COMPETITIVE FIXED-PRICE BID-TO-RESULT SOLICITATION FOR SITE CLOSURE ACTIVITIES

Former Route 248 Texaco Facility
3621 Nazareth Road (Route 248), Easton, Palmer Township, Northampton County, Pennsylvania 18042
PADEP FACILITY ID #48-26478; USTIF CLAIM #1999-0441(F)

February 8, 2013

The Pennsylvania Underground Storage Tank Indemnification Fund (USTIF), on behalf of the claimant, Mr. Henry Chamesian of Galaxy One, LLC (Galaxy), who hereafter is referred to as the Client or Solicitor, is providing this Request for Bid (RFB) to qualified firms to prepare and submit a fixed-price proposal for a Bid to Result scope of work (SOW) to complete corrective action activities under Chapter 245 to achieve site closure and obtain Relief from Liability from the PaDEP using the Statewide Health Standard for soil and groundwater for the above-mentioned facility (the Site).

Corrective action under Chapter 245 is being conducted in response to a confirmed petroleum release at the former Texaco facility located at 3621 Nazareth Road (Route 248) in Easton, Palmer Township, Northampton County, Pennsylvania. Site investigation and characterization actives were initiated at the Site in December 1989 by Storb Environmental Inc. (Storb). Storb was retained by Pipeline Petroleum, Inc. (Pipeline) who was the previous site owner. Storb provided environmental consulting services during Site upgrade activities that included the removal of four 10,000-gallon underground storage tanks (USTs) and the associated dispensers in December 1998 through May 1999. During the upgrade activities, evidence of a release was observed in the former dispenser and tank excavation area. In January 1999, a notice of contamination was filed with the Pennsylvania Department of Environmental Protection (PADEP) and Palmer Township. Approximately 530 tons of impacted soils were excavated and disposed of off-Site. The results of the UST removal activities were documented in the July 1999 UST Closure Report prepared by Storb. In response to the submittal, the PADEP required the completion of site characterization activities.

Site characterization activities were conducted at the Site by Storb between 2000 and 2004. In 2006, the site property was sold by Pipeline to Galaxy and subsequent site characterization activities were conducted by Langan Engineering & Environmental Services, Inc. (Langan) between 2007 and 2011. Site characterization activities include soil sampling (characterization and attainment), installation of eight soil vapor monitoring points and collection of soil vapor samples, a geophysical survey, installation of fourteen groundwater monitoring wells (MW-1 through MW-14), and quarterly groundwater gauging/sampling and reporting since 2000. Analytical results along with a summary of previous environmental investigations completed at the site prior to 1998, were presented by Storb in the Site Characterization Report (SCR; dated December 21, 2000; Appendix A in Attachment 1a), and subsequent Groundwater Monitoring and

Sampling Reports submitted between 2003 and 2004. The SCR submitted by Storb was not approved and the PaDEP commented that additional site characterization was necessary to adequately delineate groundwater impacts at the Site. Subsequent site characterization activities conducted by Langan are detailed in the Supplemental SCR (dated June 21, 2011; Attachment 1a) submitted by Langan to the PaDEP. In correspondence dated September 21, 2011 (Attachment 1b), the PaDEP approved the Supplemental SCR. A Remedial Action Plan has not been submitted to the PaDEP and is included in the SOW for this RFB.

Galaxy has an open claim (claim number referenced above) with the USTIF and the corrective action work will be completed under this claim. Reimbursement of Solicitor-approved, reasonable, necessary, and appropriate costs up to claim limits for the corrective action work described in this RFB will be provided by the USTIF. Costs for work to complete site closure activities, including costs for the completion of work described in this RFB, will be reimbursed by the USTIF at 90%. To date, sufficient claim funds remain to reimburse reasonable, necessary and appropriate costs to complete the SOW described in this RFB.

The corrective action work (i.e., scope of work (SOW)) included in this RFB solicitation will generally include the following components (additional details provided later in this solicitation):

- Obtain off-site access
- Installation, surveying, development, and initial sampling of off-site groundwater monitoring well (MW-15);
- Comprehensive groundwater gauging and sampling event;
- Conduct additional site characterization activities;
- Perform pilot testing of proposed groundwater remediation technology;
- Prepare/submit a combined Supplemental Site Characterization Report (SSCR)/Remedial Action Plan (RAP) for the site;
- Quarterly separate-phase liquid (SPL) monitoring (8 quarters);
- Implementation of remediation;
- Groundwater attainment sampling;
- Preparation of a Remedial Action Completion Report; and
- Well abandonment and site restoration.

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.** 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 # 1999-0441(F)". 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 Thursday, March 28, 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, 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 assist[1] the Solicitor in evaluating the competitive bids received; however, it is the Solicitor who will ultimately select the successful bidder with whom it will negotiate a mutually agreeable contract. Bid evaluation will consider, among other factors, estimated total cost, unit costs, schedule, discussion of technical and regulatory approach, qualifications, and contract terms and conditions. **The technical and regulatory approach will be the most heavily weighted evaluation criteria.** The Solicitor (via the Technical Contact) will inform the successful bidder by email. The unsuccessful bidders will be informed by email and by posting the name of the successful bidder on the USTIF's website, following the full execution of the Remediation Agreement by the Solicitor and the successful bidder.

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

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

Solicitor	**ICF Claims Handler**	**Technical Contact**[2]
Mr. Henry Chamesian	Ms. Linda Melvin	David Reusswig, P.G.
Galaxy One, LLC	ICF International, Inc.	Groundwater Sciences Corp.
P.O. Box 156	4000 Vine Street	2601 Market Place Street
Cedar Grove, NJ 07009	Middletown, PA 17057	Suite 310
	mcs@epix.net	Harrisburg, PA 17110
	Cc: DCassel@icfi.com	Phone: (717) 901-8183
		Fax: (717) 657-1611
		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 e-mail subject line must be "FORMER ROUTE 248 TEXACO 1999-0441(F) – RFB QUESTION". Bidders must neither contact nor discuss this RFB Solicitation with the Solicitor, USTIF, PADEP, or ICF unless approved by the Technical Contact. Bidders may discuss this RFB Solicitation with subcontractors and vendors to the extent required for preparing the bid response. **All questions must be received by close of business on Thursday, March 21, 2013.**

B. ATTACHMENTS TO THIS RFB SOLICITATION

ATTACHMENT 1: SUPPORTING REPORTS, CORRESPONDENCE AND DATA
ATTACHMENT 2: STANDARDIZED BID COST SPREADSHEET
ATTACHMENT 3: DRAFT REMEDIATION AGREEMENT

C. SITE SETTING AND BACKGROUND INFORMATION

Corrective action activities are being conducted in response to two confirmed petroleum releases (unleaded gasoline and diesel fuel) at the site in 1999. Specific site background information can be found in the documents provided in **ATTACHMENT 1**.

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

Figure 1: Site Location Map
Figure 2: Aerial Map Showing Site and Surrounding Properties
Figure 3: Site Plan
Figure 4: Groundwater Elevation Contour Map; March 14, 2012

[2] Subcontractor to ICF.

Figure 5: Dissolved-Phase Benzene Concentration Contour Map; March 14-15, 2012
Figure 6: Dissolved-Phase Toluene Concentration Contour Map; March 14-15, 2012
Figure 7: Dissolved-Phase Ethylbenzene Concentration Contour Map; March 14-15, 2012
Figure 8: Dissolved-Phase Total Xylenes Concentration Contour Map; March 14-15, 2012
Figure 9: Dissolved-Phase MTBE Concentration Contour Map; March 14-15, 2012
Figure 10: Dissolved-Phase Naphthalene Concentration Contour Map; March 14-15, 2012

The previous introduction and the following information summarizes, and is derived from, relevant information provided in the previous environmental reports that are included in ATTACHMENT 1. If there is any discrepancy between the summary provided herein and the source documents, the bidder should defer to the source documents.

Site Name / Address

Former Route 248 Texaco Facility, 3621 Nazareth Road (Route 248), Easton, Palmer Township, Northampton County, Pennsylvania 18042 (Figure 1).

USTIF Eligibility

Following the documented releases from the unleaded gasoline UST systems and the diesel fuel UST system at the Site in 1999, the previous owner filed a claim with the USTIF and eligibility was granted under USTIF Claim No. 1999-0441(F). The current owner and Solicitor, Galaxy, has selected the SHS as the remedial goal to be pursued for soil and groundwater to obtain a Relief from Liability (RfL) from the PaDEP and the USTIF has agreed to 90% reimbursement of Solicitor-approved reasonable, necessary and appropriate costs up to claim limits for the corrective action work described in this RfB.

Site Use

Currently the Site is used as a Sunoco-branded retail petroleum dispensing facility and a small strip mall. The strip mall is occupied by a restaurant, a laundromat, and a wine and spirits store. There is no anticipated change in Site use at this time.

Site Ownership History

The site property is owned by Galaxy, who purchased the Site from Pipeline Petroleum in 2006.

Underground Storage Tanks (USTs) on-Site

The Site contains a registered 15,000-gallon gasoline UST (tank # 006), a registered 12,000-gallon diesel fuel UST (tank #007), and a registered 8,000-gallon gasoline UST (tank # 008), and associated product delivery piping and dispensers. These UST systems were installed in 1998. The USTs are located on the eastern portion of the Site, along Nazareth Road, and are connected with delivery piping to dispenser islands located in the middle of the Site.

Site Description

The Site contains a single-story building that consists of a convenience store and a strip mall. The strip mall is occupied by a restaurant, a Laundromat, and a wine and spirits store. The entire property is paved with either asphalt or concrete. The site is served by public water and sewer. Three petroleum dispenser islands and a canopy are located within the western portion of the Site. There are eight monitoring wells (MW-1 through MW-8) and eight soil vapor monitoring points (VP-1 through VP-8) that exist at the Site (Figures 2 and 3).

Surrounding Properties

The site is surrounded by commercial properties. A restaurant (Diner 248) is located to the northwest of the site and a Hampton Inn hotel is located to the southwest, across Nazareth Road. Areas immediately to the north, east and southeast of the site are undeveloped and overgrown with trees and shrubs. A commercial property (owned by Land Group, LLC) containing a warehouse building is located immediately to the northeast of the site. The site and surrounding properties are currently supplied by public water and sanitary sewer. An aerial map is provided as Figure 2.

Current and Historical Constituents of Concern

The constituents of concern (COCs) at this site are the substances on the old PADEP short list for unleaded gasoline and diesel fuel (benzene, toluene, ethylbenzene, total xylenes, cumene, MTBE, naphthalene, phenanthrene and fluorene) and 1,2-dibromoethane (1,2-DBA). Previous soil and groundwater data show that the diesel fuel constituents, phenanthrene and fluorene, were detected at concentrations greater than laboratory detection limits, indicating that a diesel fuel release occurred at the Site, but were below the applicable RUA MSCs (indicating that the attainment criteria for diesel fuel constituents were met). However, for confirmatory purposes and to provide additional supporting documentation that attainment has been demonstrated for phenanthrene and fluorene in soil and groundwater at the site, all soil and groundwater samples collected as part of the SOW contained herein shall be analyzed for phenanthrene and fluorene. Additionally, for confirmatory purposes and to provide supporting documentation that attainment has been demonstrated for 1,2-DBA in groundwater, all groundwater

samples collected as part of the SOW contained herein shall be analyzed for 1,2-DBA. All supporting documentation and data shall be provided in the Remedial Action Completion Report (RACR) to obtain Relief from Liability for diesel fuel constituents with respect to the diesel fuel release at the Site, and for 1,2-DBA in groundwater at the Site.

Site Topography

The United States Geological Survey (USGS) 7.5-minute Topographic Quadrangle Map for Nazareth, Pennsylvania (Figure 1) shows that surface elevations at the Site decrease moderately to the northeast. Elevation at the Site is approximately 340 feet above mean sea level. Local topography in the immediate Site area is varied with natural and manmade hills and depressions, interrupting regional surface drainage. Reportedly, surface water tends to accumulate in many of the depressions.

Regional Geology and Hydrogeology

According to the Pennsylvania Department of Conservation and Natural Resources (DCNR) Physiographic Provinces of Pennsylvania Map (2000), the Site is located in the Great Valley Section of the Ridge and Valley Physiographic Province. The Great Valley Section consists of lowland that lies in southeastern Pennsylvania. The lowland has gently undulating hills on the north side of the valley and a lower elevation, flatter landscape on the south side.

