

Request for Bid

Fixed-Price Bid to Result

For

Preparation of Remedial Action Plan, Implementation of Remedial Activities, Quarterly Groundwater Monitoring/Reporting, and Preparation of Remedial Action Completion Report

Solicitor

**Lamagna Cheese Company, Inc.
Lamagna Cheese Facility
1 Lamagna Drive
Verona, Allegheny County, Pennsylvania 15147**

PADEP Facility ID #: 02-27697 PAUSTIF Claim #: 2013-0066(I)

Date of Issuance

December 1, 2017

Table of Contents

Calendar of Events	1
Contact Information.....	2
Requirements.....	3
Mandatory Pre-Bid Site Meeting.....	3
Submission of Bids.....	3
Bid Requirements.....	4
Bid Review and Evaluation	8
General Site Background and Description	10
Scope of Work (SOW).....	17
Objective.....	17
Constituents of Concern (COCs).....	18
General SOW Requirements.....	18
Site-Specific Guidelines	19
Additional Information.....	32
List of Attachments	34

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. The claim is not prorated and the deductible has been met for this claim. 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 <https://ustif.pa.gov>.

Calendar of Events

Activity	Date and Time
Notification of Intent to Attend Site Visit	December 18, 2017 by 5 p.m.
Mandatory Pre-Bid Site Visit	December 20, 2017 at 11 a.m.
Deadline to Submit Questions	January 19, 2018 by 5 p.m.
Bid Due Date and Time	January 31, 2018 by 3 p.m.

Contact Information

Technical Contact
Lawrence F. Roach, P.G. Vice President 2601 Market Place Street, Suite 310 Harrisburg, PA 17110 Office: (717) 901-8184 Fax: (717) 657-1611 Cell: (717) 645-2612 lroach@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 "**Lamagna Cheese 2013-0066(I) – RFB QUESTION**". Bidders must neither contact nor discuss this RFB with the Solicitor, PAUSTIF, the Pennsylvania Department of Environmental Protection (PADEP), or 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 will collect questions and respond via email. All questions and answers will be provided via email to all attendees. This meeting is mandatory for all bidders, no exceptions. This meeting will allow each bidding company to inspect the Site and evaluate Site conditions. **A notice of the bidder's intent to attend this meeting is requested to be provided to the Technical Contact via email by the date listed in the Calendar of Events with the subject "Lamagna Cheese 2013-0066(I) – 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.

For the purposes of navigating to the Site for the pre-bid Site meeting, all participants are encouraged to consider using the address: 1 Daily Way, Verona, PA. The location of the Site is shown on Figure 1 in Attachment 3a and all pre-bid site meeting attendees are required to park and meet at the location specified on the Site Map included as Figure 2 in Attachment 3a.

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, 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 # 2013-0066(I)".** 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 with the selected consultant ("Remediation Agreement"). 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. Bids should include enough original language conveying bidder's thought such that the understanding of site conditions, closure approach (if applicable), and approach to addressing the scope of work can be evaluated. Since bidders are not prequalified, the bid response must provide the Bid Evaluation Committee and Solicitor enough information to complete a thorough review of the bid and bidder.

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 the Site Specific Standard (SSS)? Please list up to 5 sites with brief descriptions of the SSS attainment demonstrations.
 - 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”.
11. The name and contact information of the person who is to be contacted in the event the bid is selected by the Solicitor and/or a Right to Know request is received by PAUSTIF.

Bid Review and Evaluation

1. Bid Review and Scoring

Bidders' submissions that are administratively qualified (attend the mandatory pre-bid site meeting, submission of the bid by the designated due date and time) will be evaluated.

Technical Scoring

Bids are evaluated for technical viability before cost is considered. Bids that have technical scores that fall within 75% of the highest technical score will advance to cost scoring. Bids with technical scores below 75% of the highest technical score are eliminated from further consideration.

Numerical values will be assigned for defined SOW bids for two categories:

- Understanding the problem and demonstrating knowledge of how to perform the work
- Qualifications and Experience

Numerical values will be assigned to three categories in those cases where there is a bid-to-result request:

- Understanding of the problem
- Technical and Regulatory Approach to Remediation
- Qualifications and Experience

Cost Scoring

Cost scores are determined by a cost formula. The bid(s) with the lowest total cost receives the maximum cost points available. The remaining bids are scored by applying the following cost formula: $(1 - ((B - A) / A)) \times C = D$

A = the lowest bid cost

B = the bidder's cost being scored

C = the maximum number of cost points available

D = bidder's cost score (points)

If a bid cost is equal to, or greater than, twice the amount of the lowest bid cost, the formula calculation will result in a negative number and the bid will be assigned zero cost points.

