Request for Bid

Fixed-Price Defined Scope of Work to Complete Characterization

Solicitor

John F. Tressler Jr.

Tressler's Midway Gulf

5817 Nittany Valley Drive (State Route 64), Lamar, Porter Township, Clinton County, Pennsylvania 16848

PADEP Facility ID #: 18-03809 PAUSTIF Claim #: 2003-0120(I)

Date of Issuance

April 6, 2015

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

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

Calendar of Events

Activity	Date and Time
Notification of Intent to Attend Site Visit	April 20, 2015 by 3 p.m.
Mandatory Pre-Bid Site Visit	April 21, 2015 at 11 a.m.
Deadline to Submit Questions	May 1, 2015 by 5 p.m.
Bid Due Date and Time	May 12, 2015 by 3 p.m.

Contact Information

Technical Contact
Mr. Chris O'Neil **Groundwater Sciences Corporation** **2601 Market Place Street, Suite 310** **Harrisburg, PA 17110-9340** **Phone – 717-901-8176** **Fax – 717-657-1611** **Email – coneil@groundwatersciences.com**

All questions regarding this RFB and the subject Site conditions must be directed via email to the Technical Contact identified above with the understanding that all questions and answers will be provided to all bidders. The email subject line must be **"[insert Site name and claim number provided on cover page] – RFB QUESTION".** Bidders must neither contact nor discuss this RFB with the Solicitor, PAUSTIF, the Pennsylvania Department of Environmental Protection (PADEP), or ICF International (ICF) unless approved by the Technical Contact. Bidders may discuss this RFB with subcontractors and vendors to the extent required for preparing the bid response.

Requirements

Mandatory Pre-Bid Site Meeting

The Solicitor, the Technical Contact, or their designee will hold a mandatory Site visit on the date and time listed in the Calendar of Events to conduct a Site tour for one (1) participant per bidding company. The Technical Contact may answer questions at the Site meeting or may collect questions and respond via email. All questions and answers will be provided via email to all attendees. It is the attendee's responsibility to forward emails with questions and answers to others within their company. This meeting is mandatory for all bidders, no exceptions. This meeting will allow each bidding company to inspect the Site and evaluate Site conditions. **A notice of the bidder's intent to attend this meeting is requested to be provided to the Technical Contact via email by the date listed in the Calendar of Events with the subject "[insert Site name and claim number provided on cover page] – SITE MEETING ATTENDANCE NOTIFICATION".** The name and contact information of the company participant should be included in the body of the email. Notification of intent to attend is appreciated; however, it is not required. Attendance at the Pre-Bid Site Meeting is mandatory.

Submission of Bids

To be considered for selection, **one (1) hard copy of the signed bid package and one (1) electronic copy (one (1) PDF file on a compact disk (CD) included with the hard copy) must be provided directly to the PAUSTIF's third party administrator, ICF, to the attention of the Contracts Administrator.** The Contracts Administrator will be responsible for opening the bids and providing copies to the Technical Contact and the Solicitor. Bid responses will only be accepted from those companies that attended the Mandatory Pre-Bid Site Meeting. **The ground address for overnight/next-day deliveries is ICF International, 4000 Vine Street, Middletown, PA 17057, Attention: Contracts Administrator. The outside of the shipping package containing the bid must be clearly marked and labeled with "Bid – Claim # [insert claim number provided on cover page]".** Please note that the use of U.S. Mail, FedEx, UPS, or other delivery method does not guarantee delivery to this address by the due date and time listed in the Calendar of Events for submission. Companies mailing bids should allow adequate delivery time to ensure timely receipt of their bid.

The bid must be received by 3 p.m., on the due date shown in the Calendar of Events. Bids will be opened immediately after the 3 p.m. deadline on the due date. Any bids received after this due date and time will be time-stamped and returned. If, due to inclement weather, natural disaster, or any other cause, the PAUSTIF's third party administrator, ICF's office is closed on the bid due date, the deadline for submission will automatically be extended to the next business day on which the office is open. The PAUSTIF's third party administrator, ICF, may notify all companies that attended the Mandatory Pre-Bid Site Meeting of an extended due

date. The hour for submission of bids shall remain the same. Submitted bid responses are subject to the Pennsylvania Right-to-Know Law.

Bid Requirements

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

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

The Remediation Agreement fixed costs shall be based on unit prices for labor, equipment, materials, subcontractors/vendors, and other direct costs. The total cost quoted in the bid by the selected consultant will be the maximum amount to be paid by the Solicitor unless a change in scope is authorized and determined to be reasonable and necessary. There may be deviations from and modifications to this SOW during the project. The Remediation Agreement states that any significant changes to the SOW will require approval by the Solicitor, PAUSTIF, and PADEP. NOTE: Any request for PAUSTIF reimbursement of the reasonable costs to repair or replace a well will be considered on a case-by-case basis.

The bidder shall provide its bid cost using the Bid Cost Spreadsheet (included as Attachment 2) with descriptions for each task provided in the body of the bid document. Please note, if costs are provided within the text of the submitted bid and there is a discrepancy between costs listed in the Bid Cost Spreadsheet and in the text, the costs listed within the Bid Cost Spreadsheet will be used in the evaluation of the bid and in the Remediation Agreement with the selected consultant. Bidders are responsible to ensure spreadsheet calculations are accurate. The technical score for bids will be based solely on those tasks represented as milestones included in the Bid Cost Spreadsheet and the total bid cost. Any optional bidder-defined tasks,

milestones, or cost adders that are not requested as part of this RFB will not be considered by the Bid Evaluation Committee in the technical review and technical score for the bid.

In addition, the bidder shall provide:

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

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

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

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

Each bid will be assumed to be valid for a period of up to 120 days after receipt unless otherwise noted. The costs quoted in the Bid Cost Spreadsheet will be assumed to be valid for the duration of the Remediation Agreement.

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

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

Each bid response document must include at least the following:

1. Demonstration of the bidder's understanding of the Site information provided in this RFB, standard industry practices, and objectives of the project.

2. A clear description, specific details, and original language of how the proposed work scope will be completed for each milestone. The bid should specifically discuss all tasks that will be completed under the Remediation Agreement and what is included (e.g., explain groundwater purging/sampling methods, which guidance documents will be

followed, what will be completed as part of the Site specific work scope/SCR/RAP implementation). Recommendations for changes/additions to the Scope of Work proposed in this RFB shall be discussed, quantified, and priced separately; however, failure to bid the SOW "as is" may result in a bid not being considered.

3. A copy of an insurance certificate that shows the bidder's level of insurance consistent with the requirements of the Remediation Agreement. Note: The selected consultant shall submit evidence to the Solicitor before beginning work that they have procured and will maintain Workers Compensation, commercial general and contractual liability, commercial automobile liability, and professional liability insurance commensurate with the level stated in the Remediation Agreement and for the work to be performed.

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

5. Responses to the following specific questions:

    a. Does your company employ a Pennsylvania-licensed Professional Geologist that is designated as the proposed project manager? How many years of experience does this person have?
    b. How many Pennsylvania Chapter 245 projects is your company currently the consultant for in the PADEP Region where the Site is located? Please list up to 10.
    c. How many Pennsylvania Chapter 245 Corrective Action projects involving an approved SCR, RAP, and RACR has your company and/or the Pennsylvania-licensed Professional Geologist closed (i.e., obtained Relief from Liability from the PADEP) using any standard?
    d. Has your firm ever been a party to a terminated PAUSTIF-funded Fixed-Price (FP) or Pay-for-Performance (PFP) contract without attaining all of the milestones? If so, please explain.

6. A description of subcontractor involvement by task. Identify and describe the involvement and provide actual cost quotations/bids/proposals from all significant specialized subcontracted service (e.g., drilling/well installations, laboratory, etc.). If a bidder chooses to prepare its bid without securing bids for specialty subcontract services, it does so at its own risk. Added costs resulting from bid errors, omissions, or faulty assumptions will not be considered for PAUSTIF reimbursement.

7. A detailed schedule of activities for completing the proposed SOW including reasonable assumptions regarding the timing and duration of Solicitor reviews (if any) needed to

complete the SOW. Each bid must provide a schedule that begins with execution of the Remediation Agreement with the Solicitor and ends with completion of the final milestone proposed in this RFB. Schedules must also indicate the approximate start and end date of each of the tasks/milestones specified in the Scope of Work, and indicate the timing of all proposed key milestone activities (e.g., within 30 days of the contract being executed).

8. A description of how the Solicitor, ICF, and the PAUSTIF will be kept informed as to project progress and developments and how the Solicitor (or designee) will be informed of and participate in evaluating technical issues that may arise during this project.

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

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

General Site Background and Description

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

Site Name/Address

Tressler's Midway Gulf
5817 Nittany Valley Drive (State Route 64)
Lamar, Pennsylvania 16848
Porter Township, Clinton County

Site Location and Operation information

The site is an active automotive maintenance facility that is located to the northwest of the intersection of Interstate I-80 and State Route 64 (**Figure 1**). The area of the site is shown on **Figure 2** along with the surrounding commercial properties (truck stop, hotels, restaurants, etc.). No underground storage tanks (USTs) are known to currently exist at the site.

The site has an active water supply well; however, the well construction details, total depth and pump setting are unknown. The supply well was sampled periodically and shown not to contain detectable concentrations of the PADEP's old short list of unleaded gasoline parameters (benzene, toluene, ethylbenzene, xylenes (total), isopropylbenzene (cumene), methyl tertiary butyl ether (MTBE), and naphthalene). The location of the water supply well is shown on **Figure 3**.

Site Geology

The site is located in the Nittany Valley and is mapped as being underlain by the Axemann Formation (*Groundwater Resources of the West Branch Susquehanna River Basin, Pennsylvania*, Water Resources Report 56, Commonwealth of Pennsylvania, Department of Environmental Resources, Office of Resources Management, Bureau Topographic and Geologic Survey, dated 1983). The Axemann Formation consists of fractured limestone and dolostone with well-developed karst features. The site is shown on the eastern limb of the northeasterly plunging Nittany anticline and to the south of a mapped fault (**Figure 4**). However, the structural geology at the site could be more complex than shown on **Figure 4** based on studies that were completed approximately one mile to the east-northeast of the site, where numerous thrust faults were mapped (*Bedrock Geologic Map of the Central Portion of the Mill*

Hall Quadrangle, Clinton County, Pennsylvania, Open-File Bedrock Geologic Map Report 09-01.0, Pennsylvania Geological Survey, dated 2009).