As mapped in the Pennsylvania DCNR Topographic and Geologic Survey's 1981 Atlas of Preliminary Geologic Quadrangles, the Site is underlain by the Rickenbach Formation of the Beekmantown Group. The Rickenbach Formation consists of "gray, very finely to coarsely crystalline, laminated dolomite; dark-gray chert in irregular beds, stringers and nodules; bands of quartz sand grains in lower half." The Rickenbach Formation is moderately resistant to weathering and susceptible to solution channels and cavities. Sinkholes are common in this formation.

Site Geology

Based on information obtained during drilling activities, fill material was encountered from ground surface to a maximum depth of approximately eight fbg near the former UST field. Fill material is comprised of silt, gravel, sand, mixed with building debris. Building debris contains fragments of concrete. Native soil was encountered at depths ranging from approximately two (2) fbg to twenty-five (25) fbg, and is mainly comprised of clay and silt, with interbedded sand and gravel, underlain by weathered bedrock.

Depth to bedrock at the Site has been determined from borings drilled and a geophysical microgravity survey. These investigations indicate a variable bedrock surface, ranging from eight (8) fbg within the northern portion of the Site to twenty-

five (25) fbg within the southeastern portion of the Site. Bedrock encountered during drilling activities was described as gray limestone.

Site Hydrogeology

Groundwater at the Site occurs within the bedrock. The monitoring wells installed on-Site and off-Site are screened across the water table and completed in bedrock. The March 14, 2012 depth-to-water measurements collected from on-Site and off-Site wells indicate the depth to groundwater ranged from 26.07 feet below top of casing (fbtoc) (MW-12) to 39.07 fbtoc (MW-5). A groundwater elevation contour map for the most recent groundwater gauging event (March 14, 2012), provided as Figure 4, shows that the general direction of decreasing head potential at the Site is toward the north-northeast.

Site History, Nature of Confirmed Releases, and Corrective Action Activities

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

1995 Utility Trench Excavation

In August 1995, a utility trench was excavated alone the Site boundary, along Nazareth Road by a utility contractor. The utility trench was excavated to an approximate depth of four to eight feet below grade (fbg). During the trench excavation, petroleum odors were noted in a portion of the excavation near the southern corner of the Site. Reportedly, soil that exhibited petroleum odors was noted over a length of approximately 200 feet. Pipeline Petroleum, who was the Site owner at the time, retained Norbec Environmental Limited (Norbec) to investigate the origin and extent of the impacted soil in the utility trench. At the time of this initial investigation, five USTs were present on site: three 10,000-gallon gasoline USTs, one 10,000-gallon diesel fuel UST and one 1,000-gallon kerosene UST. These USTs were installed in 1977. The gasoline and diesel fuel USTs were located in the middle of the Site. The dispenser island and kerosene UST were located on the western portion of the Site, along Nazareth Road.

Because the dispensers and kerosene UST were believed to be hydraulically upgradient of the impacted soils observed in the dug utility trench, the investigation was focused on investigating a potential release from the dispensers and/or kerosene UST. As part of the investigation, five soil borings (B-1 through B-5) were installed onsite. Soil boring B-1 was installed immediately adjacent to the eastern wall of the utility trench, directly adjacent to the noted soil impacts. Borings B-2 through B-5 were installed to depths ranging from twelve fbg (B-5) to 26 fbg (B-1). Reportedly, no evidence of soil

impacts, such as discolored soils or staining, were observed in soil borings B-1 through B-5 installed in August of 1995. No hydrocarbon odors were documented for any soil samples. Soil retrieved from each boring was also screened with a photoionization meter. Because there was no evidence of impacts and groundwater was not encountered in any boring drilled in August 1995, Norbec collected one to two soil samples from each boring and submitted these samples for total petroleum hydrocarbons (TPH) and VOC analyses.

The results indicated no compounds were detected above the PaDEP "Statewide Cleanup Levels". Results of this investigation were presented in the Site Investigation Report, date September 1995. Based on the results of this investigation, Norbec concluded that no petroleum hydrocarbons were present in soil downgradient of the kerosene UST and dispensers.

1998 – 1999 Facility Upgrade and UST Removal Activities

Between November 1998 and May 1999, the five previously-mentioned USTs and the associated supply piping and dispensers were removed from the Site as part of a facility upgrade. During the removal of the three gasoline USTs and one diesel UST, a release of petroleum product was discovered in the tank excavation. Additionally, impacted soils were encountered during the removal of the dispenser island for these USTs. Based on evaluation of the dispenser equipment and visual observations, the release was attributed to a faulty submersible pump and piping connection at the select dispensers. No evidence of a release was observed at the former location of the kerosene UST. Notice of contamination was verbally given to the PaDEP and Palmer Township in January 1999. A Notice of Contamination, dated January 19, 1999 (Attachment 1b) was submitted to the PaDEP.

Approximately 530 tons of the petroleum-impacted soil were excavated from the former USTs location and dispenser island locations and stockpiled on-Site. Subsequently, this soil was transported to an appropriate facility for incineration on July 16, 1999.

To demonstrate the Site soil was remediated to the Statewide Health Standard, Storb completed soil attainment sampling in accordance with the PaDEP General Attainment Requirements for soil. Storb established the entire area around the former dispenser island as the point-of-compliance for the soil. Nine soil samples (Act-01 through Act-09) were collected from the excavation. Soil attainment sampling locations were selected using the EPA Systematic Random Sampling Procedure. The calculations used to determine the sampling interval and locations, along with detailed information on the soil attainment demonstration, is presented in Storb's SCR (Appendix A in Attachment 1a).

Soil samples were analyzed for leaded and unleaded gasoline and diesel fuel compounds. As reported by Storb, no targeted compounds of concern were detected in the soil samples at concentrations greater than the RUA MSCs. The UST removal activities were documented in the UST Closure Report that was submitted by Storb to the PaDEP on July 23, 1999 (Attachment 1c). In this report, Storb concluded that horizontal and vertical extent of soil impacts under the former dispenser island had been delineated. Based on the soil results, there were no concentrations of leaded, unleaded or diesel fuel constituents that were greater than the RUA MSCs.

Additionally, a detailed summary of remedial action completed during the 1998-1999 UST system removal activities is presented in Section 3 of Storb's December 21, 2000 SCR (Appendix A in Attachment 1a).

Site Characterization Activities - Storb

Based on the 1999 UST closure report (Attachment 1c), the PaDEP required site characterization activities to investigate potential soil and groundwater impacts. Storb initiated site characterization activities in January of 2000. Activities completed by Storb included the installation of eight groundwater monitoring wells (MW-1 through MW-8), completion of slug tests and collection of three rounds of groundwater samples from these wells. Depth to groundwater at the Site was reported by Storb to be approximately 44 feet below grade, which indicated that groundwater beneath the Site is in bedrock. Groundwater flow direction was reported by Storb to be toward the north-northwest (please note more recent groundwater data indicates groundwater flow is toward the north-northeast). The slug tests completed in select wells showed that hydraulic conductivity at the site ranged from 1.3×10^{-2} feet per minute (ft./min) to 2.3×10^{-5} ft./min.

Groundwater samples were collected from wells MW-1 through MW-8 and were submitted to the Blue Marsh Laboratories, Inc. of Princeton, NJ for analyses of the leaded and unleaded gasoline and diesel fuel compounds. Analytical results indicate that several compounds including benzene, ethylbenzene, toluene, total xylene, methyl tert-butyl ether (MTBE), cumene, naphthalene and 1,2-dibromoethane (1,2-DBA) were detected above their respective groundwater MSCs in wells MW-1, MW-2, and MW-5 through MW-8. None of the above-mentioned constituents were detected at concentrations greater than the RUA MSCs in wells MW-3 and MW-4.

Storb submitted a SCR on December 21, 2000 (Appendix A in Attachment 1a). In the SCR, Storb proposed completing additional groundwater monitoring well installation to complete delineation of the dissolved-phase plume, a sensitive receptor survey, fate and transport modeling, and a risk assessment to develop Site-Specific Standards for remediating the Site.

To supplement the initial site characterization, between November 2000 and August 2001, Storb completed four additional groundwater sampling events in wells MW-1 through MW-8. In September 2001, Storb installed two additional off-site groundwater monitoring wells (MW-9 and MW-10) west of the Site for downgradient groundwater delineation. Subsequently, thirteen comprehensive groundwater sampling events involving wells MW-1 through MW-10 were completed between November 2001 and June 2004. According to Storb, groundwater monitoring data collected from on-Site and off-Site wells indicated the direction of groundwater flow beneath the Site varies from the north/northwest to east. Concentrations of benzene, toluene, ethylbenzene, xylenes, MTBE and naphthalene were detected at concentrations greater than their respective RUA MSCs in wells MW-1, MW-2, and MW-5 through MW-8. The wells with the highest constituent concentrations included wells MW-1, MW-2, MW-6 and MW-7.

SPL thickness ranging from approximately 0.01 feet to 0.03 feet was measured in wells MW-1, MW-2, MW-6 and MW-7 during the November 2000, February 2001, November 2001, March 2002 and August 2002 events. Storb reported that approximately ten gallons of SPL was recovered from Site wells using passive recovery methods between 2000 and 2004.

The PaDEP performed a completeness evaluation of Storb's December 2000 SCR and four Groundwater Monitoring Reports (dated August 5, 2003, October 14, 2004, February 24, 2004, and April 7, 2004) and found the reports to be deficient. In their March 8, 2004 letter to Pipeline (the tank owner at the time), the PADEP required additional remedial investigation at the Site to further investigate potential remaining soil sources and to install additional wells to better determine groundwater flow direction at the Site.

In January 2005, Storb proposed additional site characterization activities, including soil sampling, soil gas sampling, geophysical investigations, off-Site groundwater well installation, and additional groundwater sampling.

Additional Site Characterization Activities - Langan

Langan was retained by Pipeline in June 2006 to conduct the activities proposed by Storb in 2005 and to complete site characterization activities. Supplemental site characterization activities conducted by Langan included: 1) drilling of thirteen soil borings (SS-1 through SS13) to assess current soil concentrations and to confirm that soil is not an issue at the Site; 2) installation and sampling of eight soil vapor monitoring points to assess vapor intrusion at the Site; 3) a geophysical survey using microgravity to assess karst subsurface conditions at the Site; and installation and sampling of four additional off-Site groundwater monitoring wells to complete off-Site delineation of the dissolved-phase plume. Details of Langan's supplemental site characterization activities are provided in their Supplemental SCR (dated

June 21, 2011) included as Attachment 1a. Langan's Supplemental SCR was approved by the PaDEP in correspondence dated September 21, 2011 (Attachment 1b).

Current Groundwater Conditions

Because the last comprehensive groundwater sampling round at the Site was conducted on June 30, 2009, a comprehensive groundwater gauging and sampling event was conducted on March 14-15, 2012 to assess more recent groundwater conditions at the Site. The March 2012 groundwater data, along with the additional groundwater data collected as part of the SOW for this RFB, will allow bidders to propose a more accurate timeframe with respect to cleanup of groundwater at the Site using their proposed remedial technology/approach. A summary table of the March 2012 groundwater analytical data, along with the supporting laboratory analytical report, is included in the correspondence submitted by GSC to the PaDEP on April 25, 2012 (Attachment 1b).

Although groundwater data collected by Langan during their supplemental site characterization activities showed that the downgradient edge of the dissolved-phase plumes was adequately delineated, the subsequent groundwater data collected in March of 2012 indicates that the downgradient edge of the plume has advanced to beyond monitoring well MW-14. Upon receipt of the March 2012 groundwater data, the PaDEP, in correspondence dated May 10, 2012 (Attachment 1b), requested additional off-Site groundwater monitoring well installation and sampling to adequately delineate the current downgradient extent of the dissolved-phase plume. This work is included in the SOW for this RFB. This additional characterization work is to be reported in a combined SSCR/RAP.

Separate-Phase Liquid (SPL)

Between 2000 and 2002, SPL was intermittently detected in wells MW-1, MW-2, MW-6 and MW-7, with SPL thicknesses ranging from 0.01 feet (MW-2 on March 14, 2002) to 0.31 feet (MW-1 on November 29, 2001). Since 2002, SPL has only been detected intermittently in well MW-2 (March 14, 2002; January 9, 2008; June 30, 2009; September 30, 2009; June 30, 2009). The SOW included in this RFB includes SPL monitoring and removal (if present) and the demonstration that SPL has been removed at the Site to the maximum extent practicable.

