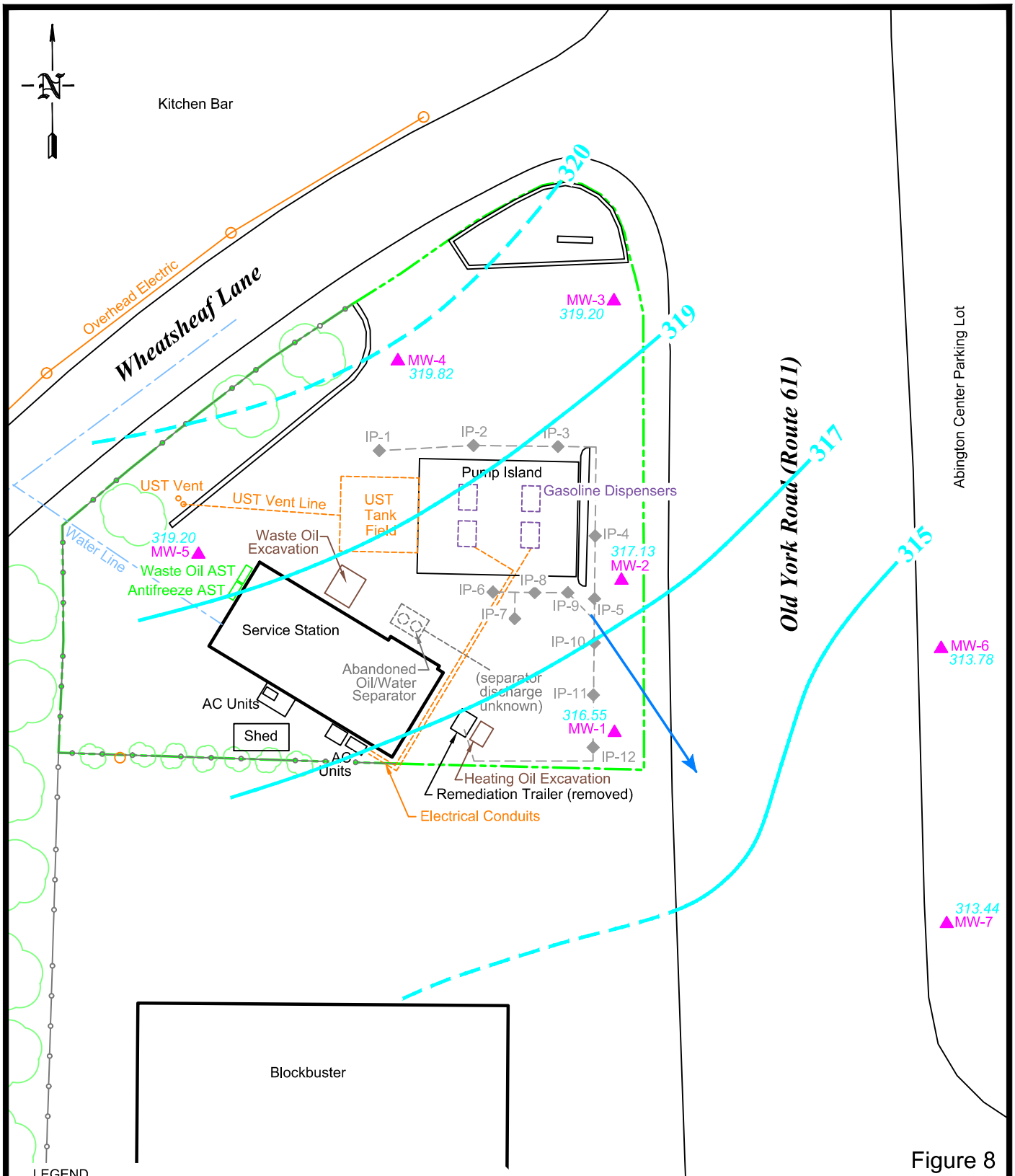


Figure 8

LEGEND

315 - Groundwater Elevation Contour (feet amsl; approx.)

316.55 - Groundwater Elevation (feet amsl)

- Approximate Groundwater Flow Direction

- Property Line

▲ - Monitoring Well Location (2007-2009)

◆ - Oxygen Injection Point (2009)

Note: All locations approximate.