Release Investigations and Interim Remedial Actions

In July 2003, a subsurface release of unleaded gasoline was discovered from a former UST system (**Figure 3**). Interim remedial actions (IRAs) consisting of the excavation and removal of petroleum-impacted soil were performed to address the release. In August 2004, 234 tons of petroleum-impacted soil was excavated during the removal of the former USTs and in October 2010, 31 tons of petroleum-impacted soil was excavated from beneath the former product dispensers. During the backfilling of the UST excavation, a series of slotted 2-inch diameter PVC pipes were installed to a depth of approximately 12 feet below grade (fbg) for possible future use during investigation/remedial activities.

From 2003 through 2010, soil quality investigations and attainment sampling were completed in the vicinity of the former unleaded gasoline UST system at the Tressler property. The investigations documented that subsequent to the IRAs only a limited volume of petroleum-impacted soil remained in the subsurface beneath the former USTs at the soil/bedrock interface (approximately 16 to 20 fbg). Remedial Action Progress Reports (RAPRs) for the second and fourth quarters of 2010 provide a summary of the soil investigation results and state that attainment of the non-residential Statewide Health Standard (SHS) has been demonstrated for soil at the site (**Attachment 3a and 3b**).

From 2003 through 2008, monitoring wells MW-1 through MW-7 were installed on the Tressler property and wells MW-8 through MW-16 were installed on the McDonald's property (**Figure 3**). A copy of the license to install monitoring wells and remediation systems and to perform remediation work between McDonald's and the Solicitor is included in **Attachment 3c** for reference.

In August 2008, MW-8, MW-9, MW-13 and MW-14 were reamed out, reconstructed (deepened with longer screened intervals installed) and renamed MW-8R, MW-9R, MW-13R and MW-14R to reportedly enable monitoring throughout seasonal fluctuations (e.g., MW-9 was occasionally dry). As a result, the current monitoring well network consists of both relatively shallow wells that are screened from approximately 40 to 80 fbg (40-foot long screens) and deeper wells that are screened from approximately 55 to 115 fbg (60-foot long screens). The screened intervals in the wells are noted on **Figure 3** and well logs are included in **Attachment 3d**.

Wells SM-1, SM-2 and SM-3 on the McDonald's property, which range in depth from 122 to 130 fbg, were reportedly installed to monitor the groundwater conditions around the septic leach field that is reportedly no longer in use. Information regarding the construction of these wells is not available.

The soil and lithology described on the well logs for the monitoring wells consists of 2 to 23 feet of residual silty clay and clay soil overlying bedrock. Bedrock on the logs is described as limestone, dolomitic limestone and dolomite with fractures, open and clay-filled voids and weathered intervals encountered to varying degrees in all of the wells. In addition, petroleum impacts (e.g., gasoline odors and elevated photoionization detector (PID) measurements) are noted on the logs within bedrock for wells MW-3 (23 to 57 fbg), MW-6 (54 to 65 fbg), MW-7 (32 to 38 fbg and 54 to 58 fbg) on the Tressler property and MW-8 (45 to 60 fbg) on the McDonald's property.

In 2003 and 2004, remediation feasibility testing was performed and the results are documented in the April 2004 SCR (**Attachment 3e**). The testing included the following activities:

- A 24-hour groundwater pumping test at on-site well MW-3 at a pumping rate of approximately 1 gallon per minute (gpm).
- 2-hour long soil vapor extraction (SVE) feasibility tests were performed on wells MW-6 through MW-9.
- An evaluation of groundwater analytical data to assess the feasibility of bioremediation technologies.

In April and May 2010, soil gas samples were collected from two 5-foot deep sample points that were installed adjacent to the east side of the Tressler building to assess the vapor intrusion pathway. The analytical results of the soil gas sampling, which are documented in the second quarter 2010 RAPR (**Attachment 3a**), indicate that all of the analysis parameters (benzene, toluene, ethylbenzene, xylenes, cumene, naphthalene, and MTBE were below their respective soil gas screening criteria.

Groundwater Conditions

To date, no separate phase liquid (SPL) has been detected in the wells at the site. Dissolved-phase concentrations of the PADEP's old short list of unleaded gasoline parameters were evaluated through the completion of 20 to 40 sampling rounds from the wells. The fourth quarter 2014 RAPR provides a comprehensive summary of the groundwater monitoring data (**Attachment 3f**).

A summary of the groundwater sampling data is presented on **Figure 5** and the following is a description of the data:

- Four water supply wells were sampled (Cottage Family Restaurant, Tressler, Comfort Inn and McDonald's). The McDonald's water supply well (closed in August 2008) is the only well that has shown detectable concentrations of unleaded gasoline parameters.

- None of the wells on the Tressler property (MW-1 through MW-7) have shown groundwater concentrations above the residential used aquifer medium specific concentrations (RUAMSCs) since May 2011.
- Since February 2011, wells MW-8R, MW-9R, MW-15, SM-2 and SM-3 are the only wells on the McDonald's property where groundwater concentrations above the RUAMSCs were detected.
- The following is a discussion of the groundwater chemistry for well MW-9/9R, which currently exhibits the highest groundwater concentrations at the site (**Figure 6**). The screened interval in this down-dip well likely intercepts the bedding planes that subcrop in the area of the former Tressler unleaded gasoline USTs:
    - Between October 2004 and February 2009, low to moderate groundwater concentrations were detected.
    - Between June 2009 and June 2010 (following the reconstruction of the well) the concentrations of BTEX and MTBE spiked and moderate to high concentrations were detected.
    - From June 2010 to date, BTEX and MTBE concentrations in groundwater have fluctuated from non-detect to around 1,000 micrograms per liter (µg/l). These concentration swings are likely associated with the dissolution of petroleum impacts from the UST release during water level fluctuations that have been observed to vary up to 50 feet in the karst bedrock aquifer.
    - Relatively high concentrations of benzene, toluene and MTBE are present in the samples (which are typically the most susceptible to attenuation in the subsurface) and suggest that a relatively significant undegraded source of petroleum-impacted material may exist in the subsurface.
- The extent of groundwater with concentrations above the RUAMSCs to the south of MW-9R (towards I-80) has not been delineated.

Quarterly groundwater monitoring was being performed at the site following the recommendations included in the February 2006 Remedial Action Plan (RAP) (**Attachment 3g**). Based on a review of the groundwater analytical data, a request to reduce the monitoring was submitted to the PADEP in the third quarter 2013 RAPR (**Attachment 3h**). The request consisted of the following proposed monitoring schedule that was approved by the PADEP in a letter to the Solicitor dated December 18, 2013:

- Quarterly sampling of three Tressler property wells (MW-5, MW-6 and MW-7), five McDonald's property wells (MW-8R, MW-9R, MW-15, SM-2 and SM-3) and two water supply wells (Tressler and Comfort Inn) during the first, third and fourth quarterly rounds, in February, August and November, respectively.
- Annual sampling of all wells during the second quarterly round in May.
- Quarterly depth-to-water measurements from all wells.

The depth-to-water in monitoring wells at the site is approximately 50 to 60 fbg; however, the depth-to-water in some of the wells varies by up to 50 feet (e.g., see **Figure 6** for MW-9R). Groundwater elevation contouring was completed for depth-to-water measurements from May 7, 2013, which represents groundwater elevations that are typical of the middle of the range of groundwater elevations for the wells at the site. To account for the differences in the construction of the wells, separate contour maps were prepared for the shallow wells (**Figure 7**) and the deep wells (**Figure 8**). Groundwater elevations in all of the wells at the site have historically been used to construct groundwater elevation contour maps presented by others in project correspondence (RAPRs, etc.).

The following observations are offered based on the May 7, 2013 groundwater contours:

- The groundwater elevations in the shallow wells showed an approximate 20 foot difference in vertical elevations across the site. Specifically, the elevations ranged from almost 810 feet above mean sea level (amsl) in MW-1 (located on the Tressler property) to 790 feet amsl in MW-12 (located on the McDonald's property). The lateral groundwater gradient (head potential between wells) is towards the northeast, east and southeast.
- The groundwater elevations in the deep wells, which are all located on the McDonald's property, vary from 782 to 777 feet amsl (5-foot difference in vertical elevations) and the lateral groundwater gradient is generally towards the east.
- Based on a comparison of the groundwater elevations in the shallow wells (located on the Tressler and McDonald's properties) and the deep wells (located on the McDonald's property), there appears to be a downward vertical gradient in the karst bedrock aquifer. For example, on the McDonald's property, the groundwater elevation in shallow well MW-10 (800.27 feet amsl) is about 18 feet higher than deep well MW-9R (781.90 feet amsl) and the wells are only separated by a lateral distance of 80 feet.

The direction of groundwater flow through the karst bedrock aquifer is controlled by a combination of the groundwater gradient and preferential flow through zones of enhanced permeability (bedding plane partings, fractures, joints, voids, etc.). This would appear to at least partially explain why the groundwater concentrations in MW-8R are lower than MW-9R when MW-8R is located closer to and hydraulically downgradient of the source (the former unleaded gasoline USTs on the Tressler property).

Monitoring Well Network Construction Issues

As mentioned above, the monitoring well network at the site consists of wells that are constructed to highly variable depths (63 to 128 fbg) and with relatively long well screen intervals (40 to 60 feet long). It is understood that the depth to groundwater in some wells varies significantly and may have been a factor in how the wells were constructed. However,

the variable depths of wells and length of the well screens is problematic because it makes interpreting groundwater level and chemistry data from the wells difficult due to potential intermingling of groundwater from multiple depths. For example, long screen lengths decrease the resolution of the hydraulic head distribution in the karst bedrock aquifer. This is a particular concern at the site because there appears to be a potential for a downward vertical gradient in the aquifer. In addition, contaminated groundwater entering the well at a specific depth may be diluted by uncontaminated groundwater entering the well at another depth, which leads to uncertainty regarding the vertical distribution of contamination in the aquifer screened by the well and in diluted groundwater concentrations in impacted zones.

Section 3.5.1 of the PADEP's *Groundwater Monitoring Guidance Manual* dated December 1, 2001, states "Shorter open intervals or screen lengths provide better accuracy in determining hydraulic head at a specific point in the flow system. If a sufficient number of shorter well screens or open intervals are stacked or clustered vertically so that the entire saturated thickness of the target zone is adequately monitored, they will, when taken together, provide better resolution of the vertical distribution of any contamination that may be detected. In addition, the possibility of cross-contamination is minimized." Furthermore, Section 3.5.2 of the groundwater manual states "The major purpose of assessment monitoring is to determine the vertical and horizontal extent and magnitude of contamination that has been detected during compliance monitoring. In most cases this will require the installation or modification of wells so that they are screened or open to relatively short vertical intervals within each target zone." Using well MW-9/9R as an example, the well logs note that multiple fractures were encountered during drilling at depths of 46, 49, 55, 72, 77 and 82 fbg and a clay-filled void was encountered from 94 to 99 fbg that are all within the well screen intervals (MW-9 – 40 to 80 fbg and MW-9R – 55 to 115 fbg) (see well logs in **Attachment 3d**).