Updated Site Conceptual Model

Unleaded gasoline and diesel fuel releases were reported to the PaDEP in 1999 following the removal of five USTs (three gasoline USTs and one diesel fuel UST in the same tank grave, and one kerosene UST in a separate tank grave) as part of the facility upgrades. The kerosene UST closed "clean", however, a release of petroleum product was discovered in the gasoline/diesel fuel UST excavation, and impacted soil was encountered during the removal of the dispenser island for these

USTs. The suspected sources of the releases are the former gasoline/diesel fuel USTs and the associated dispensers. The release was reportedly attributed to a faulty submersible pump and piping connection at the select dispensers. As a result, approximately 530 tons of impacted soil were excavated from the former gasoline/diesel fuel UST grave and dispenser island areas and was transported off-site for appropriate disposal.

As a result of the release, petroleum product migrated through the fill, the native soils and weathered limestone, and reached the limestone bedrock which, in the area of the USTs and the dispensers, is located approximately nine fbg. Once the product reached the bedrock, it migrated downward through fractures in the unsaturated limestone and accumulated on top of the water table located approximately 30 to 40 fbg (i.e., approximately 20 to 30 feet below the top of the bedrock) in the area of the USTs and the dispensers.

Based on the gauging data collected by Storb, SPL was detected in monitoring wells MW-1, MW-2, MW-6 and MW-7 at thicknesses ranging from 0.01 feet to 0.31 feet (within MW-2 in November of 2001). The SPL provided a continuous source for groundwater contamination and subsequent off-site migration of the dissolved-phase plumes. The majority of the SPL at the site was detected in these four wells from 2000 through 2002 (from 2002 through 2010, SPL has only been detected in well MW-2, and no SPL was detected in MW-2 during the most recent March 14, 2012 groundwater gauging event). The SPL migrated and at times likely became trapped in solution features as a result of significant water level fluctuations. The depth to groundwater under the site appears to have significant seasonal variability. Since groundwater sampling began in November of 2000, groundwater elevations have fluctuated as much as ten feet in many of the monitoring wells. The presence of SPL in well MW-1, MW-2, MW-6 and MW-7 intermittently in the early 2000's was probably caused by the seasonal fluctuation of the groundwater within the carbonate bedrock. The SPL may have pooled in the voids of the karst limestone and SPL flowed into MW-2, MW-6 and MW-7 wellbores when the depth to groundwater in each of these wells dropped to below approximately 45 fbg. Since the 1999 reportable release, there has been no active SPL removal employed at the site. SPL removed from MW-1, MW-2, MW-6 and MW-7 has been through passive means via absorbent socks and manual hand bailing during groundwater sampling activities. During Langan's subsequent site characterization activities, a thin layer of SPL has only been detected intermittently in monitoring well MW-2.

Once the SPL reached the water table, it was the principle source of the dissolved phase in groundwater, and the dissolved-phase plume expanded in the direction of groundwater flow, which is to the north/northeast (Figure 4). The dissolved-phase plume expanded to its current geometry, which extends beyond monitoring well MW-14. The current lateral extent of the dissolved-phase plume(s) is contained on-site to the south and east, but extends off-site (in the downgradient direction) to the north/northwest beneath the northeast portion of the Diner 248 property, and to the north/northeast beneath the Land Group property. Currently, the primary

constituents of concern in groundwater are unleaded gasoline constituents including benzene, toluene, ethylbenzene, total xylenes, MTBE and naphthalene, which are all currently above the Residential, Used Aquifer (RUA) Groundwater Medium-Specific Concentrations (MSCs) at the downgradient point of compliance (POC).
Impacted soil at the site was removed during the UST removal/upgrade activities. Subsequent soil characterization sampling by Storb and Langan has adequately delineated soil impacts at the site. Storb conducted systematic random sampling in the area of the USTs and dispenser islands, where the releases occurred and impacted soils were removed, and the soil attainment sampling results indicate that attainment of the SHS was met for these areas using the "75%/10x rule". No soil samples collected since the completion of soil remedial activities exhibit concentrations of target unleaded or diesel fuel constituents greater than the RUA Soil-to-Groundwater MSCs. Therefore, no further investigation of soils appears warranted and the soil data shows that attainment of the SHS for soil appears to have been demonstrated at the Site.

As part of Langan's subsequent site characterization activities, Langan installed eight soil vapor monitoring points and conducted soil vapor sampling to assess the potential for vapor intrusion into on- and off-Site occupied buildings. Based on the analytical results from the two rounds of soil vapor sampling conducted by Langan, soil vapor concentrations are below the applicable soil vapor MSCs and, therefore, vapor intrusion into occupied buildings and indoor air is not an issue at the Site.

Remedial Alternatives Evaluation and Conceptual RAP

With regard to remedial goals, no remedial activities are proposed for soil and soil vapor, as attainment of the SHS for soil has reportedly been demonstrated for soil at the Site and indoor air quality from soil vapor intrusion is reportedly not an issue at the site. Active remediation of dissolved-phase concentrations in groundwater is required to meet the SHS at and beyond the point-of-compliance (POC) for the Site. Removal of SPL to the maximum extent practicable will need to be demonstrated in all wells in the SPL plume. Passive SPL removal is proposed and several potentially feasible remedial technologies to remediate groundwater to the SHS were presented and discussed in correspondence submitted by GSC to the PaDEP on April 25, 2012 (Attachment 1b).

SPL has been present intermittently in well MW-2. Continued monitoring and passive removal techniques (i.e., manual hand bailing during quarterly gauging events and placement of absorbent socks in well MW-2) and a demonstration that SPL has been removed to the maximum extent practicable is necessary.

With regard to groundwater, a variety of groundwater remediation technologies that have been applied to petroleum-contaminated sites were evaluated, including: 1) monitored natural attenuation/biodegradation, 2) air sparging/vapor extraction, 3) *in situ* bioremediation, 4) *in situ* chemical oxidation (ISCO), 5) groundwater recovery and treatment, 6) dual-phase high vacuum extraction, and 7) vacuum enhanced

groundwater extraction. Each of these technologies may be considered as stand-alone remedies, or as parts of an integrated remedial approach combining one or more technologies. A general description of each remedial action alternative, along with a discussion regarding the technical feasibility of each technology for this particular site, was provided in the April 25, 2012 letter report submitted by GSC to the PaDEP (Attachment 1b). As this letter report specifies, the remedial alternatives evaluation presented in the May letter report indicates that AS/SVE and DPE/TPE are the most feasible technologies to achieve the SHS for groundwater in a timely manner and that one of these general remedial approaches is preferable for this site. However, monitored natural attenuation or enhanced aerobic bioremediation may be feasible for the downgradient portions of the plume during or following the application of AS/SVE or DPE/TPE.

Although the PaDEP did not comment on the conceptual RAP because additional site characterization is necessary, the general AS/SVE or DPE/TPE options are presented in this RFB as the options bidders should choose from to present as their proposed technology to clean up groundwater at the site to the SHS. It is anticipated that the successful bidder will need to perform pilot testing to confirm the feasibility of the technology, to determine specific design criteria, and to ensure that a reasonable remedial timeframe can be met, and so pilot testing is part of the scope of work presented in the RFB solicitation, as would preparation and submittal of a formal RAP. The formal RAP for the site would be submitted by the successful bidder and would include a detailed description and the results of their feasibility/pilot testing.

D. OBJECTIVE / SCOPE OF WORK

This RFB Solicitation is different from most other USTIF RFB Solicitations to date. Most previous RFB solicitations have been of the 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, there is no defined SOW, but rather the bid is to obtain RfL, that is, to "close" the site, by demonstrating attainment of the selected standard for soil and groundwater (i.e., bid to a result rather than a fixed SOW). There are general milestones outlined in this RFB designed to assist the bidder in preparing their bid, however, it is the responsibility of the bidder to present a detailed SOW that would result in obtaining RfL for the site. **As noted in the introduction, this RFB is also different from most RFBs because the most heavily weighted element of the evaluation will be the technical and regulatory approach, rather than the cost proposal.**

For this RFB Solicitation, bidders are asked to define and present the specific technical and regulatory approach that constitutes the SOW within the structure outlined below. This RFB seeks competitive bids from consultants to perform the activities necessary to secure RfL using the SHS. 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 (that is, the SHS for soil and groundwater using the Residential, Used Aquifer MSCs as the numerical values to meet the SHS) "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), and 2) has proposed a technical solution that is reasonably capable of achieving site closure in conformance with PaDEP Chapter 245 and associated statutes, regulations and guidance. 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.

As discussed below, the general sequence of events and Milestones for site closure is:

- Obtain off-site access;
- Install, survey, develop and purge/sample bedrock groundwater monitoring well MW-15 (assume continued access to off-Site properties);
- Conduct comprehensive groundwater gauging and sampling round;
- Conduct additional site characterization activities;
- Conduct pilot testing for remedial system design as deemed necessary by the bidder;
- Preparation, submission and PaDEP approval of a Combined SSCR/RAP;
- System design, installation and permitting;
- System operation and maintenance, NPDES sampling/reporting, and quarterly groundwater monitoring and reporting;
- Conduct eight quarters of groundwater attainment sampling and reporting;
- Preparation, submission and PaDEP approval of a RACR;
- Well decommissioning, remedial system removal, and site restoration.

This RFB seeks competitive bids from qualified contractors to perform the activities necessary to secure Relief from Liability for groundwater (using the Residential, Used Aquifer Statewide Health Standard without the use of any activity and use limitations), in accordance with the Storage Tank Spill and Prevention Act and

associated statutes and regulations, for the Solicitor for the identified petroleum releases on the property (i.e., bid to a result rather than a fixed-scope of work). Bidders should assume that no further corrective action activities are necessary to address soil or soil vapor 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.

MILESTONE A – OBTAIN OFF-SITE ACCESS

Prior to installing off-site groundwater monitoring well MW-15, the selected bidder shall obtain off-site access from the appropriate property owner. The Technical Contact does not know who the property owner is and has not discussed the proposed drilling locations with the property owner. Bidders shall provide a fixed-price cost to review municipal tax assessor's files to determine the owner of the property, and negotiate and execute an off-site access agreement with the property owner. For the purposes of this bid, bidders should assume that off-site access to conduct the necessary site characterization activities will be granted without extended negotiation with the property owner. The PaDEP will be involved to the extent necessary to ensure access is granted at this property and any other location where that location is deemed critical to gain an understanding of the relationship between the Solicitor's release and adjacent properties.

The selected bidder shall contact the property owner and discuss the details and schedule of the activities to be conducted on the owner's property and execute ROE agreements, as necessary, at a fixed-price. Upon execution of the ROE agreements, the selected bidder shall provide adequate notification to the property owners who may be affected by the drilling activities.

MILESTONE B – SUPPLEMENTAL SITE CHARACTERIZATION ACTIVITIES

<u>Milestone B1: Installation, Surveying, Development and Initial Sampling of Monitoring Well MW-15</u>

After the above-mentioned off-site access agreement has been fully executed, the selected bidder shall install off-site monitoring well MW-15, the proposed location of which is shown on the site plan provided as Figure 3. This well will serve to better delineate the current dissolved-phase plume(s) off-site. For the purpose of this RFB assume that the bedrock monitoring wells shall be installed with the following characteristics:

a. Continuous soil/overburden and bedrock characterization shall be conducted and boring logs shall be prepared for each well using appropriate classification systems;

b. Bedrock wells shall be constructed of two-inch diameter, threaded, flush-joint, schedule 40 PVC riser and 0.010- or 0.020-inch slot width well screen;

c. Bedrock wells shall be constructed such that the top of the screen is five (5) feet below the soil/bedrock interface and the top of the sand pack is at least three (3) feet below the soil/bedrock interface;

d. The bedrock well shall be drilled such that there is a surface casing to the top of bedrock (ungrouted) and a protective casing set three (3) feet into the bedrock and grouted in the bedrock socket and the surface casing (Please prepare your bid with a cost for this configuration. If the bidder wishes to propose an alteration to this configuration, please do so in the text with an associated cost as an option);

e. Hydrated bentonite chips, bentonite slurry or another acceptable sealant combination shall be used to seal the annulus (between the PVC and the casing) above the sand pack up to grade;

f. The bedrock well shall be completed at the surface with a securable stand pipe with a lockable cover and set in a concrete pad that is flush with the ground surface. A locking, pressure fit, watertight cap shall be secured on the top of the PVC well inside the stand pipe to further restrict access by unauthorized individuals; and,

g. A monitoring well construction log shall be prepared for the well.