Map Sources:

USGS High Resolution Orthoimage, Montgomery Co., PA (2010); Fig. 2: Groundwater Contour, (CMI, North Whales, PA).

Approximate Scale

0 20' 40'

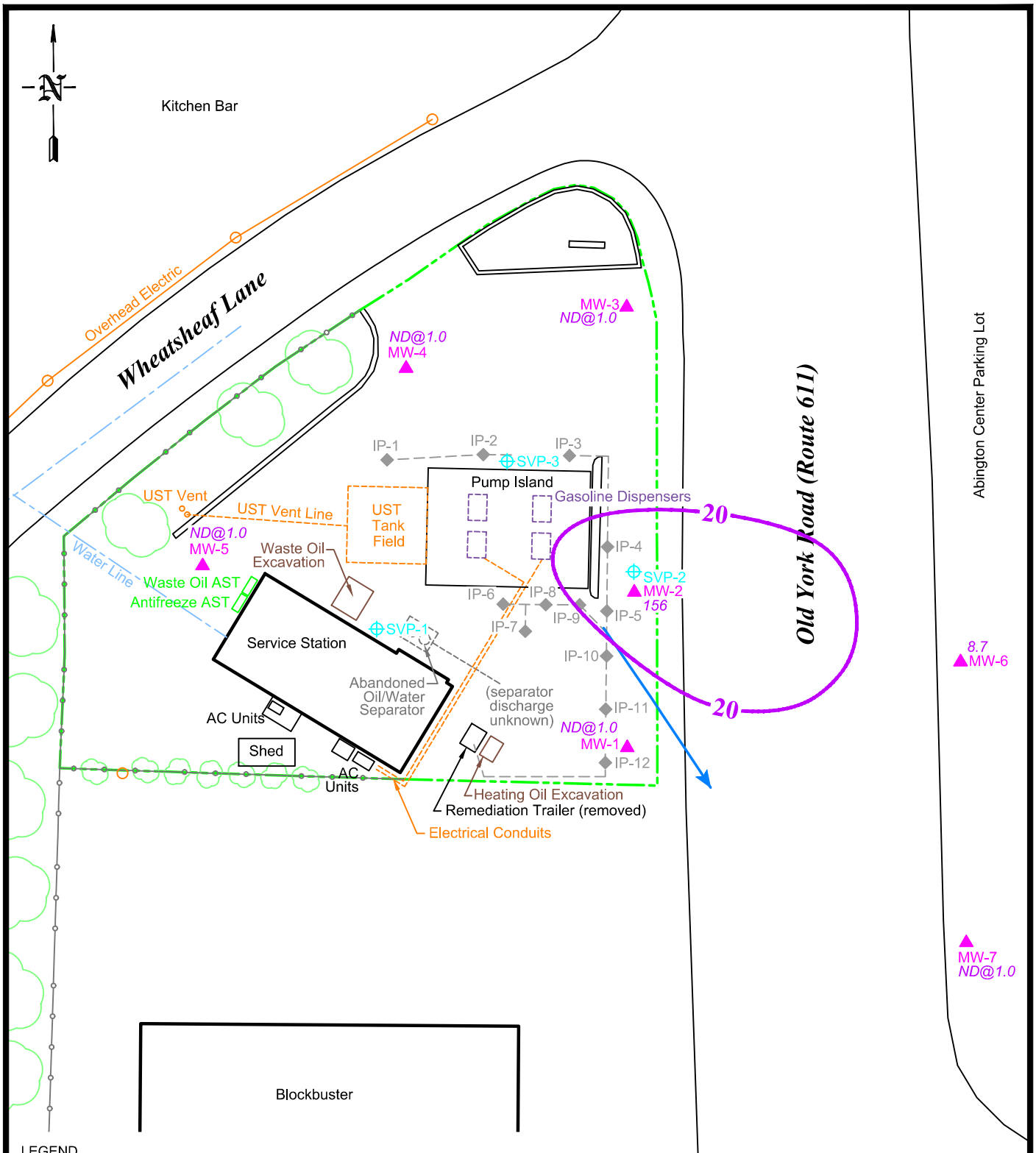
Glenn & Ken's Auto Repair

1474 Old York Road, Abington, Montgomery County, PA 19001

Groundwater Elevation Contour Map
September 30, 2013

DRAWN BY: M/J/MHM	DATE: 2/26/14	DRAWING NO.
CHECKED & APPROVED BY: DLR		glenn12009-003-C2

GROUNDWATER SCIENCES CORPORATION



LEGEND

MTBE - Methyl Tert.-Butyl Ether

20 - MTBE Concentration Contour (µg/l; approx.)