Therefore, the completion of both shallow and deep monitoring well pairs with shorter screened intervals at strategic locations across the site would have enabled a more effective characterization of the groundwater conditions at the site.

Regulatory Submissions

The results of investigation activities performed in 2003 and 2004 were documented in a Site Characterization Report (SCR) dated April 2004. In January 2005, a second SCR was submitted to the PADEP that provided the results of additional groundwater investigation activities. A third SCR for the site was submitted to the PADEP in June 2005, which included the results of additional soil investigation and groundwater monitoring activities.

In February 2006, a RAP was submitted to the PADEP that proposed to remediate the Site to the non-residential used aquifer SHS using SVE and groundwater pump and treat (if necessary) **(Attachment 3g**). The results of remedial pilot/treatability testing, which included 2-hour long soil vapor extraction (SVE) tests on four wells, a 24-hour groundwater pumping test on one well

and a bioremediation treatability study, are documented in the RAP. The RAP was approved with modifications by the PADEP in March 2006 **(Attachment 3i**). However, the proposed remedial activities were not implemented based on comments from the PADEP in the RAP approval, which included the need for additional offsite monitoring wells to fully characterize the identified groundwater contamination and the need to evaluate alternative treated water discharge options.

In May 2006, a Pay for Performance (PFP) contract was issued by USTIF based on a third party review of the site data to remediate the site in accordance with the February 2006 RAP to achieve the non-residential used aquifer SHS. However, the PFP contract was not implemented due to the decline in the dissolved-phase concentrations of unleaded gasoline parameters in groundwater samples from the monitoring well network at the site.

Scope of Work (SOW)

This RFB seeks competitive bids from qualified contractors to perform the activities in the SOW specified herein. The SOW presented in this RFB was provided to the PADEP for review and comment. A response was received from the PADEP that indicated that they did not have any comments on the SOW.

Objective

This RFB is seeking qualified firms to prepare and submit a fixed price proposal to complete a Defined Scope of Work for the Milestones presented below. The objectives of the SOW are to 1) delineate the extent of dissolved-phase unleaded gasoline parameters in groundwater to the south-southeast of the site, 2) better understand the groundwater chemistry and hydrogeology in the shallow and deep portions of the karst bedrock aquifer, 3) assess the groundwater concentration fluctuations in MW-9R and 4) further evaluate remedial alternatives for the site.

Constituents of Concern (COCs)

The COCs for the site include benzene, toluene, ethylbenzene, xylenes (total), isopropylbenzene (cumene), MTBE, and naphthalene.

General SOW Requirements

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

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

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

- Conduct necessary, reasonable, and appropriate project planning and management activities until the project (i.e., Remediation Agreement) is completed. Such activities may include Solicitor communications/updates, meetings, record keeping, subcontracting, personnel and subcontractor management, quality assurance/quality control, scheduling, and other activities (e.g., utility location). Project planning and management activities will also include preparing and implementing plans for health and safety, waste management, field sampling/analysis, and/or other plans that are necessary and appropriate to complete the SOW, and shall also include activities related to establishing any necessary access agreements. Project planning and management shall include identifying and taking appropriate safety precautions to not disturb Site utilities including, but not limited to, contacting Pennsylvania One Call as required prior to any ground-invasive work. As appropriate, project management costs shall be included in each bidder's pricing to complete the milestones specified below.
- Be responsible for coordinating, managing, and completing the proper management, characterization, handling, treatment, and/or disposal of all impacted soils, water, and derivative wastes generated during the implementation of this SOW. The investigation-derived wastes, including purge water, shall be disposed in accordance with standard industry practices and applicable laws, regulations, guidance, and PADEP directives. Waste characterization and disposal documentation (e.g., manifests) shall be maintained and provided to the Solicitor and the PAUSTIF upon request. All investigation derived wastes shall be handled and disposed per PADEP's Regional Office guidance. It is the selected consultant's responsibility to conform to current PADEP Regional Office guidance requirements in the region where the site is located.
- Be responsible for providing the Solicitor and facility operator (and off-site owner/operator, where appropriate) with adequate advance notice prior to each visit to the property. The purpose of this notification is to coordinate with the Solicitor and facility operator to ensure that appropriate areas of the property are accessible. Return visits to the site will not constitute a change in the selected consultant's SOW or result in additional compensation under the Remediation Agreement.

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

Site-Specific Guidelines

As part of this RFB, the selected consultant will need to consider the following site-specific guidelines:

- **Scheduling:** As part of this RFB, the selected consultant shall provide a detailed schedule to complete the milestones (e.g. within 30 days of the contract being executed) as to when each of the milestones will be completed. This includes the expected date (e.g. within 90 days of the contract being executed) when the draft deliverables will be submitted to the Solicitor and PAUSTIF for review.

- **Field Activities:** All on- and off-site work should be conducted during the normal business days and hours of 8:00 AM to 5:00 PM from Monday through Friday, unless work outside of these normal business days and hours is authorized by the respective property owner.

- **Responsibility:** The selected consultant will be the consultant of record for the site. They will be required to take ownership of the project and will be responsible for representing the interests of the Solicitor and PAUSTIF with respect to the project. This includes utilizing their professional judgment to ensure reasonable, necessary and appropriate actions are recommended and undertaken to protect sensitive receptors, adequately characterize the site, and move the site towards closure.

  Be responsible for keeping the 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 any seals or locks that become defective during the completion of activities under the Remediation Agreement at its expense. If, during the mandatory pre-bid site meeting, any well(s) is (are) identified to be in need of repair or replacement, each bidder shall provide its estimated cost to repair/replace said well(s) in its bid for Milestone G. **NOTE: Any request for reimbursement of the reasonable costs to repair or replace a well or well surface completion will be considered on a case-by-case basis.**

- **Field Instrumentation:** Each bidder should state in their bid response the appropriate field instrumentation (e.g., pumps, meters, PIDs, etc.) to be used during the completion of the SOW. Specifically, the product associated with the PADEP -regulated UST release at this site is unleaded gasoline. As such, any field-screening instrumentation used at the site should be able to detect the presence of hydrocarbons associated with that type of product.

- **Safety Measures:** Each bidder should determine the safety measures necessary to appropriately complete the milestones. Specifically, if a consultant feels that it is

appropriate and necessary to complete utility clearance using an air knife, the cost should be included in their fixed-price cost. If a bidder includes costs to conduct specific safety measures or activities, the bidder should specify it in the bid response and discuss why it is appropriate and necessary and indicate which methods will be utilized and to what extent. As discussed in the RFB, cost is not the only factor when evaluating bid responses and other factors are taken into consideration during the bid evaluation process, including appropriate safety measures.

- **Waste Disposal:** The IDW waste (including, but not limited to, soil/rock cuttings, well development/purging liquids, and liquids generated during well installation) shall be disposed of per the instructions included in the "General SOW Requirements" section of the RFB. Bidders will be responsible for arranging any off-site waste disposal (if required) and including costs in their bid response to cover the disposal of all potential waste related to the milestones included in the SOW. Containerized soil and groundwater may be temporarily stored on-site, but should be removed from the site in a timely manner. Bidders will be responsible for including costs in their bid response to cover the disposal of all potential waste related to the milestones included in the SOW. Bidders should estimate the volume of waste using professional opinion, experience and the data provided. **ICF and PAUSTIF will not entertain any assumptions from the selected bidder in the Remediation Agreement with regards to a volume of waste. Invoices submitted by the selected bidder to cover additional waste disposal costs as part of activities included under the fixed-price Remediation Agreement for this site will not be paid.**

Site-Specific Milestones

The following Milestones are to be included in the bid response:

Milestone A - Fracture Trace Analysis

Complete a fracture trace analysis to identify possible fracture locations/orientations that could be acting as groundwater flow conduits within the karst bedrock aquifer beneath the site. Perform the analysis within a minimum 2-mile radius of the site using available multi-year historical aerial photographs to identify linear features based on subtle soil and vegetation tonal differences (i.e., fracture traces) and avoid the impacts of manmade development that could obliterate these features. If fracture traces are identified at the site, consider adjustments to the locations of the new monitoring wells to intercept them. Document the locations of identified fracture traces on a map of the site in the SSCR (Milestone L).

Milestone B - Geologic Field Reconnaissance

Perform geologic field reconnaissance within a ½-mile radius of the site to identify surficial bedrock outcrops. Expand the area of the field reconnaissance to a 1-mile radius of the site if no bedrock outcrops are identified within the ½-mile radius (**Figure 1**). Record the bedrock lithology and structural attitude of bedding, fractures and joints with a Brunton-type compass (e.g., strike and dip) at each outcrop. Geologic data from the field reconnaissance may be beneficial to understand the groundwater conditions at the site and to adjust the locations and construction of the new monitoring wells, if appropriate. Prepare a written description of each outcrop, show its location on a map with the structural orientation measurements and prepare a rose diagram showing the orientation and frequency of the measurements in the SSCR (Milestone L).

Milestone C - Groundwater Use Survey

Conduct a door-to-door survey of all properties located within a ½-mile radius of the site to confirm current and potential future groundwater use (**Figure 1**). It is known that water supply wells were identified at the Tressler, Comfort Inn, McDonald's and Cottage Family Restaurant properties; however, the previous investigations did not include a comprehensive door-to-door well search to identify all potential groundwater use receptors.

Confirm the boundaries and ownership information for all properties located within the search radius prior to conducting the door-to-door survey using available tax parcel information or other sources. During the survey, record information for each property (owner name, contact information, property use, etc.) and for any wells that are identified (use, depth, construction, water quality, sub-meter coordinates form a global positioning system (GPS) unit, etc.). Prepare and submit written requests for groundwater use information to all properties within the survey area that are not able to be contacted during the door-to-door survey.

In addition to the door-to-door survey, conduct a database well search and contact the local municipality and water authority to confirm water usage in the vicinity of the site and local restrictions on water usage.

Documentation of the survey results, including tabulated information and a map showing the locations of the properties surveyed, well locations, etc. in the SSCR (Milestone L) .