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

The selected bidder shall conduct initial monitoring and sampling of the newly installed monitoring well at least two weeks following well development. A water level measurement shall be taken from the new well. The depth-to-water measurement 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 elevation within the new well. The casing elevation of the new well shall be surveyed within +/- 0.01 foot relative to an arbitrary benchmark already established at the site. The benchmark elevation shall be obtained by referencing the approximate ground surface elevation of the property or from an available benchmark from the USGS topographic map or benchmark elevation marker located at the site if one exists. Depth-to-water data (measured from the top of casing) shall then be subtracted (with appropriate corrections made for the presence of SPL) from respective casing elevations to determine water level elevations relative to the arbitrary benchmark such that the groundwater elevation within the well can be determined. If the monitoring well contains SPL, the groundwater elevation shall be corrected for product thickness when calculating the static groundwater elevation in this well.

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

Sampling equipment shall be decontaminated prior to sample collection in accordance with generally accepted industry practices. 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. At the conclusion of purging, a groundwater sample 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 Old Shortlist of unleaded gasoline and diesel fuel parameters (i.e., benzene, toluene, ethylbenzene, total xylenes, cumene, naphthalene, MTBE, fluorene and phenanthrene) and 1,2-DBA, 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.

Task B2: Comprehensive Gauging and Sampling of 15 Monitoring Wells (MW-1, through MW-15)

At least two weeks but not more than eight weeks following the initial sampling event, the selected bidder shall conduct confirmatory gauging and sampling of the new well (MW-15) for characterization purposes, as well as conduct gauging and sampling of all other on- and off-site groundwater monitoring wells listed above. Water level measurements, purging, sampling and analyses shall be conducted in the same manner as described for Task B1. The depth-to-water data collected during this comprehensive groundwater monitoring round shall be used to determine water level elevations that can be used to create groundwater elevation contour maps and determine groundwater flow direction. Groundwater concentration contour maps for all constituents that exceed the applicable Residential, Used Aquifer MSCs shall be prepared using the data from this sampling round and these maps shall be included in the SSCR referenced below.

Task B3: Supplemental Site Characterization and Reporting

This milestone provides bidders the opportunity to identify which additional site characterization work will be completed in advance of finalizing the remedial

approach design and moving ahead with its implementation. Conducting supplemental investigative activities under this milestone is mandatory. The USTIF will be reimbursing up to $10,000 for supplemental site characterization and reporting costs under this milestone. Bidders are to describe what supplemental site characterization will be completed, the rationale for the work and how the derived data will be used. For purposes of bidding, and to ensure consistent cost scoring of bids, each bidder will enter exactly $10,000 as the bid price for Milestone Task B3_in the Standard Bid Cost Spreadsheet. The USTIF will only reimburse up to $10,000 of reasonable and necessary costs for those tasks actually performed. The selected bidder must provide time and material documentation in addition to supporting documentation required (in Exhibit C of the executed Remediation Agreement) to support the requested reimbursement and completion of this milestone.

Bidders may use this opportunity to: 1) confirm any elements of the site characterization completed by a previous consultant; 2) address any perceived data gaps in the existing site characterization work; 3) assist in the evaluation and determination of remedial technologies and system design; and 4) assist with refining the cleanup timeframe estimate and/or other reasons related to validating the bidder's remedial approach and design.

MILESTONE C – PILOT TESTING

Bidders shall prepare a conceptual remedial action plan including the conceptual design of a remedial system in their response to this RFB. It is industry practice to perform a pilot test or remedial feasibility test and provide the results of this testing in the RAP. The purpose of the pilot test is to:

- Confirm that the proposed technology is technically feasible
- Confirm that the proposed technology is cost-effective
- Confirm that the proposed technology will provide a timely closure
- Determine design criteria

The bidder shall provide a detailed description of the proposed pilot testing including rationale, the use of existing or installation of new data monitoring/collection points, proposed equipment to be used, and the data that is proposed to be collected. Additionally, the bidder shall specify up to five basic, objective criteria that would be evaluated to determine whether the remedial action proposed in the bid response document is feasible. The criteria shall be listed with an upper and lower limit that will define the range of acceptable results. These criteria must be tightly- controlled measurements or calculations that could be independently measured or verified by others during the pilot test.

Pilot Test "Off-Ramp" / Changed Condition

The selected consultant and the Solicitor are protected from being obligated to move forward with a remedial action under Milestone D if the Milestone D proposed remedial approach is not optimal or is expected to fail based on new site characterization or pilot test data from Milestone C. While the selected bidder will be under no obligation to cancel the eventual Fixed-Price Remediation Agreement if the site characterization or pilot test results are outside the criteria or range specified in the bidder's RFB Solicitation response, the following conditions will apply:

1. With advanced Solicitor and USTIF approval, the selected bidder may elect to modify the Milestone D remediation plan and continue with the project at no additional cost; that is, for the same total fixed price found in the RFB Solicitation response, based on the remaining fixed description and price for the remaining tasks.

2. If the Solicitor or USTIF choose not to approve the selected bidder's revised plan adjusting to the new Milestone C data, the Remediation Agreement for the project will terminate.

3. Or if the selected bidder adequately demonstrates the site conditions revealed by Milestone C activities are significant and could not have reasonably been expected prior to conducting the Milestone C activities, the selected bidder may elect to not proceed and withdraw from / terminate the Remediation Agreement for the project.

Bidders shall, therefore, specify within their bids the critical criteria (if any) that will be used by Solicitor and the selected bidder to evaluate the significance of data obtained through Milestone C activities. These critical criteria shall be used to assess if the new data change the feasibility of the Milestone D proposed remedial approach. As such, and as applicable, bids shall list an upper and lower limit for each critical criterion that will define the range of acceptable results (i.e., feasibility study or pilot testing results) relevant to the proposed Milestone D remedial approach. These criteria must be measurements or calculations that could be independently measured or verified by others during testing. Based on these criteria, Exhibit A of the Fixed-Price Agreement (ATTACHMENT 3) will contain a provision allowing cancellation of the Agreement should test results (i.e., the data obtained during the implementation of Milestone C) not meet certain bidder-defined criteria bounds (ranges). Each bidder, therefore, shall explicitly specify any and all critical criteria and their associated acceptable ranges for key design elements on which the Milestone D proposed remedy depends (i.e., the critical criteria and quantified ranges of values that will make the proposed conceptual remedial action plan technically feasible, cost-effective, and timely).

For example, bids shall include language like, "For our Milestone D proposed remedial action approach to be successful and for the technology(ies) used thereby

to operate as planned and meet our proposed cleanup schedule, the Milestone C testing must show:

1. A hydraulic conductivity greater than X;
2. A pumping rate exceeding XX gpm at the end of YY hours of vacuum enhanced pumping;
3. The capacity to generate a soil vapor extraction vacuum of at least Y in the native soil while not exceeding a soil flow rate of Z; and
4. Iron and manganese hardness within groundwater at or below XX milligrams per liter (mg/L)."

This is only an example. Actual bid language, if any, and the associated critical criteria will vary by bidder. Please note that the Changed Condition criteria only applies to data from the Milestone C activities. Should it eventually be found once the Milestone D proposed remedial solution is implemented that the site, in fact, does exceed the critical criteria ranges, this will **not** constitute a Changed Condition since the selected bidder was given the opportunity under Milestone C to finish establishing site conditions.

The critical criteria identified in each bid and their associated acceptable range of testing results will be evaluated by the bid evaluation committee as part of the technical review. **Unrealistic criteria or criteria that are unreasonably narrow will reduce the favorability of the bid as viewed by the bid review committee**.

The selected bidder will prepare a Pilot Test Report and submit it to the Solicitor with a copy to the Technical Contact. The Pilot Test Report shall show that the pilot test was conducted according to their bid and shall constitute documentation for payment on Milestone C regardless of the result. If the results of the pilot testing show that the proposed remedial action is feasible based on the specified criteria and ranges, the selected consultant shall move forward on the project. However, if the results of the pilot testing show that the proposed remedial action is not feasible based on the specified criteria, either the selected consultant or the Solicitor may elect to cancel the Remediation Agreement (See Provisions in Exhibit A of the Draft Remediation Agreement provided as ATTACHMENT 3). This stage of the project is referred to as the "Pilot Test Off-Ramp" and is intended to protect the selected consultant and the Solicitor from being obligated to move forward with a remedial action that is expected to be far from optimal or expected to fail. The selected bidder is under no obligation to cancel the contract if the pilot test results are outside the criteria or range specified in the RFB Solicitation response, and may proceed with a system designed to remediate the site using the criteria defined in the pilot test even if that system varies from that which was proposed in the RFB solicitation if the Solicitor agrees and elects not to cancel the contract.

If either party elects to cancel the contract, the USTIF will have complete discretion with regard to the use of the information in the Pilot Test Report. The USTIF may use it as the basis for rebidding the project or may provide it to one or more of the

previously unsuccessful bidders and request revised RFB solicitations. However, it will be specified that any use that a third party makes of the Pilot Test Report will be at the sole risk of the Third Party.

For consistency, bidders shall budget 10% of the total bid cost for this Milestone, with a maximum of $50,000. For example, if the total proposed cost for Milestones A through I (excluding C) is determined to be $300,000, the cost of Milestone C specified in the bid shall be up to $30,000. However, if the total proposed cost for Milestones A through I (excluding C) is determined to be $550,000, the cost of Milestone C specified in the bid response shall be up to but no more than $50,000.

MILESTONE D - PREPARATION, SUBMITTAL AND PADEP APPROVAL OF A COMBINED SUPPLEMENTAL SITE CHARACTERIZATION REPORT/REMEDIAL ACTION PLAN

The selected bidder shall prepare a combined Supplemental Site Characterization Report/Remedial Action Plan (SSCR/RAP) in accordance with 25 Pa Code §245.310 and 25 Pa Code §245.311.

The SSCR portion of the combined SSCR/RAP shall document and discuss the data obtained and the conclusions drawn from the completion of Milestones A, B1, B2, B3 and B4. Tables, figures, and other attachments that support the text shall include the following:

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

The RAP portion of the combined SSCR/RAP shall document and discuss the data obtained from Milestone C, include all tables, figures and other documents that support the RAP text, and include a detailed remedial alternatives evaluation that leads to the selection of the remedial technology proposed by the selected bidder.

The selected bidder shall prepare a SSCR/RAP in draft form for review and comment by the Solicitor and the USTIF. This SSCR/RAP shall contain information required under 25 PA Code 245.310 and 245.311 and other applicable statutes, regulations and guidance, and shall be signed and sealed by a Professional Geologist and a Professional Engineer registered in the Commonwealth of Pennsylvania. Each bidder's project schedule shall provide three weeks for the Solicitor and USTIF review of the draft document. The final SSCR/RAP shall address comments received from the Solicitor and the USTIF on the draft report before it is submitted to the PaDEP for review and approval. The SSCR/RAP shall be consistent (with regard to approach and level of effort) with the conceptual RAP provided in the selected consultant's bid response. Upon approval of the SSCR/RAP by the PaDEP, the selected bidder will be paid the fixed-price amount specified for this Milestone in the Remediation Agreement and can then proceed with installation of the remedial system.

MILESTONE E – REMEDIAL SYSTEM DESIGN, PERMITTING, INSTALLATION AND STARTUP

This Milestone shall include all costs associated with the purchase and installation of the remedial system up to the point in time that it has been installed and daily operation is implemented as described in the selected consultant's PADEP-approved RAP. The Solicitor and USTIF shall have the opportunity to inspect and confirm that the system has been installed as described in the Remediation Agreement and that it is in daily operation as described in the RAP. Bidder shall describe specific monitoring operation, monitoring, and maintenance procedures proposed to monitor and evaluate the performance of the proposed remediation system and how the system may be adjusted during the implementation of the remediation.

The proposed remedial system design, including but not limited to, mechanical equipment in trailers or other enclosures, conveyance systems, extraction wells and points, instrumentation, and on-site and remote controls should be described and be shown on diagrams provided in as much detail as practical.

The bidder shall describe the principal source/vendors of the remedial equipment system and installation. The bidder shall provide Process and Instrumentation Diagrams and cut sheets.