8.7 - MTBE Concentration (µg/l)

ND@1.0 - Not Detected at Laboratory Detection Limit 1.0 µg/l

- Property Line

- Monitoring Well Location (2007-2009)

- Oxygen Injection Point (2009)

- Approximate Groundwater Flow Direction

Note: All locations approximate.

Map Sources:
USGS High Resolution Orthoimage, Montgomery Co., PA (2010); Fig. 2: Groundwater Contour, (CMI, North Whales, PA).

Approximate Scale
0 20' 40'

Figure 9

Glenn & Ken's Auto Repair
1474 Old York Road, Abington, Montgomery County, PA 19001

MTBE Concentration Contour Map
September 30, 2013

DRAWN BY: M/J/MHM	DATE: 2/27/14	DRAWING NO.
CHECKED & APPROVED BY: DLR		glenn12009-006-F1

GROUNDWATER SCIENCES CORPORATION

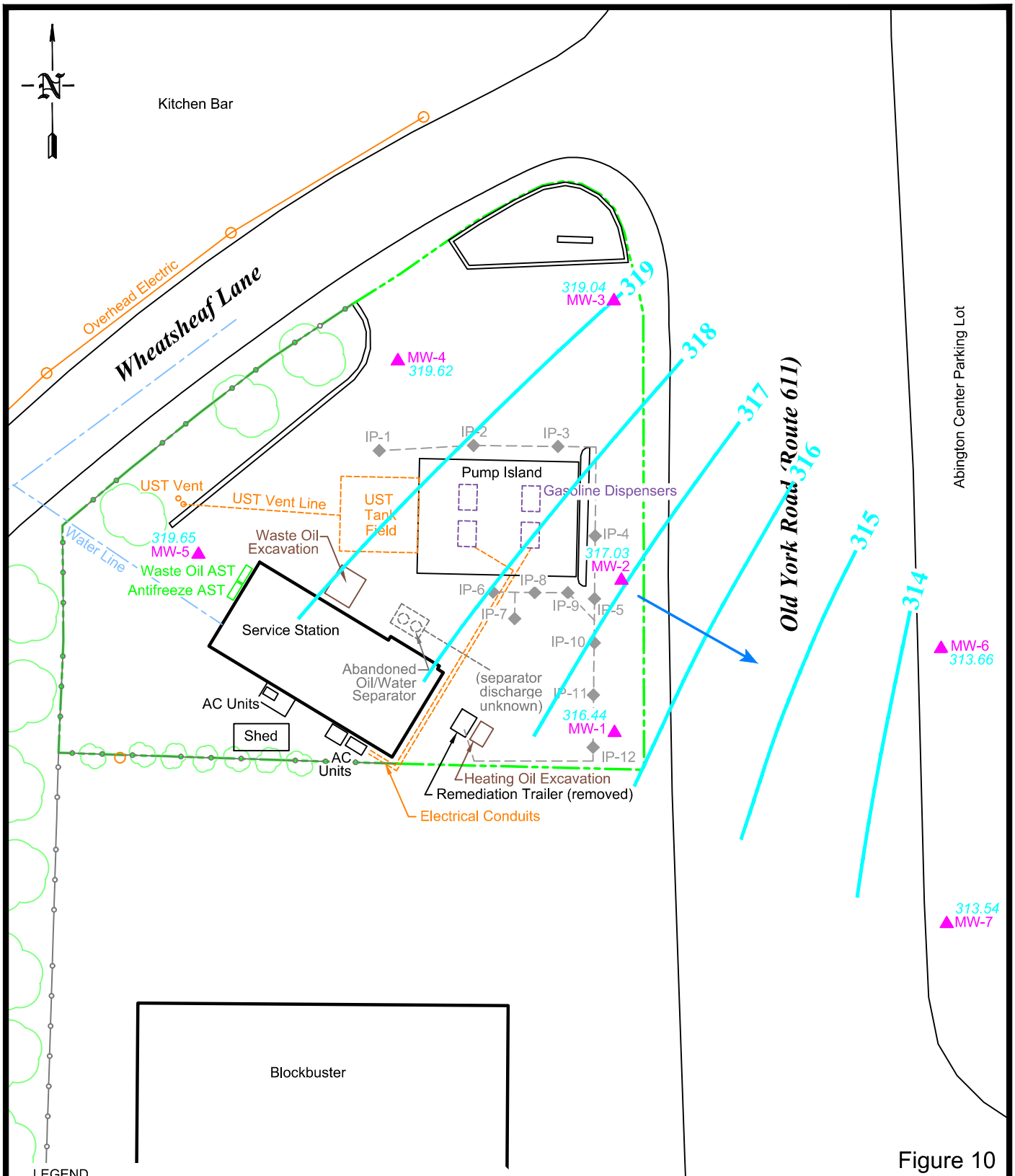


Figure 10

LEGEND

315 - Groundwater Elevation Contour (feet amsl; approx.)
316.55 - Groundwater Elevation (feet amsl)
- Approximate Groundwater Flow Direction
- Property Line
- Monitoring Well Location (2007-2009)
- Oxygen Injection Point (2009)

Note: All locations approximate.

Map Sources:
USGS High Resolution Orthoimage, Montgomery Co., PA (2010); Fig. 2: Groundwater Contour, (CMI, North Whales, PA).

Approximate Scale
0 20' 40'