Milestone D – Obtain Off-Site Access

Bidders should assume in their bid that the Solicitor owns the Tressler property and will grant access to that property to perform the SOW activities. The Technical Contact has not been in contact with the off-site property owners, or discussed any possible future activities with the off-site property owners. A copy of the license to install monitoring wells and remediation systems and to perform remediation work between McDonald's and the Solicitor is included in

Attachment 3c for reference. Bidders should assume the same type of license will be required to access and perform work on the McDonald's property.

The bidders shall provide a fixed-price cost to obtain off-site access from the off-site property owners to perform the SOW. The selected consultant shall confirm the ownership of the off-site properties, contact the each of the owners both verbally and in writing to review the details and schedule of the activities to be conducted on the off-site owner's properties, and execute access agreements. If difficulties are encountered, the selected consultant shall prepare a written request for assistance from the PADEP to facilitate off-site access and follow up with the PADEP and the property owner to coordinate access. Upon execution of the access agreements, the selected consultant shall provide adequate notification to the property owners prior to performing all work.

The selected consultant will be responsible for obtaining PennDOT authorizations for working on their property and within their right-of-way, as necessary. This shall include the need to execute Right of Entry (ROE) agreements with PennDOT. For the purposes of this RFB, bidders should assume that the ROE fees will be waived pursuant to the agreement between the PAUSTIF and PennDOT. Therefore, the associated costs for PennDOT ROE fees should not be included in bidders' fixed-price costs for this milestone.

Milestone E - Video Logging of Existing Wells

Complete optical or acoustical logging of the Tressler supply well and monitoring wells SM-1, SM-2 and SM-3 (McDonald's property) to document the construction of these wells (logs are not available). If an open rock borehole is present in any of the wells, determine the depth and structural orientation (strike and dip) of bedding plans, fractures, etc. that are observed using oriented borehole tools. Temporarily remove and reinstall the pump setting in the Tressler supply well to perform the logging, if necessary. Summarize the well logging results and include a detailed written report from the video logging service provider that includes, at a minimum, a description of the logging methods used, information on the construction of the wells, a tabulated listing and rose diagrams of the structural features and a log for inclusion in the SSCR (Milestone L).

Milestone F1 and F2 – Continued Quarterly Groundwater Sampling and Reporting from the Existing Wells (Reduced Well List)

In the event that the new proposed monitoring wells described in Milestone G are not completed, such that a quarterly round of groundwater samples cannot be collected that includes the initial sampling of the new wells, then conduct groundwater sampling from the following PADEP-approved reduced-list of ten (10) existing wells (reduced well list) shown on **Figure 9**:

- Tressler property wells MW-5, MW-6 and MW-7

- Off-site property wells MW-8R, MW-9R, MW-15, SM-2 and SM-3
- Tressler and Comfort Inn two water supply wells.

Assume two (2) rounds of quarterly sampling and reporting for the purposes of this bid.

The depth-to-water in all of the existing wells at the site shall be measured prior to the sampling to facilitate the preparation of separate groundwater elevation contour maps for the shallow and deep wells. The measurements shall be obtained using an interface probe capable of distinguishing water and/or the presence or absence of SPL to the nearest 0.01 feet.

Groundwater sampling and analysis shall be conducted in accordance with industry standards/practices, and consistent with the PADEP requirements and guidelines (e.g., *PADEP Groundwater Monitoring Guidance Manual*, Document No. 383-3000-001 dated December 1, 2001). Non-dedicated purging and sampling equipment shall be decontaminated prior to use in accordance with generally accepted industry practices. In addition to the well samples, QA/QC trip blank, duplicate and equipment blank samples shall be collected for laboratory analysis.

The groundwater samples from the monitoring wells shall be submitted to a PA-certified laboratory for analysis of benzene, toluene, ethylbenzene, xylenes (total), cumene, MTBE, and naphthalene using EPA Method SW846 8260. Groundwater samples from the supply wells shall be analyzed for the same list of parameters using EPA Method 524.2.

A RAPR shall be prepared and submitted to the PADEP that summarizes the groundwater sampling results. The RAPR shall include a write-up of the activities performed, results and conclusions. The RAPR shall also include tabulated groundwater elevation and groundwater analytical data (new and historical), separate groundwater elevation contour maps for the shallow and deep wells, isoconcentration maps for all constituents detected at concentrations that are greater than the RUA MSCs, time versus groundwater concentration-trend graphs for the wells and copies of the laboratory analytical reports and chains of custody forms.

In addition, letters shall be prepared and submitted to each of the off-site property owners (e.g., McDonalds and Comfort Inn) with copies provided to the PADEP. The transmittal letters shall include a brief summary of the sampling procedures/results and a copy of the laboratory analysis report for the samples.

Milestone G - Monitoring Well Reconstructions and Installations

Eleven (11) new monitoring wells shall be drilled, constructed and developed to further characterize the groundwater conditions at the site. Both shallow and deep monitoring wells are proposed to delineate the extent of dissolved-phase unleaded gasoline parameters in the shallow and deep portions of the karst bedrock aquifer and to further characterize the hydraulic conditions.

The approximate locations of the new monitoring wells are shown on **Figure 9**. It may be appropriate to adjust the well locations and construction based on, but not limited to, the results of the fracture trace analysis, geologic mapping, video logging, the locations of aboveground/underground utilities, subsurface conditions encountered (e.g., fractures and water bearding zones), etc. Notify the Technical Contact if any adjustments to the monitoring well locations are recommended prior to mobilizing to the site to perform the drilling, explain the rationale for the change and provide a map showing the proposed new well location(s).

The following is a description of the new monitoring wells:

- PMW-6D – Install a new deep monitoring well in the area of the former unleaded gasoline USTs on the Tressler property to provide information on the deep aquifer conditions, where no deep monitoring wells currently exist. Install the well to a depth of not less than 115 fbg with a 5- to 10-foot long screened interval constructed at the bottom of the borehole.
- PMW-8S/D and PMW-9S/D – Reconstruct monitoring wells MW-8R and MW-9R due to the issues associated with the long well screens (as discussed in the Background Section). Ream out wells MW-8R and MW-9R to a depth of not less than 115 fbg and construct new wells with 5- to 10-foot long screens at the bottom of the boreholes. Install new shallow monitoring wells (PMW-8S and PMW-9S) near wells PMW-8D and PMW-9D to a maximum depth of 85 fbg with 30- to 40-foot long well screens that straddle the groundwater table surface.
- PMW-11D, PMW-17S/D and PMW-18S/D – Install these new shallow and deep monitoring wells to delineate the extent of groundwater impact to the southwest, south and southeast of well MW-9R. Install the shallow wells to a maximum depth of 80 fbg with a 30- to 40-foot long well screen that straddles the groundwater table surface. Install the deep wells to a minimum depth of 115 fbg with a 5- to 10-foot long screened interval constructed at the bottom of the borehole.
- PMW-19S – Install a new shallow monitoring well on the northern side of the McDonald's property to provide information on the shallow aquifer conditions, where no shallow monitoring wells currently exist. Install PMW-19S to a maximum depth of 80 fbg with a 30- to 40-foot long well screen that straddles the groundwater table surface.

Underground utility clearance shall consist of notifying the Pennsylvania One Call System, Inc. and reviewing the drilling locations with the property owners prior to the initiation of any intrusive work. In addition, physically clear each of the well locations from the ground surface to a minimum depth of 5 fbg at a diameter that equals or exceeds the diameter of the drilling

equipment. The selected contractor shall determine whether or not it is appropriate to increase the clearing depth based on all available information (e.g., site conditions, utility information, etc.). Bidders shall state in their proposal how the hole-clearing will be performed.

Drilling of the wells shall be completed using air rotary methods under the oversight of a Pennsylvania-licensed professional geologist (P.G.). Inspect the drill cuttings for physical characteristics (lithology, color, moisture content, etc.) and signs of apparent petroleum impact (staining, odor, sheen, etc.). Screen the drill cuttings using head space methods with a calibrated PID for total volatile organic compounds (VOCs) at a minimum of 5-foot depth intervals from the ground surface to the total depth of the well. Complete the PID screening by partially filling a dedicated disposable container (e.g., plastic bag or jar) with a representative sample, sealing the container, agitating the sample, allowing headspace to develop, and measuring the head space inside the container with the PID. Document the subsurface conditions and inspection results encountered during the drilling on a log for each well.

The new monitoring wells shall be drilled, constructed, and developed in accordance with industry standards/practices, and consistent with PADEP requirements and guidelines (e.g., PADEP Groundwater Monitoring Guidance Manual, Document No. 383-3000-001, dated December 1, 2001). It is noted that the well screen depths shown on **Figure 9** are approximate and presumed to have sufficient groundwater yield to be completed as monitoring wells. The actual depth and length of the screened intervals shall be determined by a Pennsylvania-licensed P.G. based on the site-specific subsurface conditions encountered during the drilling of the wells. Deviations from the depths specified above should be defendable based on sound professional judgment.

Construct the new deep monitoring wells as double-cased wells (e.g., 6-inch diameter steel casing by 2-inch diameter polyvinyl chloride (PVC) casing and screen). The steel casing shall be installed in a larger diameter borehole that extends into bedrock to an appropriate depth determined by a Pennsylvania-licensed P.G. The steel casing shall be grouted in place and allowed to set for a sufficient amount of time prior to further advancement of the borehole downward. The PVC well shall extend downward through the inside of the steel casing and into bedrock below the steel casing. Bidders should clarify in their bid the anticipated depth of the steel casing for the wells and the basis for this determination.

Milestone H – Surveying of the New Monitoring Wells

Survey the locations of the new monitoring wells using a professional land surveyor (PLS) who is licensed in Pennsylvania using the Pennsylvania State Plane coordinate system with reference to the North American Datum of 1983 (NAD83). Survey the elevation of the new wells (top of manhole cover and top of well casing) to a vertical accuracy of 0.01 feet using the North American Vertical Datum (NAVD 88). Provide the survey information in tabulated format and

incorporate the survey data in the interpretations and maps, cross sections, etc. included in the SSCR (Milestone L).

Milestone I – Focused Water Level Monitoring of Selected Wells

Collect water level measurements at selected monitoring well locations across the site to assess groundwater elevation fluctuations in the shallow and deep portions of the karst bedrock aquifer, determine whether or not there are any indications of pumping or withdrawal from the aquifer, and to evaluate response to precipitation/recharge events. Use automated level recorders (transducer/data loggers) to collect water level measurements at a minimum frequency of once every 10 minutes (144 measurements per day) over a three-month time period at the Tressler water supply well and monitoring wells MW-6/PMW-6D (Tressler property), PMW-19S/MW-15, PMW-8S/D and PMW-9S/D (McDonald's property) and PMW-18S/D (on the presumed PennDOT property to the south of PMW-9S/D). The water level data must compensate for the effects of barometric pressure changes over time. Daily precipitation data for the site shall be obtained using an on-site rain gauge for comparison to the water level measurements on graphs in the SSCR (Milestone L).