The bidder shall describe the routine maintenance activities and schedule.

The bidder shall describe how progress will be monitored and how the system may be adjusted. The bidder must be specific with regard to parameters to be monitored and how these data will be used.

The bidder shall describe what permits are anticipated and include any costs for permitting in the fixed-price cost for this Milestone, as well as present calculated

estimates on the duration of system operation based on an estimate of mass in place and mass removal rates.

The bidder shall present other relevant information that would assist in the evaluation of the bid.

Critical Remedial System Design Elements

The successful bidder shall show that their remedial system would remediate dissolved-phase contaminants to the SHS in their proposed timeframe. The conceptual RAP presented in this RFB has been accepted in principle by the PaDEP and includes two generally acceptable remedial approaches – AS/SVE and DPE/TPE. Alternatives to these two PaDEP-accepted remedial approaches may be presented in the bid response, but it is critical that the bidder show that the alternative technology is feasible on a conceptual level before pilot testing, and perform a thorough demonstration of the feasibility and practicality during pilot testing. It is also critical that any proposed alternatives do not exacerbate site impacts.

Assume Off-Site Natural Attenuation

It is assumed that monitored natural attenuation will continue and that on-site remedial activities implemented by the selected bidder that reduce on-site groundwater concentrations and reduce source concentrations will increase the attenuation rate in the off-site monitoring wells by largely cutting off the on-site source.

MILESTONES F1-F*n* - REMEDIAL SYSTEM OPERATION AND MAINTENANCE (O & M), NPDES SAMPLING/REPORTING, QUARTERLY GROUNDWATER MONITORING/SAMPLING, AND PREPARATION/SUBMITTAL OF QUARTERLY REMEDIAL ACTION PROGRESS REPORTS (RAPRs)

Following system activation and Solicitor and ICF confirmation that the system has been installed as described in the Remediation Agreement and is in daily operation as described in the RAP, the selected bidder shall operate and maintain the system until Milestone F*n* is achieved. These are quarterly Milestones, and the bidder's proposed fixed-price cost for each quarterly milestone should include all costs associated with the operation and maintenance of the proposed remedial system, NPDES sampling/reporting, quarterly groundwater gauging/sampling and preparation/submission of a RAPR that presents all data collected during the respective quarter, in accordance with 25 PA Code 245.312, until Milestone I is initiated, as described in detail in Exhibit D of the Draft Remediation Agreement (ATTACHMENT 3).

All system and groundwater samples collected during the system O & M milestones shall be analyzed in accordance with the PaDEP's Old Shortlist of unleaded gasoline

and diesel fuel parameters (i.e., benzene, toluene, ethylbenzene, total xylenes, cumene, naphthalene, MTBE, fluorene and phenanthrene) and 1,2-DBA, using the approved laboratory methods capable of reporting to the PaDEP-established Practical Quantitation Limits.

MILESTONES G1-G8 – QUARTERLY GROUNDWATER ATTAINMENT MONITORING/SAMPLING AND PREPARATION/SUBMITTAL OF QUARTERLY REMEDIAL ACTION PROGRESS REPORTS (RAPRs)

Under this Milestone, bidders shall provide a fixed price to complete eight quarters of groundwater monitoring and sampling following the completion of Milestone F. Each monitoring event shall include gauging of all Site monitoring wells and sampling of those monitoring wells specified in the RAP to be sampled for this purpose.

Water level measurements, purging, sampling and analyses shall be conducted in the same manner as described for Task B1. The depth-to-water data collected during each groundwater monitoring round shall be used to determine water level elevations such that groundwater flow direction can be determined and used to create groundwater elevation contour maps for the site. Groundwater concentration contour maps for all constituents that exceed the applicable RUA MSCs shall be prepared using the data from the quarterly sampling round and these maps shall be included in each RAPR.

MILESTONE H - PREPARATION, SUBMITTAL AND PADEP APPROVAL OF A REMEDIAL ACTION COMPLETION REPORT

When the successful bidder is convinced that a demonstration of attainment of the RUA SHS can be made for groundwater, 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 RUA SHS and with no activity and use limitations for the 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 USTIF review of the draft document. The final RACR shall address comments received from the Solicitor and USTIF on the draft before it is submitted to the PaDEP. The RACR shall request Relief from Liability for the January 1999 petroleum release by demonstrating compliance with the Residential, Used Aquifer Statewide Health Standard 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 I – 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 REQUIREMENTS

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

- Complete necessary, reasonable, and appropriate project planning and management activities until the SOW specified in the executed remediation agreement has been completed. Such activities would be expected to include client communications / updates, meetings, record keeping, subcontracting, personnel and subcontractor management, quality assurance/quality control, scheduling, and other activities. Project planning and management activities will also include preparing and implementing any plans required by regulations or that may be necessary and appropriate to complete the scope of work. 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 Tasks 1 through 12, as appropriate.

- Be responsible for coordinating, managing and completing the proper management, characterization, handling, treatment, and/or disposal of all investigation derived wastes in accordance with standard industry practices and applicable laws, regulations, guidance and PADEP directives. Waste characterization and disposal documentation shall be maintained and provided to the Solicitor upon request and shall be included as an appendices to either the RAP or the RACR. Waste disposal costs shall be included in the fixed prices quoted for Tasks 1 through 12, as appropriate.

- Be responsible for providing the Solicitor and property tenants with adequate advance notice prior to each visit to the property. The purpose of this

notification is to coordinate with the Solicitor and tenants to facilitate appropriate access to the areas of the site necessary to complete the Scope of Work. Return visits to the site prompted by a failure to make the necessary logistical arrangements in advance will not constitute a chance in the selected consultant's Scope of Work or total quoted cost for Tasks 1 through 12.

- 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 industry standards/practices, and be consistent with the applicable laws, regulations, and guidance (e.g., PADEP Groundwater Monitoring Guidance Manual, Document No. 383-3000-001 dated December 1, 2001).

Each bidder should carefully review the existing site information provided in ATTACHMENT 1 to this RFB and seek out other appropriate sources of information to develop a cost estimate and schedule to close the site. 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) that includes performance-based milestones. A copy of the Draft Remediation Agreement is included as ATTACHMENT 3 to this RFB solicitation. This agreement is a combination of the standard Fixed-Price Remediation Agreement and the standard Pay-for-Performance Contract that have been previously employed by other Solicitors on other USTIF-funded claims. The bidder must identify in the bid response document any modifications that they wish to propose to the Remediation Agreement language in ATTACHMENT 3 other than obvious modifications to fit this RFB (e.g., names and dates). The number and scope of any modifications to the agreement will be one of the criteria used to evaluate the bid. **Any bid response that does not clearly and unambiguously state that the bidder accepts the Remediation Agreement included in ATTACHMENT 3 "as is," or that does not provide a cross-referenced list of requested changes to this agreement will be considered non-responsive to**

this RFB Solicitation. Any requested changes to the agreement should be specified in the bid response, however, these changes will need to be reviewed and agreed upon by both the Solicitor and USTIF.

The Remediation Agreement costs shall be based on unit prices for labor, equipment, materials, subcontractors/vendors and other direct costs. The total cost quoted by the 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, 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, USTIF, and PADEP.

The bidder shall provide its bid using the Standardized Bid Cost Spreadsheet included as ATTACHMENT 2 with brief descriptions provided 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 2, 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 consultant's work under the USTIF claim will be subject to ongoing review by the Solicitor and USTIF or its representatives to assess whether the work has been completed and the associated incurred costs are reasonable, necessary, and appropriate.

In order to facilitate USTIF's review and reimbursement of invoices submitted under this claim, the Solicitor requires that project costs be invoiced by the Milestones identified in the bid. The standard practice of tracking total cumulative costs by bid task will also be required to facilitate invoice review.

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

F. BID RESPONSE DOCUMENT

Each bid response document must include at least the following:

1. Demonstration of the bidder's understanding of the existing site information provided in this RFB, standard industry practices, and the objectives of the project. This is important because the bidder's understanding and technical approach is the most heavily-weighted evaluation criteria.

2. Identify the bidder's approach to achieving project objectives efficiently and effectively.

3. Provide Fixed-Price bid pricing using the standardized format in ATTACHMENT 2 including a rate schedule for any out-of-scope work. The following information relating to the bid pricing should be included as additional sheets in ATTACHMENT 3 or discussed in the body of the bid document:

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

    b. The bidder's proposed mark-up on other direct costs and subcontractors (if any);

    c. The bidder's total fixed cost by Milestone consistent with the proposed SOW identifying all level-of-effort and costing assumptions.

4. Include documentation of the bidder's level of insurance consistent with the levels listed in ATTACHMENT 3[3].

5. Identify the key project personnel, including the proposed Professional Geologist and Professional Engineer of Record who will be responsible for overseeing the work and applying a professional seals to the project deliverables. The inclusion of brief resumes of key project team members is required.

6. Include answers to the following specific questions:

    a. Does your company employ the PA-licensed Professional Geologist and Professional Engineer that are designated above?

    b. How many Chapter 245 Corrective Action projects is your company currently the consultant of record for in the State? In the Northeast Region? Please list up to 10.

    c. How many Chapter 245 Corrective Action projects has your company and/or the PA-licensed PG closed (i.e., obtained relief from liability from the PADEP following the submission of an SCR, RAP, and RACR) using the Statewide Health Standard and the remedial technology proposed in your bid response?

[3] The selected consultant 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.

Provide up to two concise case histories including duration of remediation and timing to obtain relief from liability. These case histories should include a description of the nature and extent of contamination at the site prior to the implementation of the remediation (i.e., list of contaminated media and average concentrations in each media).

d. Has your firm ever been a party to a terminated USTIF-funded Fixed-Price (FP) or Pay-for-Performance (PFP) contract without attaining all of the Milestones? If so, please explain, including whether the conditions of the FP or PFP contract were met.

7. Identify and sufficiently describe subcontractor involvement by task.

8. Describe how the bidder will monitor and evaluate the performance of the remediation system and how the system may be adjusted during the implementation of the remediation.

9. Provide a detailed schedule of activities for completing the proposed SOW inclusive of reasonable assumptions regarding the timing and duration of client and PADEP reviews (if any) needed to complete the SOW. Details on such items as proposed meetings and work product submittals shall also be reflected in the schedule.

10. Describe your approach to working with the PADEP, from project inception to site closure.

11. Describe how the Solicitor and ICF / USTIF will be kept informed on the project progress and developments and how the Solicitor (or designee) will be informed of, and participate in, evaluating technical issues that may arise during this project.

12. Identify key assumptions made in formulating the proposed cost estimate. The use of overly narrow assumptions will negatively impact the bid.

13. Identify any exceptions or special conditions applicable to the proposed SOW.

14. Include quotations from major subcontractors.

G. MANDATORY SITE VISIT

THERE WILL BE A MANDATORY SITE MEETING ON THURSDAY, FEBRUARY 28, 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 will allow each bidding firm to inspect the site and evaluate site conditions. This meeting is mandatory for all bidders – no exceptions. **ANY FIRM THAT DOES NOT ATTEND THE**

MANDATORY SITE VISIT WILL NOT BE ELIGIBLE TO SUBMIT A BID RESPONSE.

A CONFIRMATION OF YOUR INTENT TO ATTEND THIS MEETING IS REQUESTED TO BE PROVIDED TO THE TECHNICAL CONTACT VIA E-MAIL BY WEDNESDAY, FEBRUARY 27, 2013 WITH THE SUBJECT "FORMER ROUTE 248 TEXACO 1999-0441(F) – SITE MEETING ATTENDANCE CONFIRMATION". The name and contact information of the company participant should be included in the body of the e-mail.