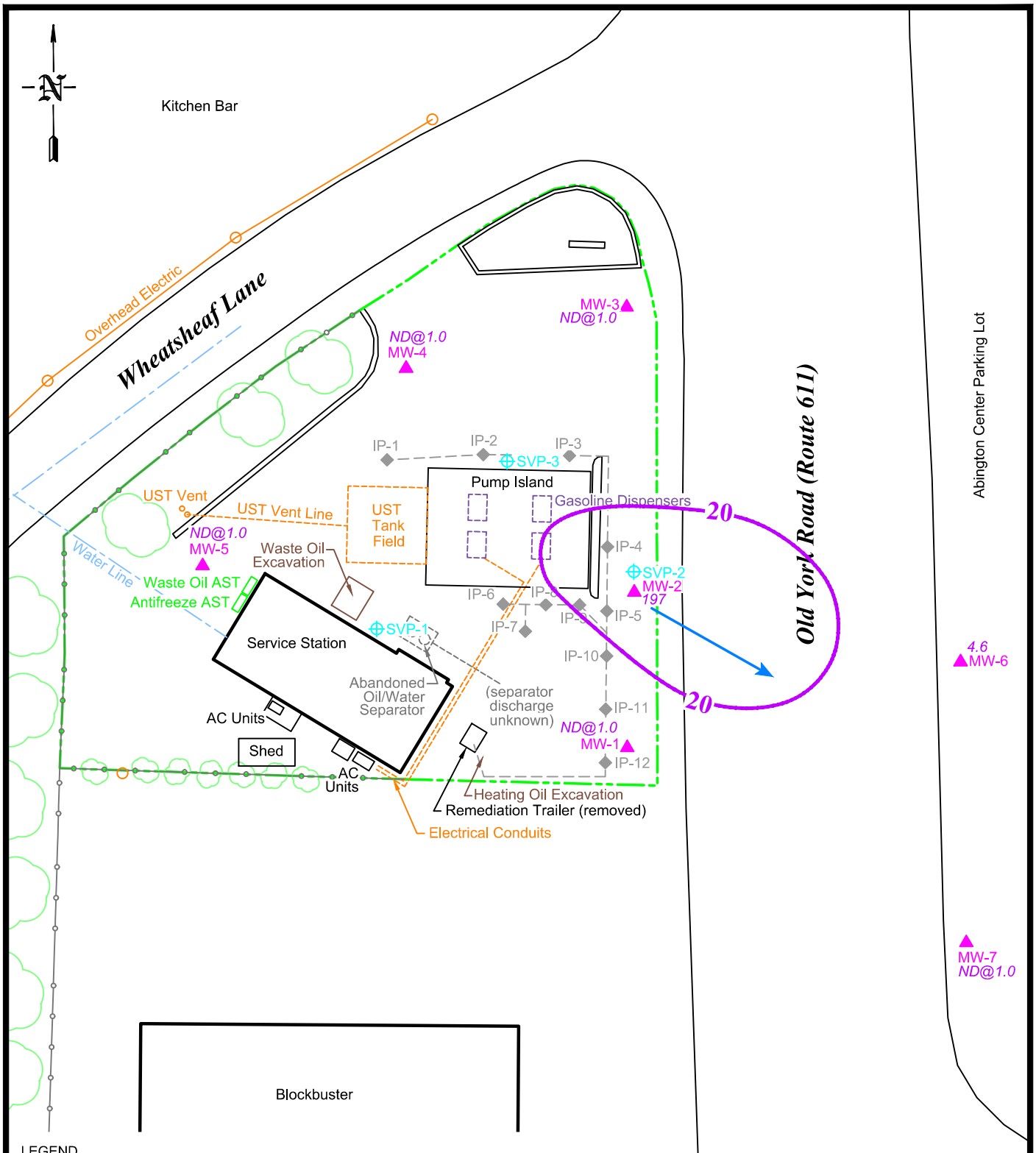
Glenn & Ken's Auto Repair

1474 Old York Road, Abington, Montgomery County, PA 19001

Groundwater Elevation Contour Map
December 9, 2013

DRAWN BY: M/J/MHM	DATE: 2/27/14	DRAWING NO.
CHECKED & APPROVED BY: DLR		glenn12009-003-F1

GROUNDWATER SCIENCES CORPORATION



LEGEND

MTBE - Methyl Tert.-Butyl Ether

20 - MTBE Concentration Contour (µg/l; approx.)

8.7 - MTBE Concentration (µg/l)

ND@1.0 - Not Detected at Laboratory Detection Limit 1.0 µg/l

- Property Line

- Planned Soil Vapor Monitoring Point

- Monitoring Well Location (2007-2009)

- Oxygen Injection Point (2009)

- Approximate Groundwater Flow Direction

Note: All locations approximate.

Map Sources:

USGS High Resolution Orthoimage, Montgomery Co., PA (2010); Fig. 2: Groundwater Contour, (CMI, North Whales, PA).

Approximate Scale

0 20' 40'