Milestone J – Initial Round of Groundwater Sampling from the New and Existing Wells (Reduced Well List)

All of the new wells and the PADEP-approved reduced-list of existing wells (reduced well list) shall be sampled no earlier than 14 days following the well development activities. The sampling shall be conducted as one round over as short a period as practical. This initial sampling round shall include the following nineteen (19) well locations shown on **Figure 9**:

- Tressler property wells MW-5, MW-6, PMW-6D, MW-7, PMW-17S and PMW-17D.
- Off-site wells PMW-8S, PMW-8D (MW-8R reconstructed), PMW-9S, PMW-9D (MW-9R reconstructed), PMW-11D, MW-15, PMW-18S, PMW-18D, PMW-19S, SM-2 and SM-3.
- Tressler and Comfort Inn water supply wells.

The sampling shall be performed following the procedures in Milestone F. In addition, the groundwater sampling results for the off-site properties shall be transmitted to the off-site property owners consistent with Milestone F.

Milestone K – Follow Up Round of Groundwater Sampling from the New and Existing Wells (Full Well List)

All of the new and existing wells at the site (full well list) shall be sampled approximately three months following the initial round of samples (Milestone J). The sampling shall be conducted as one round over as short a period as practical. This follow up sampling round shall include the following thirty (30) well locations shown on **Figure 9**:

- Tressler property wells MW-1 through MW-7, PMW-6D, PMW-17S and PMW-17D.
- Off-site wells PMW-8S, PMW-8D (formerly MW-8R), PMW-9S, PMW-9D (formerly MW-9R), MW-10, MW-11, PMW-11D, MW-12, MW-13R, MW-14R, MW-15, MW-16, PMW-18S, PMW-18D, PMW-19S, SM-1, SM-2 and SM-3.
- Tressler and Comfort Inn water supply wells.

The sampling shall be performed following the procedures in Milestone F. In addition, the groundwater sampling results for the off-site properties shall be transmitted to the off-site property owners consistent with Milestone F.

Milestone L – Supplemental SCR Preparation and Submittal

A SSCR shall be prepared in accordance with 25 Pa Code §245.310 following the completion of the activities included in Milestones A through K. The SSCR shall document the results of the characterization activities conducted by the selected consultant along with a detailed summary of the results of the previous investigations and interim remedial actions performed at the site. In addition, the SSCR shall contain the following:

- Tables, figures, cross sections, graphs and other documentation that support the data and interpretations.
- If necessary, a description of any additional activities that is required to characterize the site.
- An updated conceptual site model (CSM) and exposure pathway evaluation based on the results of the previous characterization activities and the SOW activities for Milestones A through K.
- A preliminary conceptual remedial alternatives evaluation of feasible cleanup alternatives to recommend which remedial action(s) is the most appropriate for groundwater at the site. Separate evaluations shall be provided for pursuing attainment of both the non-residential SHS and the site specific standard (SSS). Information and data generated during the characterization activities, interim remedial actions and remedial feasibility testing, along with PADEP comments on the February 2006 RAP shall be incorporated into the evaluation for this milestone.

The SSCR shall be signed and sealed by a Pennsylvania-licensed professional geologist (P.G.).

Prior to submission of the SSCR to the PADEP, a draft version of the SSCR shall be provided in both electronic and hard copy format for review and comment by the Solicitor, ICF and the Technical Contact. Three weeks shall be included in the schedule for this review following receipt of the draft SSCR by the Solicitor, ICF and the Technical Contact. All comments on the draft report from the Solicitor, ICF and the Technical Contact shall be addressed prior to submission of the finalized SSCR to the PADEP.

Milestone M1 and M2 – Quarterly Groundwater Sampling and Reporting from the New and Existing Wells (Reduced Well List)

All of the new wells and the PADEP-approved reduced-list of existing wells (reduced well list) shall be sampled on the quarterly schedule. Assume two (2) rounds of quarterly sampling and reporting for the purposes of this bid.

The sampling shall be conducted as one round over as short a period as practical. The sampling round shall include the following nineteen (19) well locations shown on **Figure 9**:

- Tressler property wells MW-5, MW-6, PMW-6D, MW-7, PMW-17S and PMW-17D.
- Off-site wells PMW-8S, PMW-8D (MW-8R reconstructed), PMW-9S, PMW-9D (MW-9R reconstructed), PMW-11D, MW-15, PMW-18S, PMW-18D, PMW-19S, SM-2 and SM-3.
- Tressler and Comfort Inn water supply wells.

The sampling shall be performed consistent with the procedures in Milestone F. RAPR's shall be prepared and submitted to the PADEP that summarize the groundwater sampling results following each quarterly sampling round consistent with Milestone F. In addition to the RAPR's, the groundwater sampling results for the off-site properties shall be prepared and transmitted to the off-site property owners for each sampling round consistent with Milestone F.

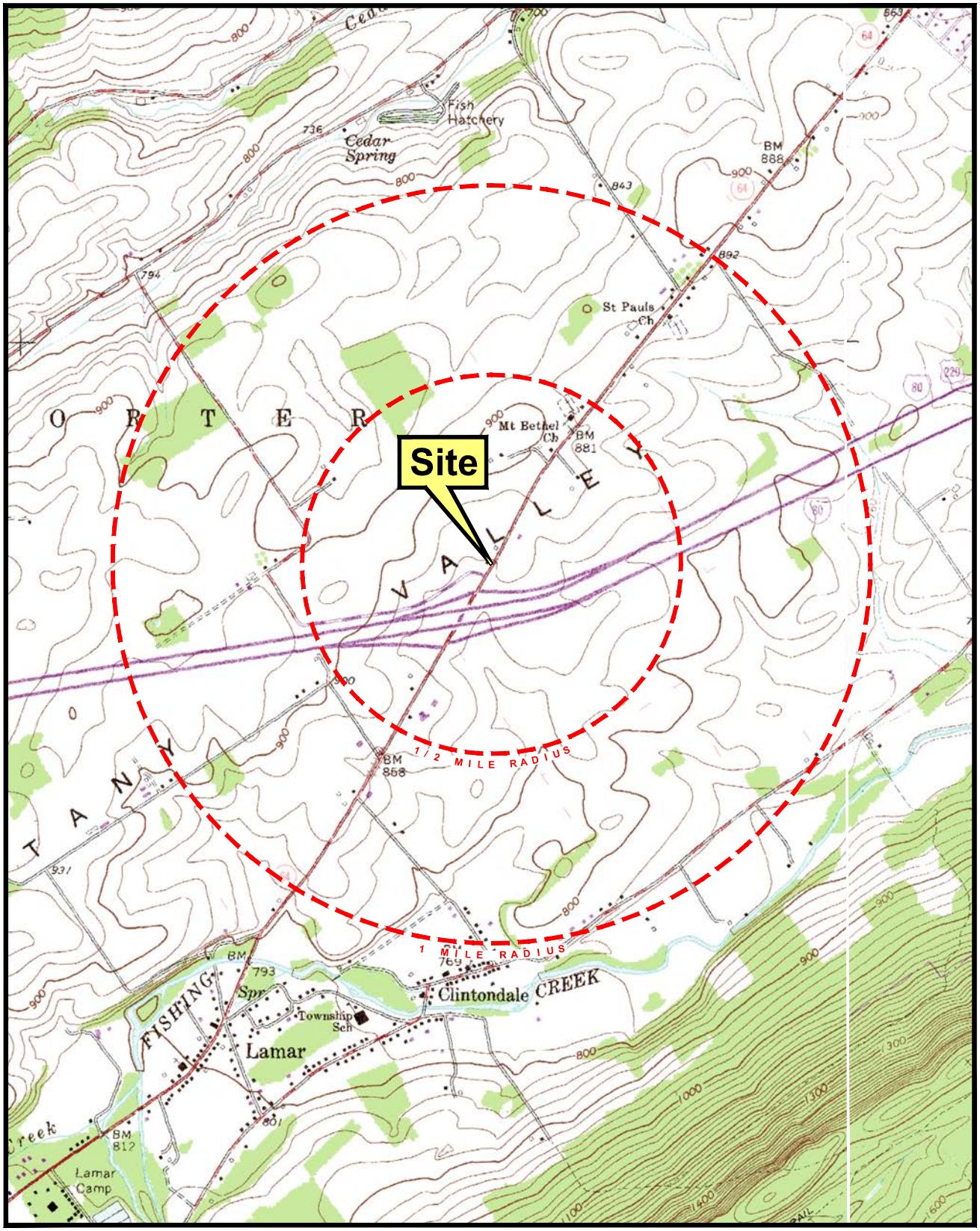
Additional Information

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

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

List of Attachments

1. Remediation Agreement
2. Bid Cost Spreadsheet
3. Site Information/Historic Documents
    a. Second Quarter 2010 RAPR
    b. Fourth Quarter 2010 RAPR
    c. McDonald's License dated March 12, 2008
    d. Well Construction Logs
    e. SCR dated April 2004
    f. Fourth Quarter 2014 RAPR
    g. RAP dated February 2006
    h. Third Quarter 2013 RAPR
    i. PADEP SCR/RAP Approval dated March 27, 2006



Portions of the Beech Creek and Mill Hall, PA
7.5-minute USGS Quadrangles
(Beech Creek: 1967, Photorevised 1973)
(Mill Hall: 1965, Photorevised 1986)

Scale
0 1000' 2000'

NORTH

Figure 1
Tressler's Midway Gulf
(USTIF Claim 2003-120(M))
5817 Nittany Valley Drive, Lamar, Pennsylvania 16848
Site Location Map