Figure 2

Galaxy One, LLC (Former Route 248 Texaco)

3621 Nazareth Rd. (Route 248), Easton, Northampton County, Pennsylvania

Aerial Map Showing Site and Surrounding Properties

DRAWN BY: JPB	DATE: 11/30/12	DRAWING NO. eastn8009-003-D1
CHECKED & APPROVED BY: DLR		

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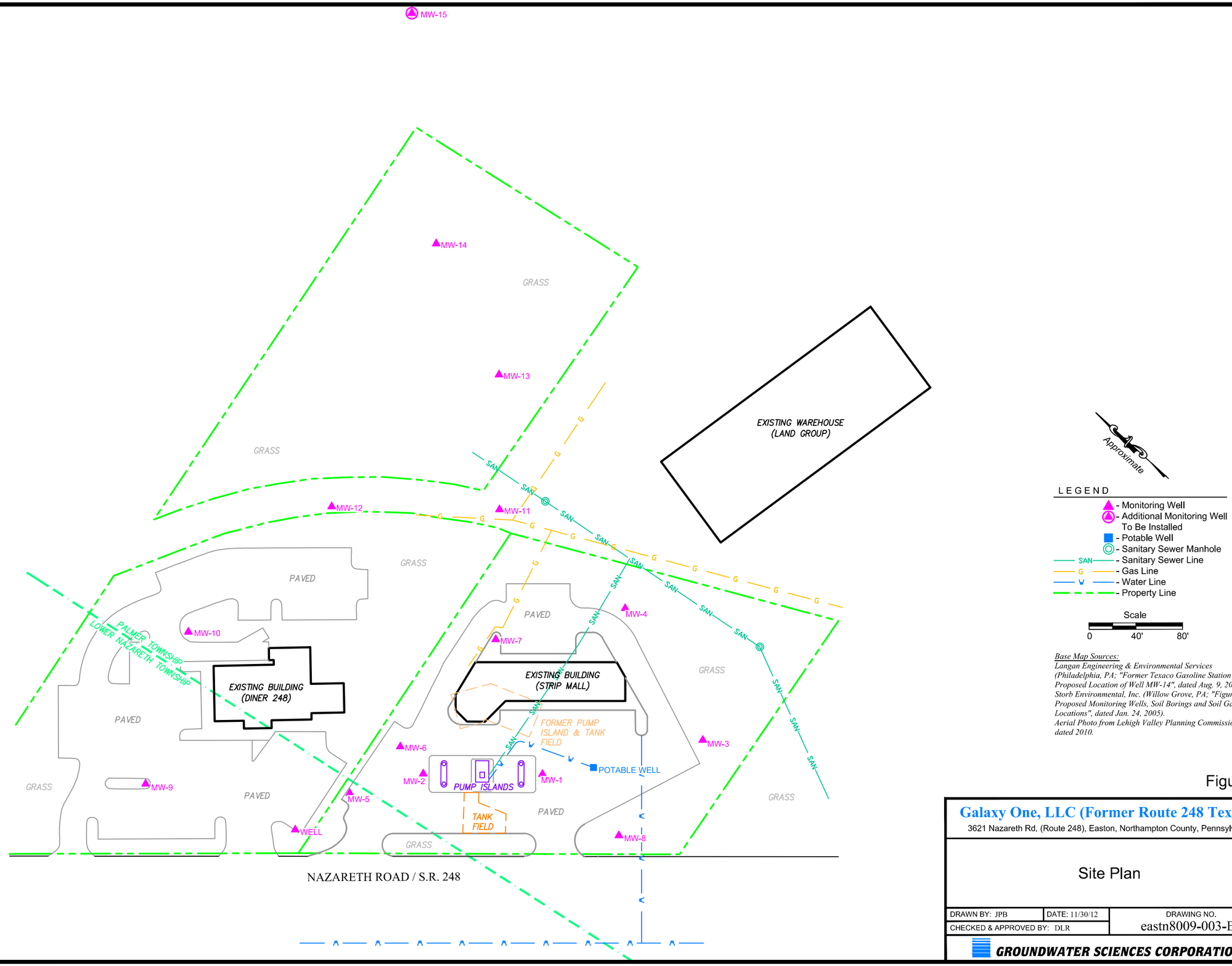

Base Map Sources:
Langan Engineering & Environmental Services (Philadelphia, PA; "Former Texaco Gasoline Station / Proposed Location of Well MW-14", dated Aug. 9, 2010).
Storb Environmental, Inc. (Willow Grove, PA; "Figure 1 / Proposed Monitoring Wells, Soil Borings and Soil Gas Locations", dated Jan. 24, 2005).
Aerial Photo from Lehigh Valley Planning Commission, dated 2010.

Figure 3

Galaxy One, LLC (Former Route 248 Texaco)
3621 Nazareth Rd. (Route 248), Easton, Northampton County, Pennsylvania

Site Plan

DRAWN BY: JPB	DATE: 11/30/12	DRAWING NO. eastn8009-003-E1
CHECKED & APPROVED BY: DLR		

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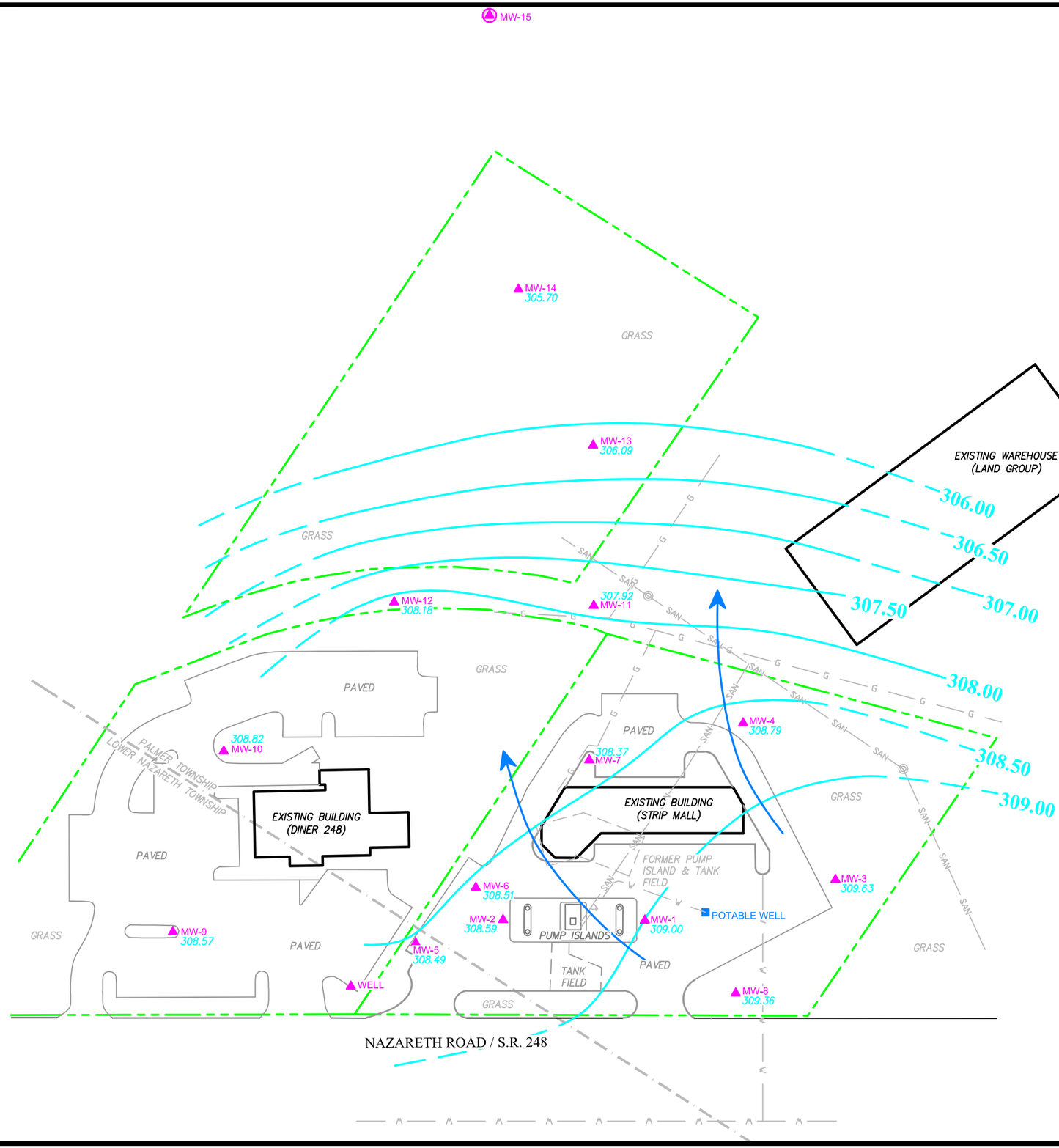

Base Map Sources:
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Aerial Photo from Lehigh Valley Planning Commission, dated 2010.

Figure 4

Galaxy One, LLC (Former Route 248 Texaco)
3621 Nazareth Rd. (Route 248), Easton, Northampton County, Pennsylvania

Groundwater Elevation Contour Map
March 14, 2012

DRAWN BY: JPB/MHM	DATE: 11/30/12	DRAWING NO.
CHECKED & APPROVED BY: DLR		eastn8009-004-C1

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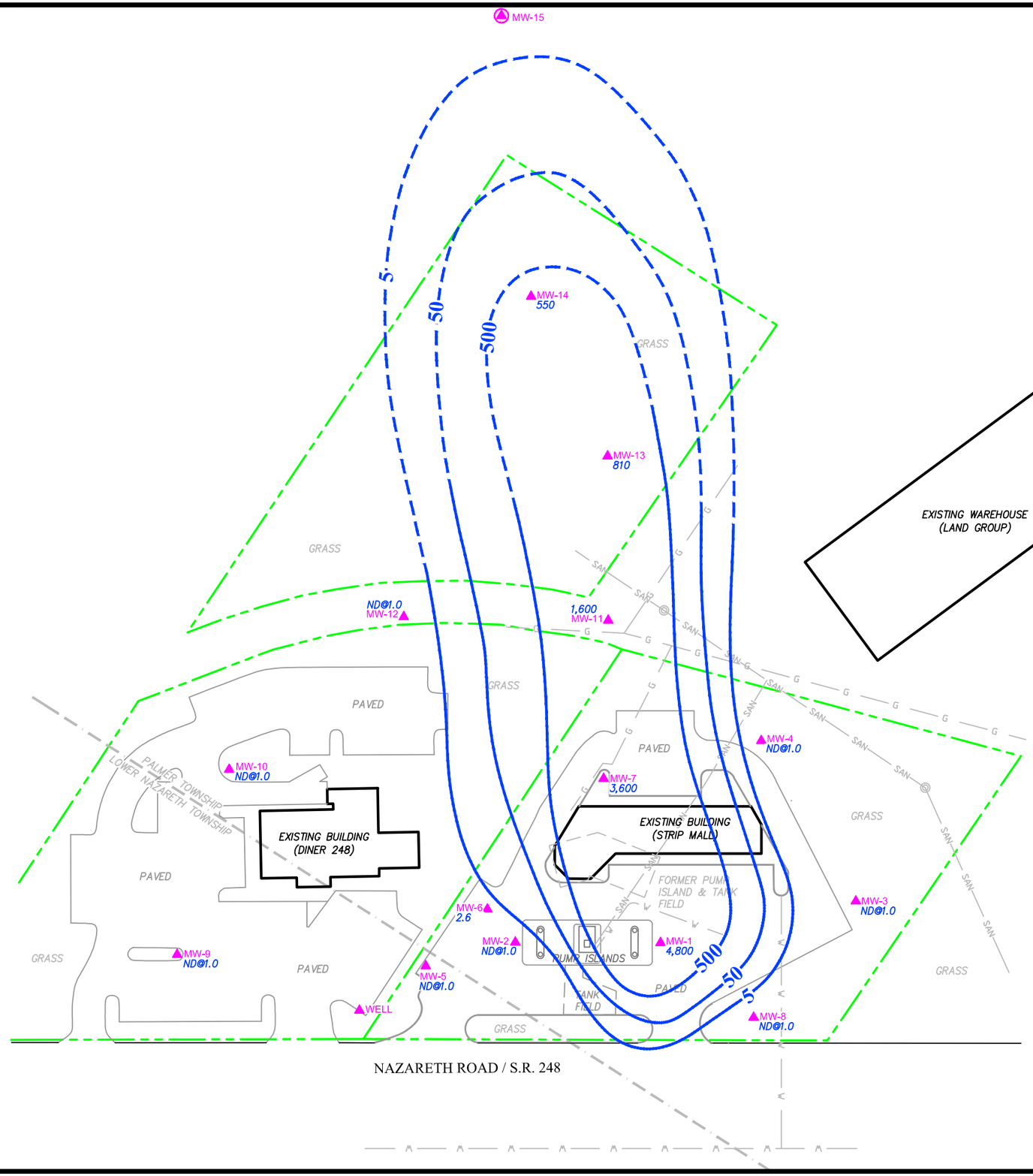

LEGEND

- 5 - Dissolved-Phase Benzene Concentration Contour (µg/L; dashed where inferred)
- 3,600 - Dissolved-Phase Benzene Concentration (µg/L)
- ND@X - Not Detected at Laboratory Detection Limit "X"
- µg/L - Micrograms per Liter
- ▲ - Monitoring Well
- ▲ - Additional Monitoring Well To Be Installed
- ◎ - Sanitary Sewer Manhole
- SAN - Sanitary Sewer Line
- G - Gas Line
- W - Water Line
- Property Line

Scale

0 40' 80'

Base Map Sources:

Langan Engineering & Environmental Services (Philadelphia, PA; "Former Texaco Gasoline Station / Proposed Location of Well MW-14", dated Aug. 9, 2010).
Storb Environmental, Inc. (Willow Grove, PA; "Figure 1 / Proposed Monitoring Wells, Soil Borings and Soil Gas Locations", dated Jan. 24, 2005).
Aerial Photo from Lehigh Valley Planning Commission, dated 2010.