Figure 11

Glenn & Ken's Auto Repair

1474 Old York Road, Abington, Montgomery County, PA 19001

MTBE Concentration Contour Map
December 9, 2013

DRAWN BY: M/J/MHM	DATE: 2/27/14	DRAWING NO.
CHECKED & APPROVED BY: DLR		glenn12009-006-G1

GROUNDWATER SCIENCES CORPORATION

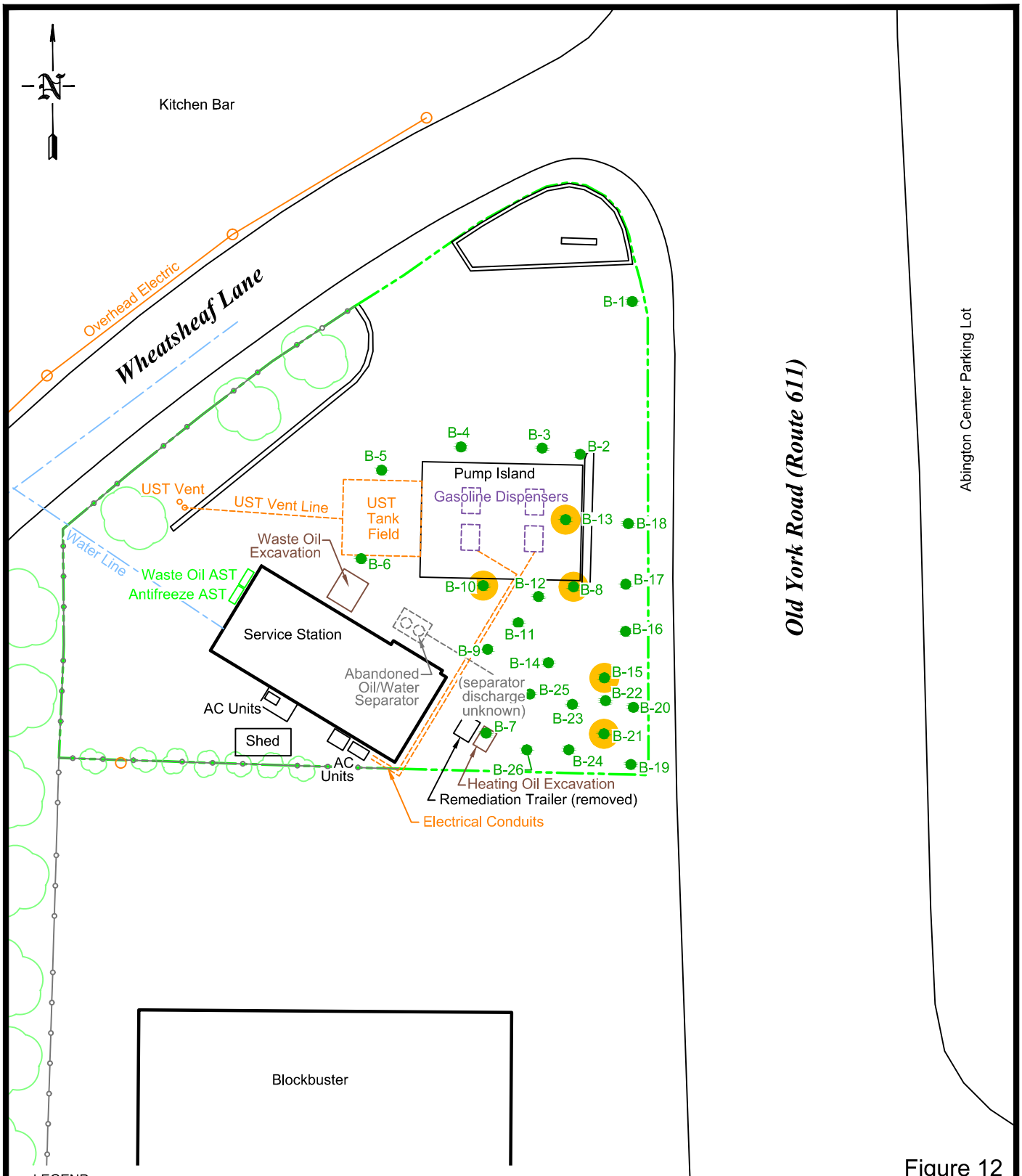


Figure 12

LEGEND

- Property Line
- Soil Boring Location
- Soil Concentration Greater Than Applicable Standard

Notes: All locations approximate.
Borings B-1 through B-8 drilled/sampled on Sept. 18, 2007.
Borings B-9 through B-18 drilled/sampled on Dec. 18, 2007.
Borings B-19 through B-26 drilled/sampled on Oct. 3, 2008.

Map Sources:
USGS High Resolution Orthoimage, Montgomery Co., PA (2010); Fig. 2: Groundwater Contour, and Fig. 3: Oxygen Injection System Plan (CMI, North Whales, PA).

Approximate Scale
0 20' 40'