GROUNDWATER SCIENCES CORPORATION
tress12009-008-B1 / 3-31-2014

Figure 2

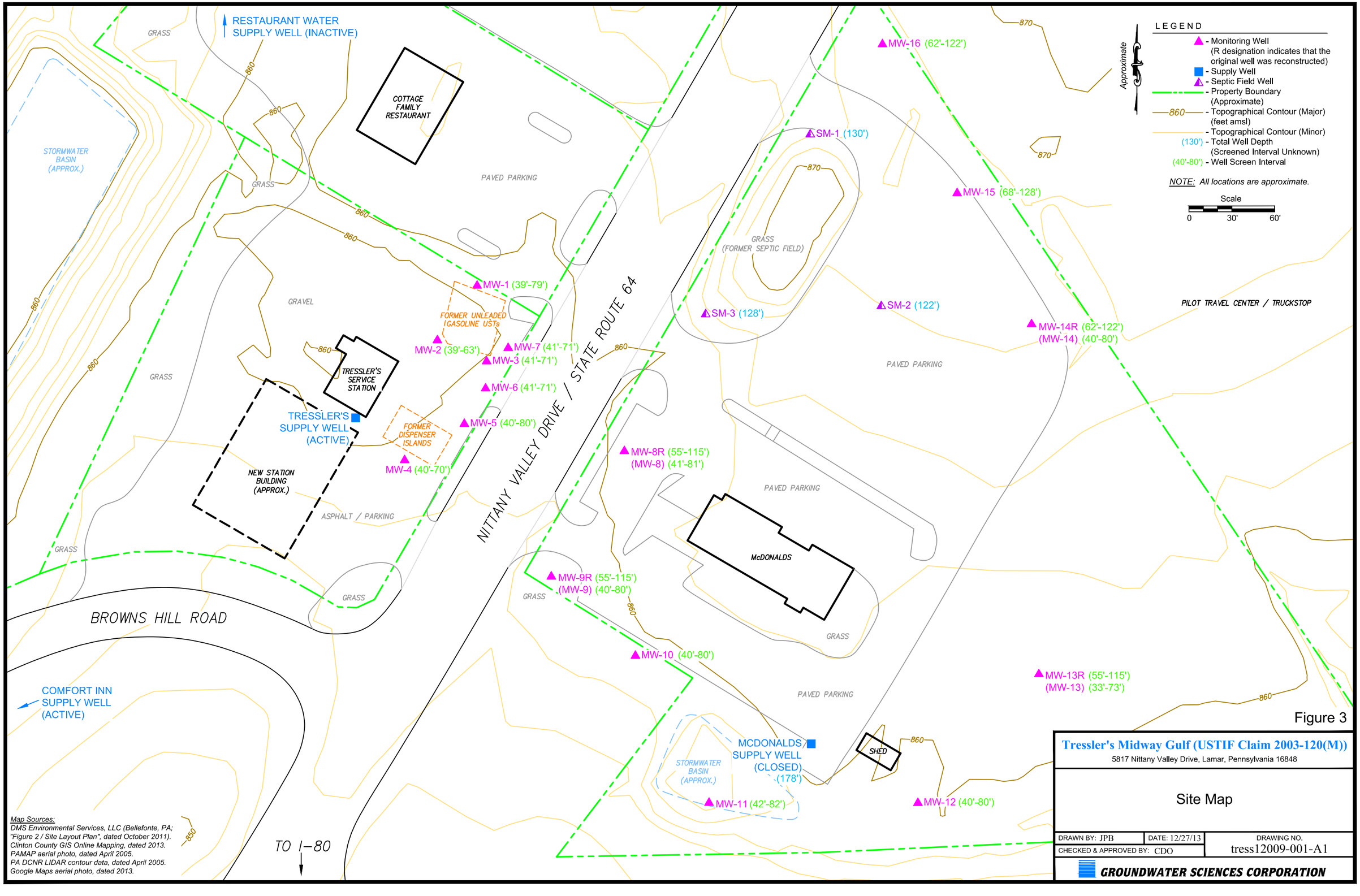
Tressler's Midway Gulf (USTIF Claim 2003-120(M))

5817 Nittany Valley Drive, Lamar, Pennsylvania 16848

Area Map

DRAWN BY: JPB	DATE: 12/27/13	DRAWING NO.
CHECKED & APPROVED BY: CDO		tress12009-002-A1

GROUNDWATER SCIENCES CORPORATION



Map Sources:
DMS Environmental Services, LLC (Bellefonte, PA; "Figure 2 / Site Layout Plan", dated October 2011).
Clinton County GIS Online Mapping, dated 2013.
PAMAP aerial photo, dated April 2005.
PA DCNR LIDAR contour data, dated April 2005.
Google Maps aerial photo, dated 2013.

Figure 3

Tressler's Midway Gulf (USTIF Claim 2003-120(M))
5817 Nittany Valley Drive, Lamar, Pennsylvania 16848

Site Map

DRAWN BY: JPB	DATE: 12/27/13	DRAWING NO. tress12009-001-A1
CHECKED & APPROVED BY: CDO		

GROUNDWATER SCIENCES CORPORATION

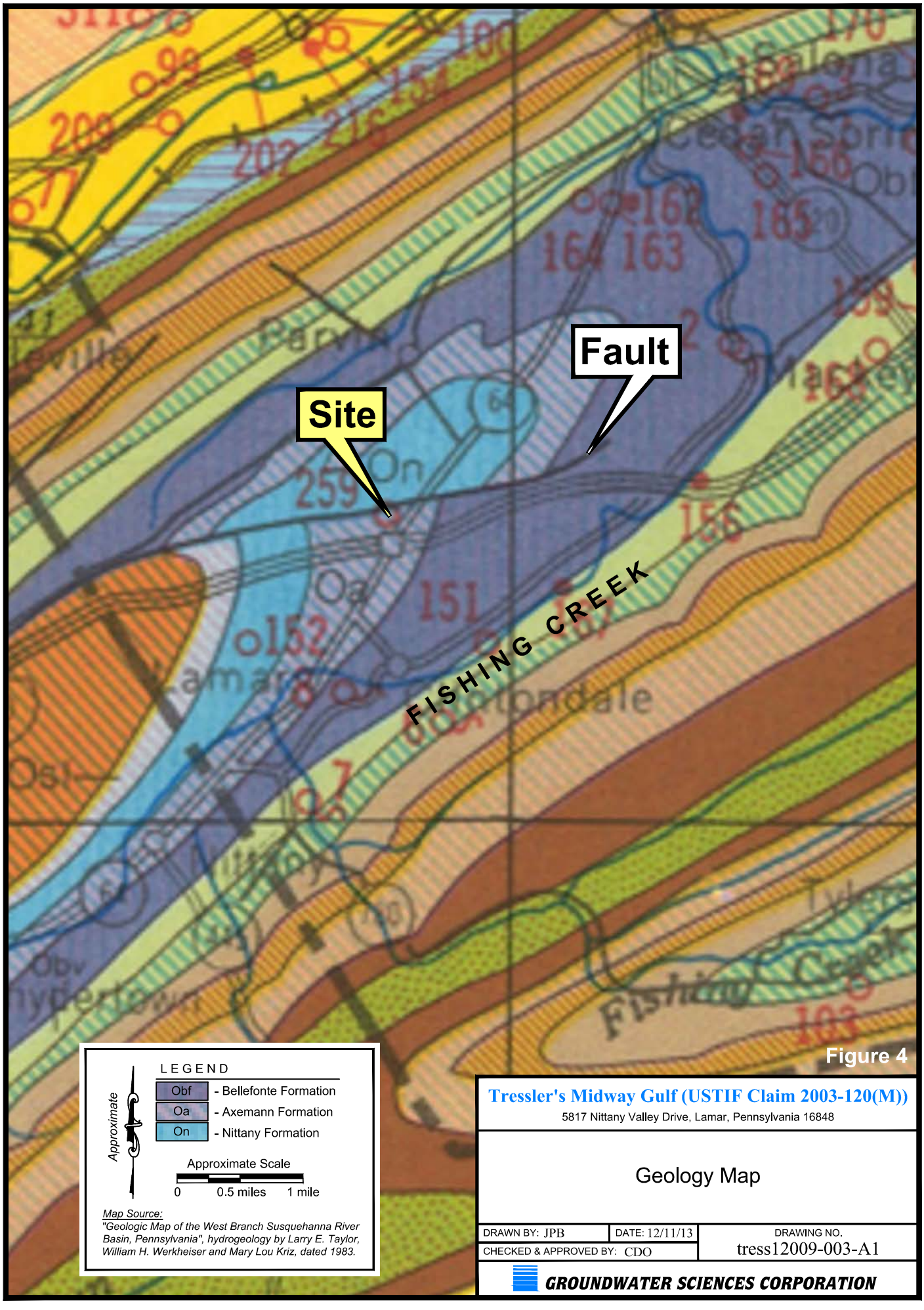


Figure 4

Tressler's Midway Gulf (USTIF Claim 2003-120(M))

5817 Nittany Valley Drive, Lamar, Pennsylvania 16848

Geology Map

DRAWN BY: JPB	DATE: 12/11/13	DRAWING NO. tress12009-003-A1
CHECKED & APPROVED BY: CDO		

GROUNDWATER SCIENCES CORPORATION

COTTAGE FAMILY RESTAURANT
WATER SUPPLY WELL (INACTIVE)
NE / ND - Last Sampled May 2007

COTTAGE FAMILY RESTAURANT

NITTANY VALLEY DRIVE / STATE ROUTE 64

GRASS

STORMWATER BASIN (APPROX.)

PAVED PARKING

GRASS (FORMER SEPTIC FIELD)

MW-16 (62'-122')

MW-16
NE / ND

SM-1 (130')

SM-1	5/25/04	3/15/05
MTBE	21.6	8.2

MW-15 (68'-128')

MW-15	8/3/11	5/9/12
MTBE	31	15

MW-1	5/25/04	9/1/04
MTBE	24.8	3.5

MW-7	5/5/11	5/5/11
EBZ	-	14
XYL	-	98
CU	-	8.6
NAPH	-	27
MTBE	33	33

SM-3	2/9/11	11/10/11
BZ	12	-
MTBE	40	17

SM-3 (128')

SM-2 (122')

SM-2	5/8/13	8/21/14
MTBE	25	9.8

MW-14
NE / ND

(MW-14) (40'-80')
MW-14R (62'-122')

MW-14R
NE / ND

MW-2	9/1/04	11/17/04
MTBE	60.6	-
NAPH	-	1.16

(39'-79') MW-1

FORMER UNLEADED GASOLINE USTs

(39'-63') MW-2

(41'-71') MW-3

MW-7 (41'-71')

MW-3	3/10/06	9/18/08
BZ	5.66	-
EBZ	-	16
XYL	-	87

MW-6	5/5/11	5/5/11
TOL	-	9.6
EBZ	-	17
XYL	-	530
CU	-	30
NAPH	-	99
MTBE	37	37

MW-6 (41'-71')

TRESSLER'S SUPPLY WELL
NE / ND

(40'-80') MW-5

FORMER DISPENSER ISLANDS

(40'-70') MW-4

MW-5	5/5/11	5/5/11
BZ	11	11
MTBE	51	51

(MW-8) (41'-81')

MW-8	5/18/07	6/19/08
MTBE	57	9.9

MW-8R (55'-115')

MW-8R	5/4/11	8/7/13
BZ	120	-
MTBE	290	-
XYL	-	9.1

PAVED PARKING

NEW STATION BUILDING (APPROX.)