Figure 5

Galaxy One, LLC (Former Route 248 Texaco)

3621 Nazareth Rd. (Route 248), Easton, Northampton County, Pennsylvania

Dissolved-Phase Benzene Concentration Contour Map March 14-15, 2012

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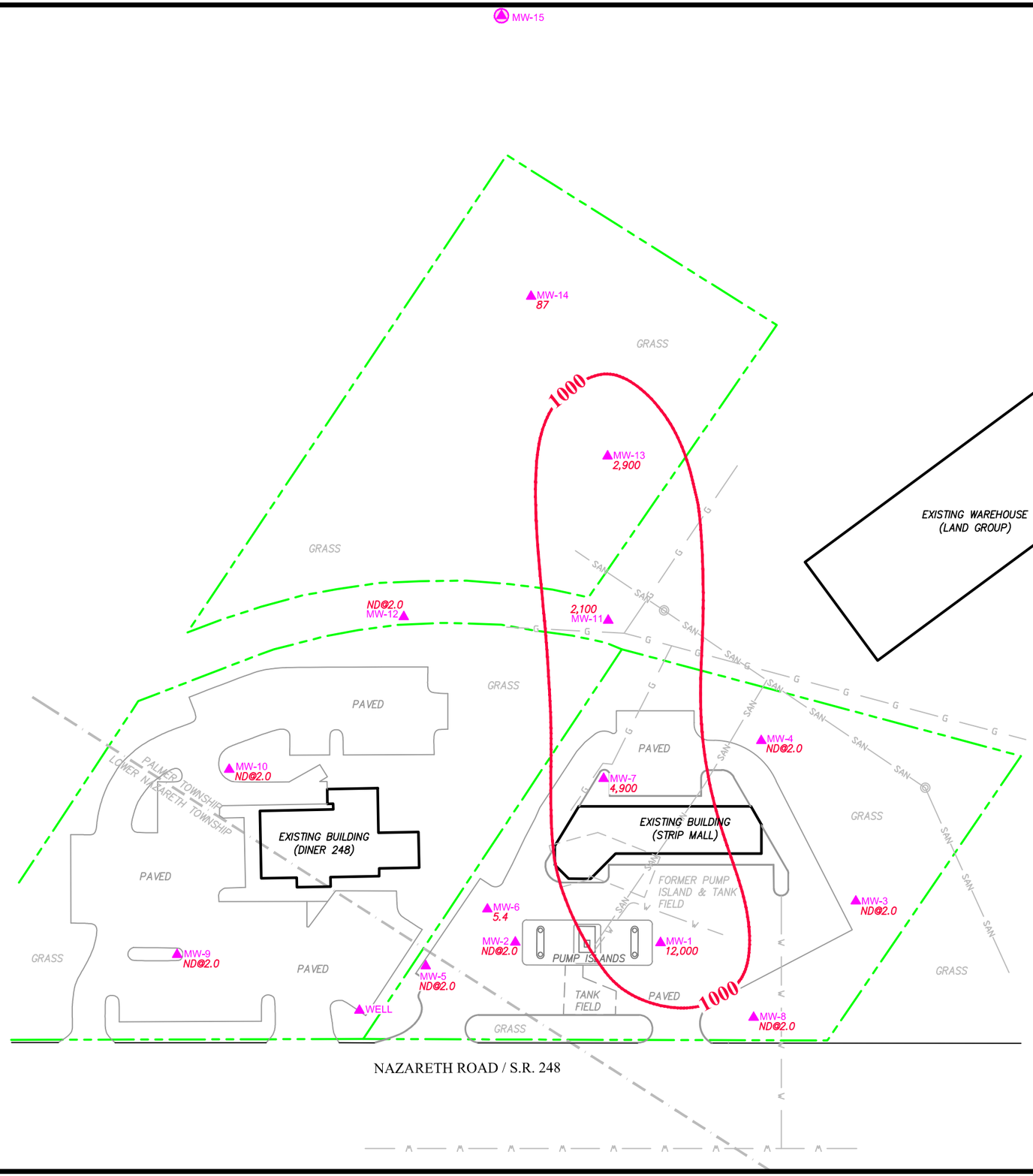

Base Map Sources:
Langan Engineering & Environmental Services (Philadelphia, PA; "Former Texaco Gasoline Station / Proposed Location of Well MW-14", dated Aug. 9, 2010).
Storb Environmental, Inc. (Willow Grove, PA; "Figure 1 / Proposed Monitoring Wells, Soil Borings and Soil Gas Locations", dated Jan. 24, 2005).
Aerial Photo from Lehigh Valley Planning Commission, dated 2010.

Figure 6

Galaxy One, LLC (Former Route 248 Texaco)
3621 Nazareth Rd. (Route 248), Easton, Northampton County, Pennsylvania

Dissolved-Phase Toluene Concentration Contour Map March 14-15, 2012

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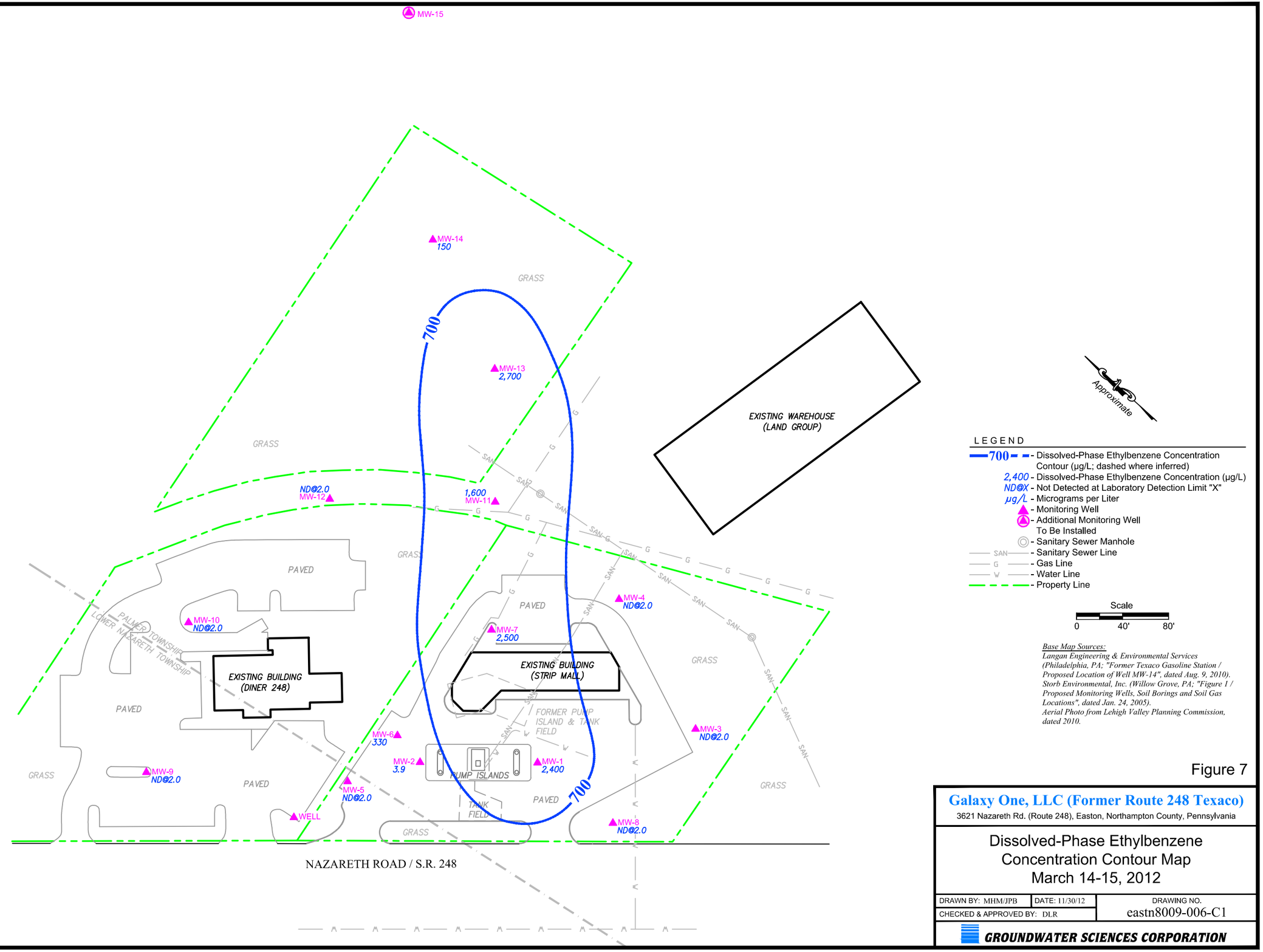

Base Map Sources:
Langan Engineering & Environmental Services (Philadelphia, PA; "Former Texaco Gasoline Station / Proposed Location of Well MW-14", dated Aug. 9, 2010).
Storb Environmental, Inc. (Willow Grove, PA; "Figure 1 / Proposed Monitoring Wells, Soil Borings and Soil Gas Locations", dated Jan. 24, 2005).
Aerial Photo from Lehigh Valley Planning Commission, dated 2010.

Figure 7

Galaxy One, LLC (Former Route 248 Texaco)
3621 Nazareth Rd. (Route 248), Easton, Northampton County, Pennsylvania

Dissolved-Phase Ethylbenzene Concentration Contour Map
March 14-15, 2012

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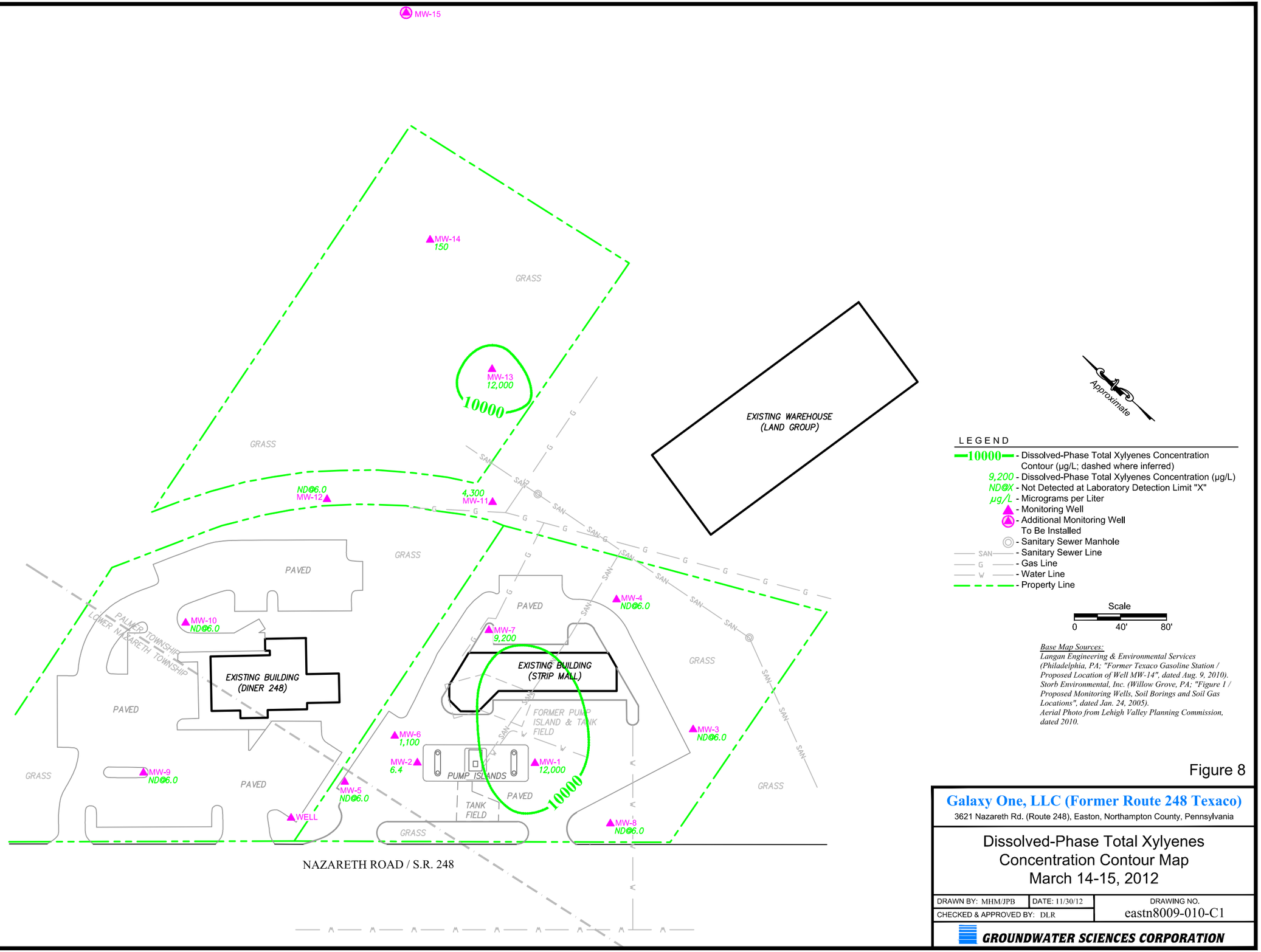