Glenn & Ken's Auto Repair

1474 Old York Road, Abington, Montgomery County, PA 19001

Soil Boring Location Map

DRAWN BY: M/J/MHM	DATE: 2/26/14	DRAWING NO.
CHECKED & APPROVED BY: DLR		glenn12009-002-B2

GROUNDWATER SCIENCES CORPORATION

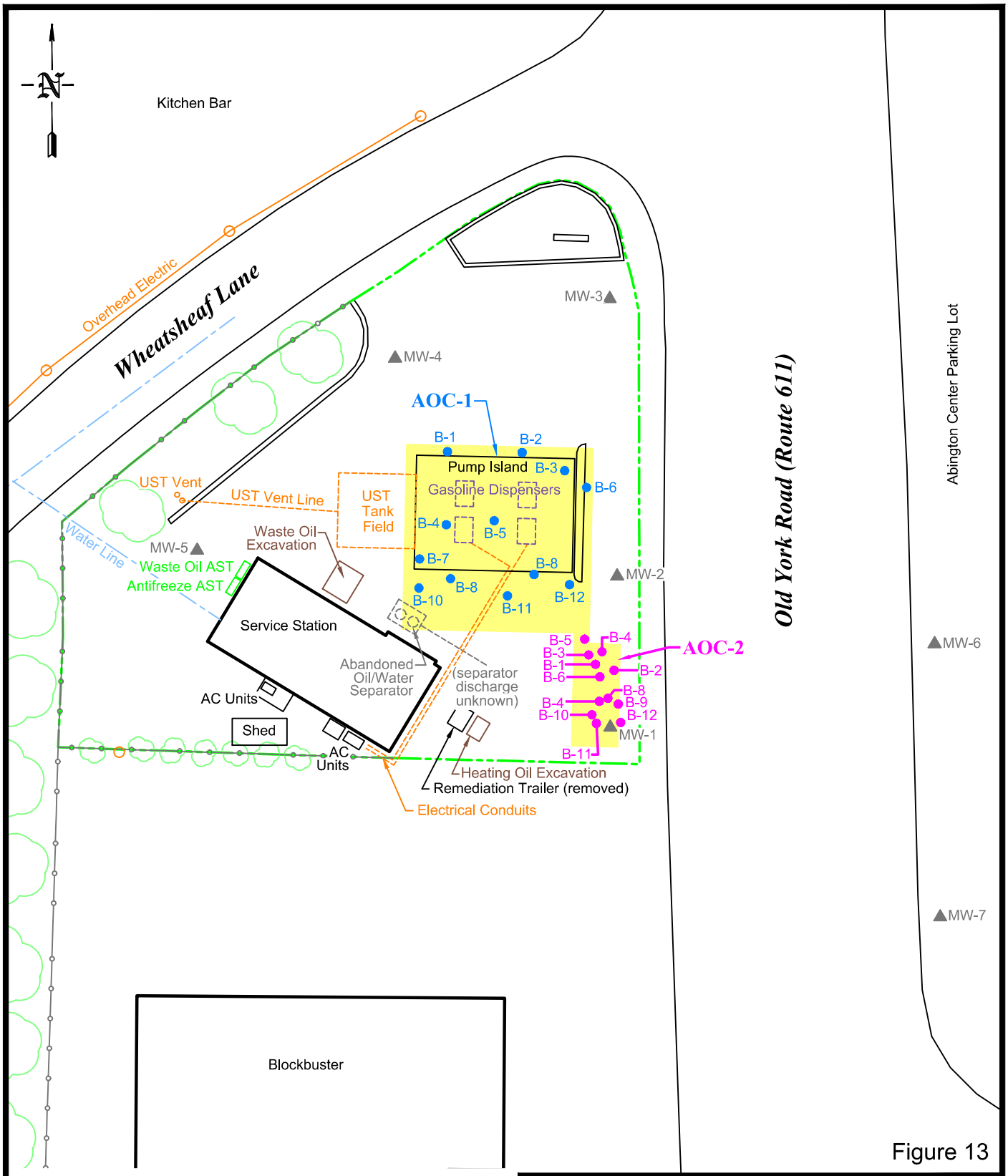


Figure 13

LEGEND

- Area of Concern (AOC); Systematic Random Sampling Area
- Property Line
- Soil Attainment Sampling Location (AOC-1; Oct. 2012)
- Soil Attainment Sampling Location (AOC-2; Oct. 2012)
- Monitoring Well Location (2007-2008)

Note: All locations approximate.

Map Sources:
USGS High Resolution Orthoimage, Montgomery Co., PA (2010); Fig. 2: Groundwater Contour, and Fig. 3: Oxygen Injection System Plan (CMI, North Whales, PA).

Approximate Scale
0 20' 40'

Glenn & Ken's Auto Repair
1474 Old York Road, Abington, Montgomery County, PA 19001

Soil Attainment Sampling Locations
October 2012

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