MW-4	-	3/10/06
XYL	-	1.96

ASPHALT / PARKING

McDONALDS

GRASS

MW-9	12/7/06	12/7/06
MTBE	310	310

(40'-80') (MW-9)
(55'-115') MW-9R

MW-9R	8/21/14	11/11/14
BZ	290	-
TOL	540	-
EBZ	820	-
NAPH	120	-
MTBE	370	9.6
CU	-	-
XYL	-	-

BROWNS HILL ROAD

MW-10 (40'-80')

MW-10	11/17/04	11/17/04
MTBE	278	278

PAVED PARKING

MW-13	3/14/05	3/14/05
MTBE	54	54

(MW-13) (33'-73')
MW-13R (55'-115')

MW-13R
ND / NE

COMFORT INN SUPPLY WELL
NE / ND

(178')

MCDONALDS SUPPLY WELL (CLOSED)	12/30/05	6/21/06
BZ	130	-
MTBE	580	5.4

STORMWATER BASIN (APPROX.)

MW-11 (42'-82')

MW-11
NE / ND

MW-12 (40'-80')

MW-12	11/16/04	11/16/04
MTBE	28.2	28.2

TO I-80

LEGEND

- ▲ - Monitoring Well (R designation indicates that the original well was reconstructed)
- ■ - Supply Well
- ◭ - Septic Field Well
- - Property Boundary (Approximate)
- (130') - Total Well Depth (Screened Interval Unknown)
- (40'-80') - Well Screen Interval

NOTE: *All locations are approximate.*

Well ID	Date of Last Exceedance	Date of Last Detection
Compound	Detected Concentration	Detected Concentration

NE / ND - No Exceedance / No Detection
BZ - Benzene
CU - Cumene
EBZ - Ethylbenzene
MTBE - Methyl T-Butyl Ether
TOL - Toluene
NAPH - Naphthalene
XYL - Xylenes (Total)

All results reported in µg/l.

Approximate

Scale
0 30' 60'

Figure 5

Tressler's Midway Gulf (USTIF Claim 2003-120(M))
5817 Nittany Valley Drive, Lamar, Pennsylvania 16848

Groundwater Chemistry Map

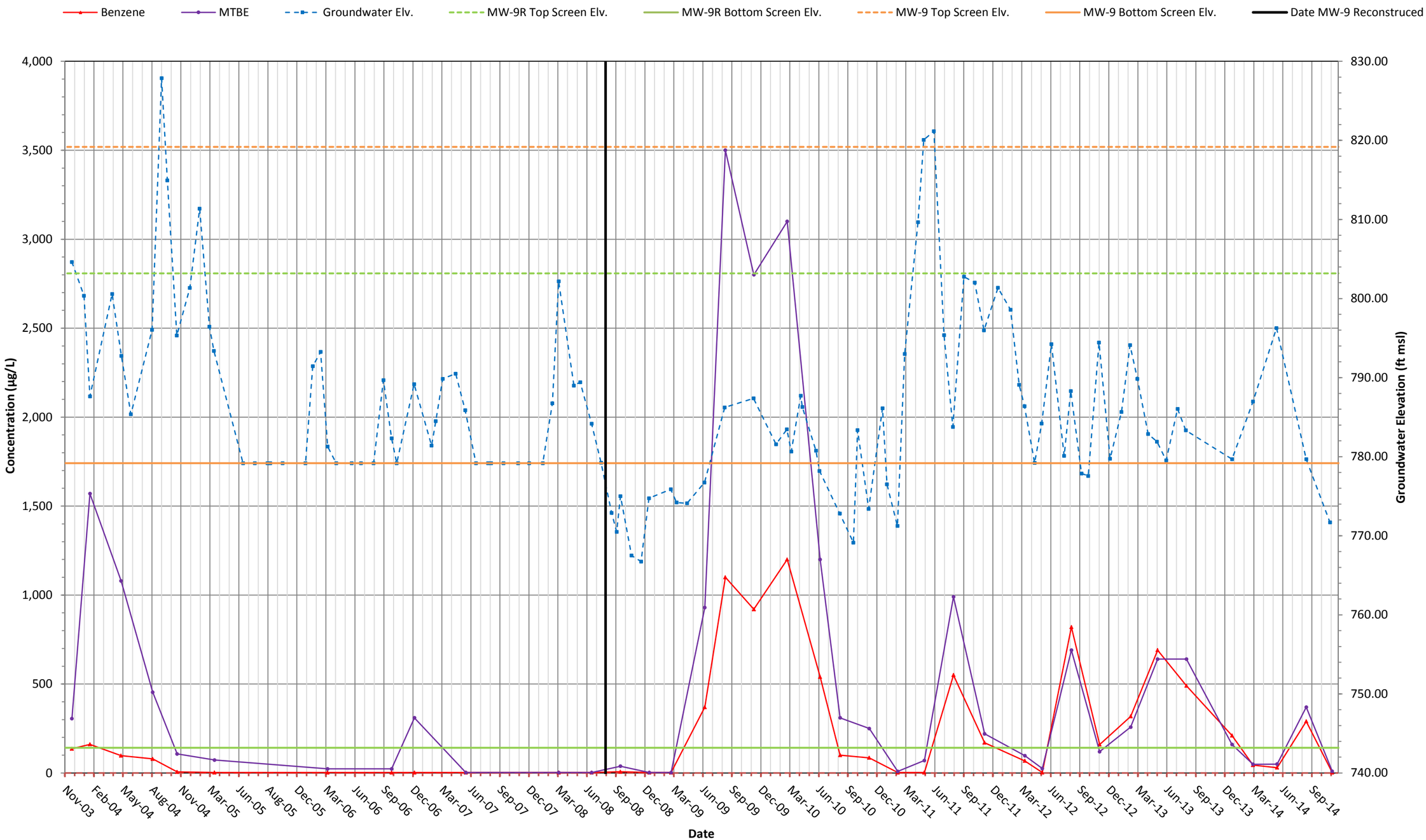
DRAWN BY: MHM/JPB | DATE: 2/11/15 | DRAWING NO. tress12009-004-B1
CHECKED & APPROVED BY: CDO

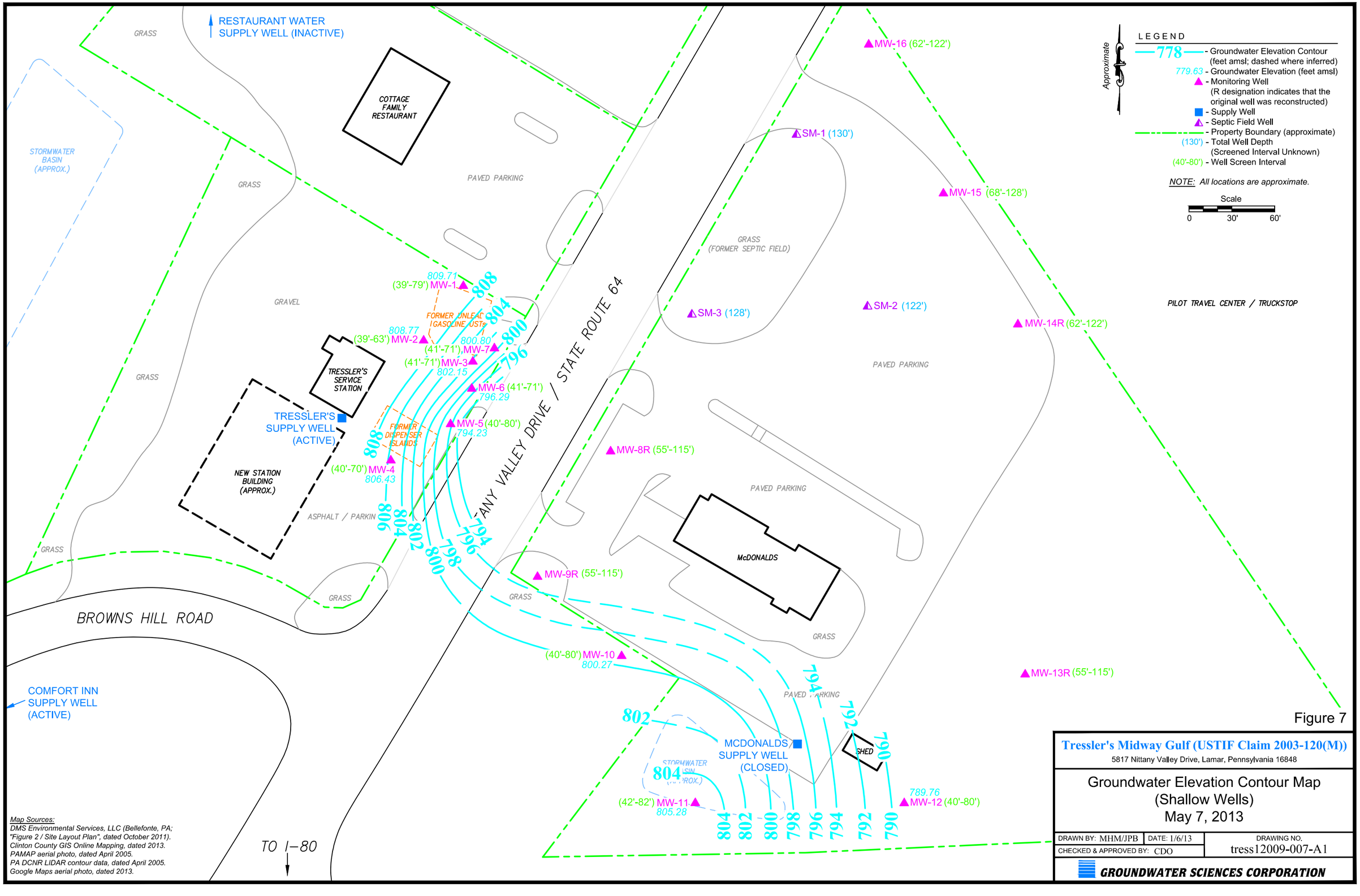
GROUNDWATER SCIENCES CORPORATION

Map Sources:
DMS Environmental Services, LLC (Bellefonte, PA; "Figure 2 / Site Layout Plan", dated October 2011).
Clinton County GIS Online Mapping, dated 2013.
PAMAP aerial photo, dated April 2005.
PA DCNR LIDAR contour data, dated April 2005.
Google Maps aerial photo, dated 2013.