Base Map Sources:
Langan Engineering & Environmental Services (Philadelphia, PA; "Former Texaco Gasoline Station / Proposed Location of Well MW-14", dated Aug. 9, 2010).
Storb Environmental, Inc. (Willow Grove, PA; "Figure 1 / Proposed Monitoring Wells, Soil Borings and Soil Gas Locations", dated Jan. 24, 2005).
Aerial Photo from Lehigh Valley Planning Commission, dated 2010.

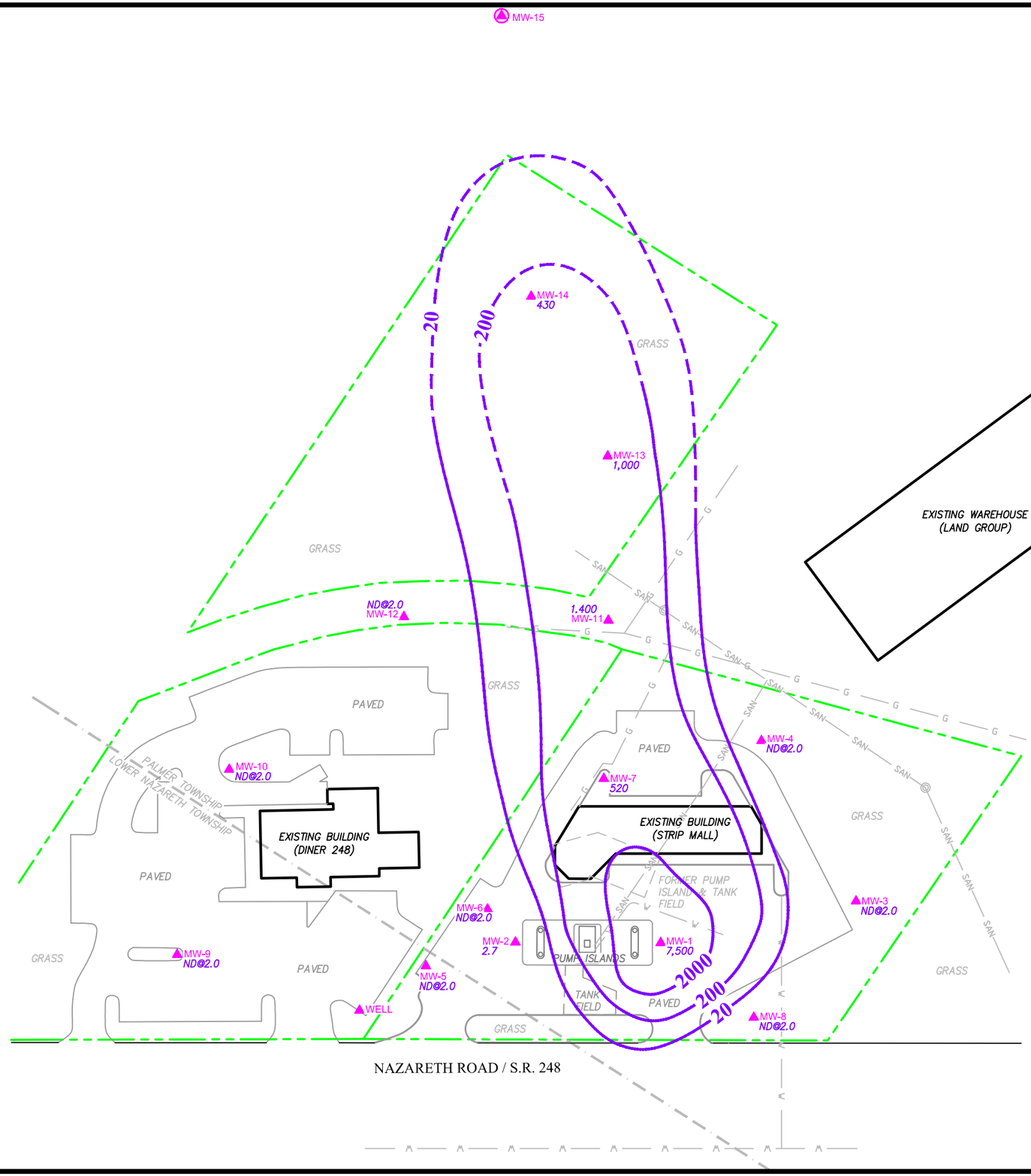
Figure 8

Galaxy One, LLC (Former Route 248 Texaco)
3621 Nazareth Rd. (Route 248), Easton, Northampton County, Pennsylvania

Dissolved-Phase Total Xylyenes Concentration Contour Map
March 14-15, 2012

DRAWN BY: MHM/JPB	DATE: 11/30/12	DRAWING NO. eastn8009-010-C1
CHECKED & APPROVED BY: DLR		

GROUNDWATER SCIENCES CORPORATION



LEGEND

- MTBE - Methyl T-Butyl Ether
- 20 - Dissolved-Phase MTBE Concentration Contour (µg/L; dashed where inferred)
- 520 - Dissolved-Phase MTBE Concentration (µg/L)
- ND@X - Not Detected at Laboratory Detection Limit "X"
- µg/L - Micrograms per Liter
- ▲ - Monitoring Well
- ◉ - Additional Monitoring Well To Be Installed
- ◎ - Sanitary Sewer Manhole
- SAN - Sanitary Sewer Line
- G - Gas Line
- W - Water Line
- Property Line

Scale

0 40' 80'

Base Map Sources:
Langan Engineering & Environmental Services (Philadelphia, PA; "Former Texaco Gasoline Station / Proposed Location of Well MW-14", dated Aug. 9, 2010).
Storb Environmental, Inc. (Willow Grove, PA; "Figure 1 / Proposed Monitoring Wells, Soil Borings and Soil Gas Locations", dated Jan. 24, 2005).
Aerial Photo from Lehigh Valley Planning Commission, dated 2010.

Figure 9

Galaxy One, LLC (Former Route 248 Texaco)

3621 Nazareth Rd. (Route 248), Easton, Northampton County, Pennsylvania

Dissolved-Phase MTBE Concentration Contour Map March 14-15, 2012

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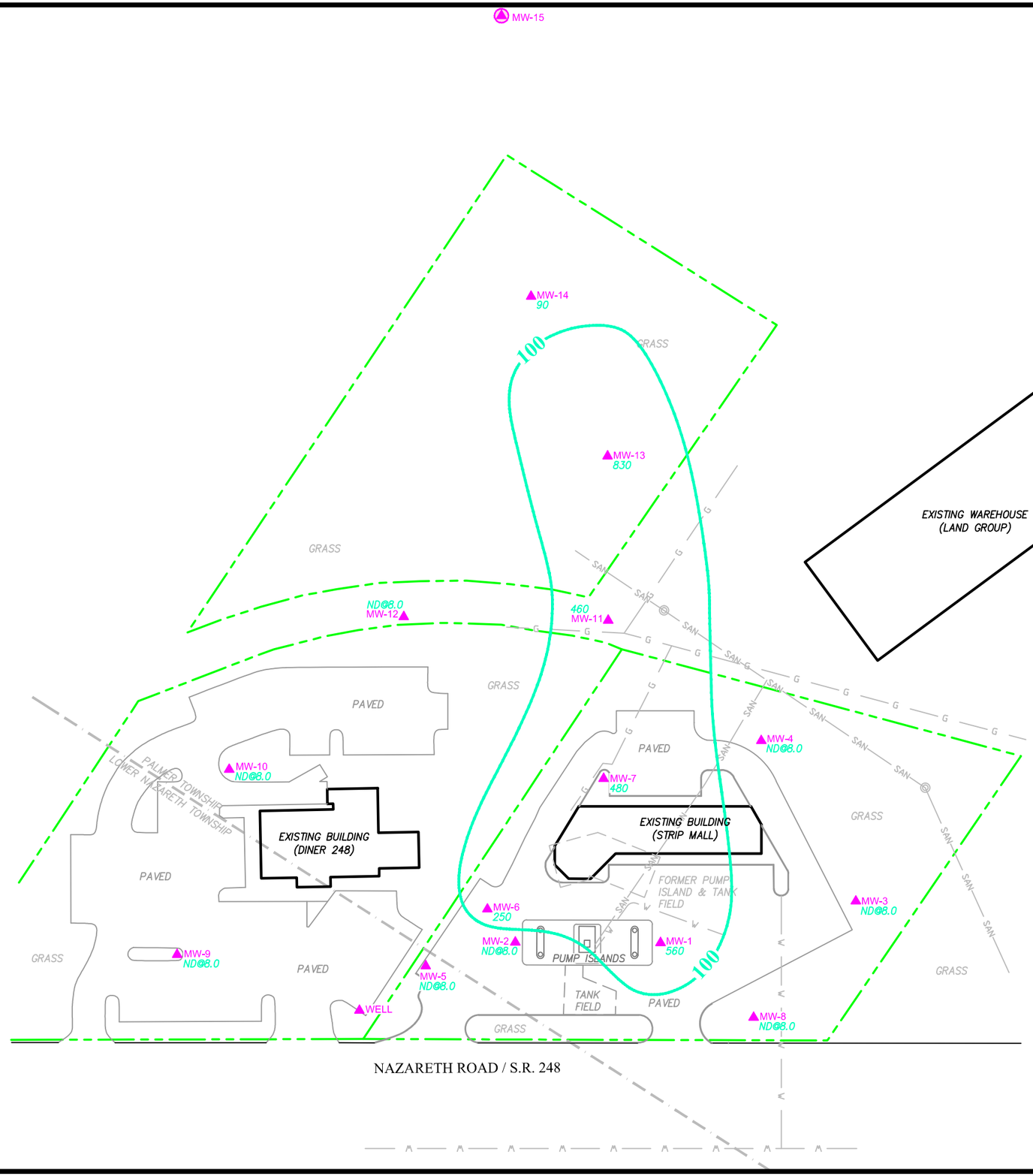

Base Map Sources:
Langan Engineering & Environmental Services (Philadelphia, PA; "Former Texaco Gasoline Station / Proposed Location of Well MW-14", dated Aug. 9, 2010).
Storb Environmental, Inc. (Willow Grove, PA; "Figure 1 / Proposed Monitoring Wells, Soil Borings and Soil Gas Locations", dated Jan. 24, 2005).
Aerial Photo from Lehigh Valley Planning Commission, dated 2010.

Figure 10

Galaxy One, LLC (Former Route 248 Texaco)
3621 Nazareth Rd. (Route 248), Easton, Northampton County, Pennsylvania

Dissolved-Phase Naphthalene Concentration Contour Map March 14-15, 2012

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CHECKED & APPROVED BY: DLR		

GROUNDWATER SCIENCES CORPORATION