Groundwater Analytical Data Source:
Fourth Quarter 2014 Remedial Action Progress Report (October - December 2014), prepared by DMS Environmental Services, LLC.

Figure 6
Tressler's Midway Gulf - USTIF Claim #03-123(M)
MW-9/MW-9R Groundwater Elevation and Chemistry Data





Map Sources:
DMS Environmental Services, LLC (Bellefonte, PA; "Figure 2 / Site Layout Plan", dated October 2011).
Clinton County GIS Online Mapping, dated 2013.
PAMAP aerial photo, dated April 2005.
PA DCNR LIDAR contour data, dated April 2005.
Google Maps aerial photo, dated 2013.

Figure 7

Tressler's Midway Gulf (USTIF Claim 2003-120(M))
5817 Nittany Valley Drive, Lamar, Pennsylvania 16848

Groundwater Elevation Contour Map
(Shallow Wells)
May 7, 2013

DRAWN BY: MHM/JPB	DATE: 1/6/13	DRAWING NO.
CHECKED & APPROVED BY: CDO		tress12009-007-A1

GROUNDWATER SCIENCES CORPORATION

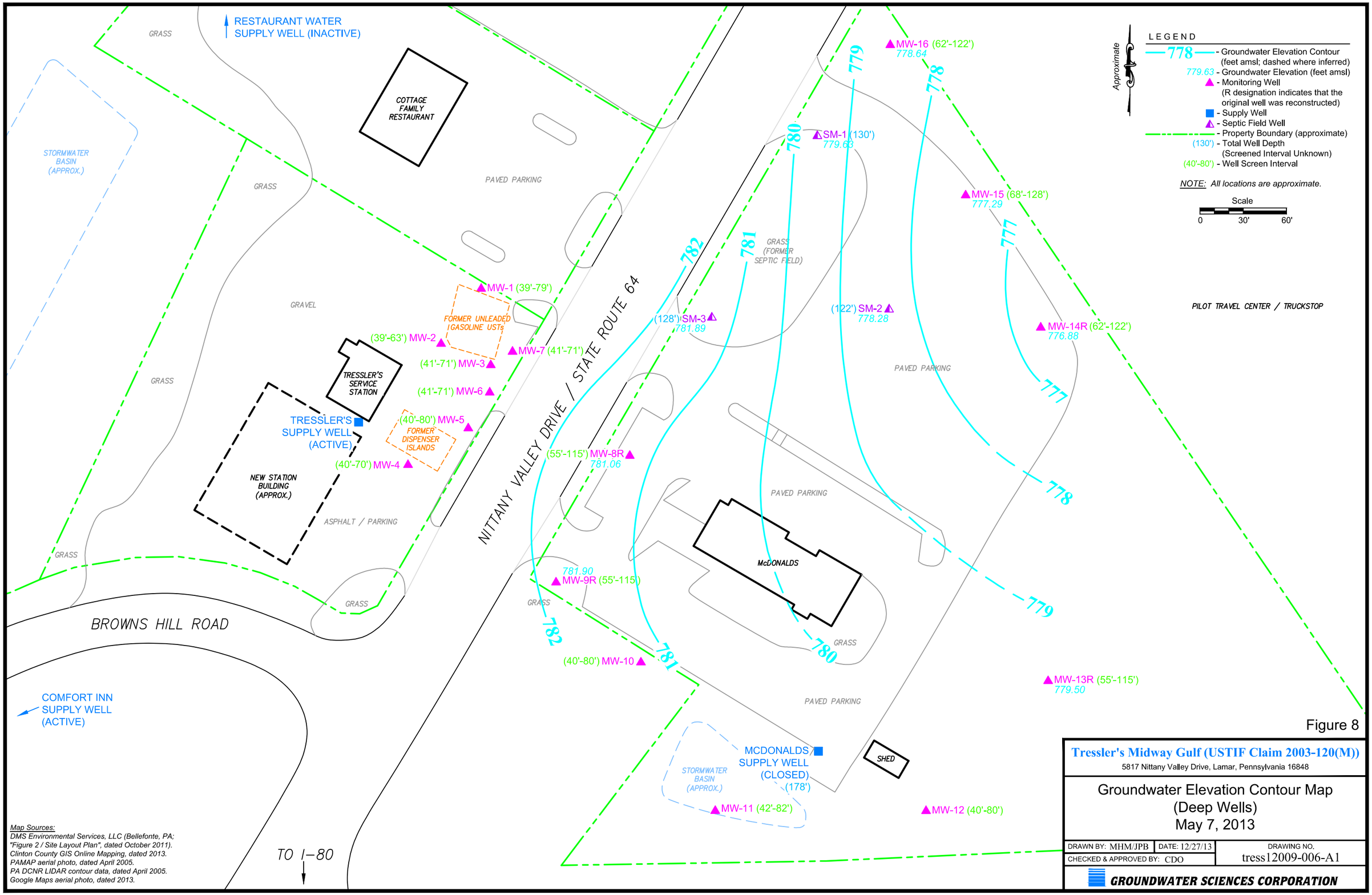


Figure 8

Tressler's Midway Gulf (USTIF Claim 2003-120(M))
5817 Nittany Valley Drive, Lamar, Pennsylvania 16848

Groundwater Elevation Contour Map
(Deep Wells)
May 7, 2013

DRAWN BY: MHM/JPB	DATE: 12/27/13	DRAWING NO. tress12009-006-A1
CHECKED & APPROVED BY: CDO		

GROUNDWATER SCIENCES CORPORATION

Map Sources:
DMS Environmental Services, LLC (Bellefonte, PA; "Figure 2 / Site Layout Plan", dated October 2011).
Clinton County GIS Online Mapping, dated 2013.
PAMAP aerial photo, dated April 2005.
PA DCNR LIDAR contour data, dated April 2005.
Google Maps aerial photo, dated 2013.

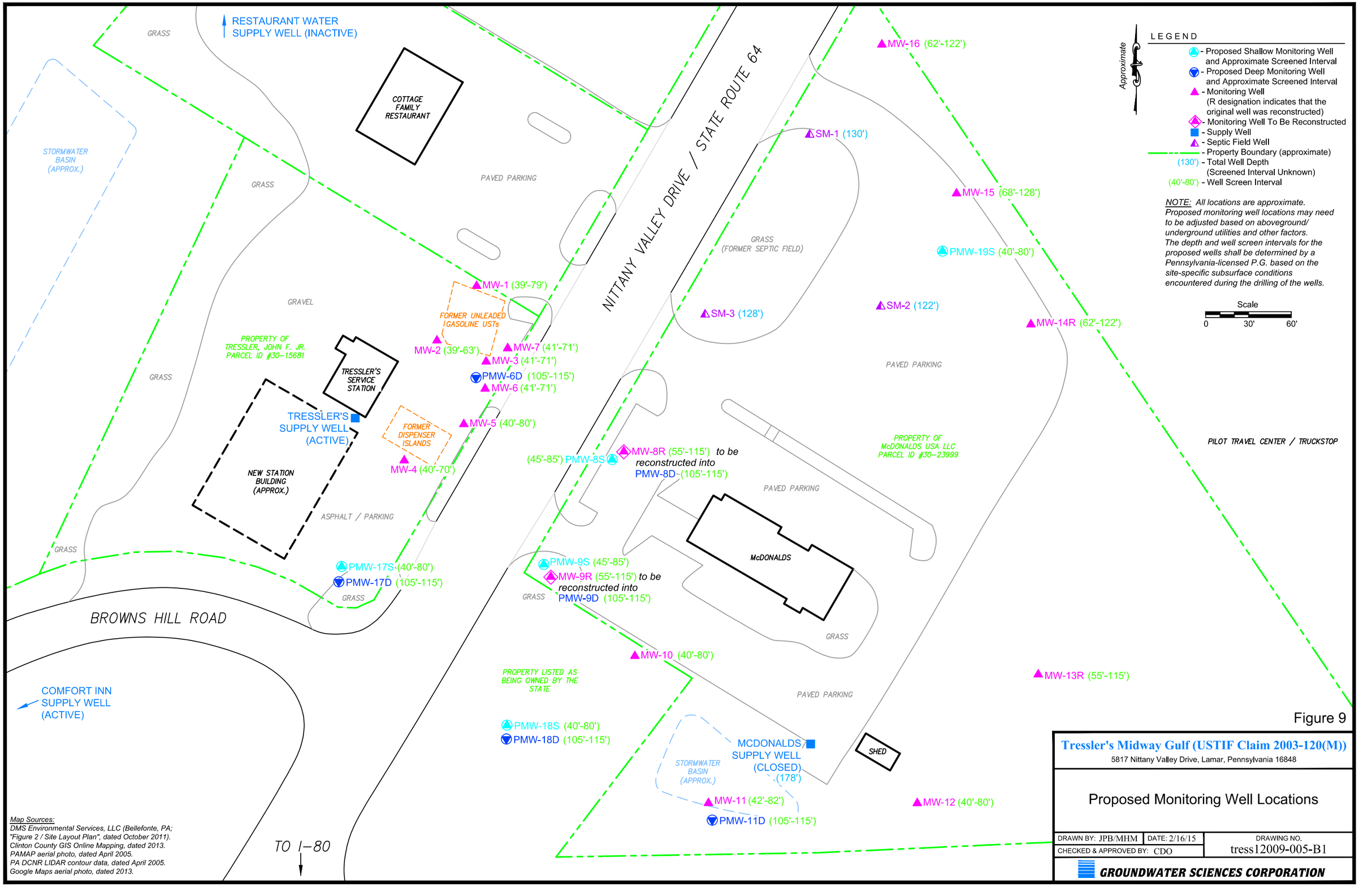


Figure 9

Tressler's Midway Gulf (USTIF Claim 2003-120(M))

5817 Nittany Valley Drive, Lamar, Pennsylvania 16848

Proposed Monitoring Well Locations

DRAWN BY: JPB/MHM	DATE: 2/16/15	DRAWING NO. tress12009-005-B1
CHECKED & APPROVED BY: CDO		

GROUNDWATER SCIENCES CORPORATION

Map Sources:
DMS Environmental Services, LLC (Bellefonte, PA; "Figure 2 / Site Layout Plan", dated October 2011).
Clinton County GIS Online Mapping, dated 2013.
PAMAP aerial photo, dated April 2005.
PA DCNR LIDAR contour data, dated April 2005.
Google Maps aerial photo, dated 2013.