2. Evaluation of Bids

A committee comprised of at least two members of the USTIF staff, two members of ICF staff, and the TPR who assisted in developing the bid package will score all bids that are administratively qualified based on the above criteria. USTIF recognizes that several bids may be acceptable and receive similar numerical scores. At the conclusion of the scoring process, the claimant will receive those bids whose numerical scores place them in the category of meeting Reasonable and Necessary criteria and acceptable for USTIF funding. The claimant may select any of the consulting firms that submitted a qualified bid package to implement the tasks described in the bid; however, USTIF will only provide funding up to the highest fixed price of those bids determined to be Reasonable and Necessary for USTIF funding.

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 Address

Lamagna Cheese Company, Inc.
1 Lamagna Drive
Verona, PA 15147
Verona Borough, Allegheny County

Site Description and Operation History

The Lamagna Cheese Company, Inc. (Lamagna Cheese) owns and operates a cheese manufacturing facility in an industrial mixed use area within Verona Borough, Allegheny County. A Site Location Map is presented as Figure 1 in Attachment 3a. Lamagna Cheese's property consists of four parcels (Lots 2, 3, 4 and 5). The approximate property boundaries for Lots 2, 3, 4 and 5 are shown on Figure 2 in Attachment 3a. For the purposes of this RFB, Lots 2, 3, 4, and 5 are collectively referred to as "the Site". Lots 2 and 3 (located in the up-gradient direction) are separated from lots 4 and 5 (located in the down-gradient direction) by a north-south oriented stormwater easement. Lot 2 is a vacant, paved lot. The Lamagna Cheese factory building is located on Lot 3, a concrete block warehouse is located on Lot 4 (and a portion of Lot 5), and a steel-sided garage is located on Lot 5. With regard to this RFB, the downgradient point-of-compliance (POC) is considered to be the outer boundary of the combined parcels.

The Lamagna Cheese factory building is constructed with a partial basement. The location of the basement and a ramp that accesses the basement is shown on Figure 3 in Attachment 3a. The other buildings located on the Site reportedly do not have a basement (constructed as slab-on-grade).

Based on information from the Pennsylvania One Call System, public utilities at the Site include public water and sewer (Oakmont Borough Municipal Water Authority), storm sewers (Penn Hills Municipal Authority), telephone (Verizon), overhead electrical (Duquesne Light Company), and natural gas (Equitable Gas). Gas lines enter the Lamagna Cheese factory building from the south and overhead electrical lines located to the west of Lamagna Cheese factory building enter the Lamagna Cheese factory building from the west. A sanitary sewer line exits the southern side of the Lamagna Cheese factory building and storm sewer lines are located on the north, west, and south sides of the Lamagna Cheese factory building.

Lamagna Cheese used unleaded gasoline and diesel fuel from two underground storage tank (UST) systems to fuel delivery trucks until May 2013, when the two UST systems were closed by removal. The two former UST systems included one 8,000-gallon fiberglass UST (registered as Tank 001) with its own dispenser and one 4,000-gallon fiberglass UST (registered as Tank 002) with its own dispenser. Tank 001 was reportedly installed in January 1980, and was used to store unleaded gasoline until October 2011, when it was switched to store diesel fuel. Tank 002 was reportedly installed in January 1981, and was used to store diesel fuel. The former UST systems were located in two separate tank excavations located to the south of the Lamagna Cheese factory building. The locations of the former UST systems are shown on Figure 3 in Attachment 3a.

In May 2013, both UST systems were closed by removal and there are reportedly no USTs currently located on the Site.

An unused water supply well is located on the southern portion of Lot 3. The approximate location of the water supply well is shown on Figure 3 in Attachment 3a.

Surrounding Land Use

The surrounding land use consists of mixed commercial, industrial, residential, and undeveloped properties (Figure 2 in Attachment 3a). The Site is bordered to the north by vacant land, beyond that by Plum Creek, and beyond Plum Creek by commercial properties, and beyond that by residential properties. Beyond Plum Creek and Allegheny Avenue to the northwest of the Site is a former steel mill facility that has been developed into residential properties. To the northeast/east of the Site is a commercial property (American Beverage Corporation). The Site is bordered to the west and southwest by Allegheny River Boulevard and beyond that by undeveloped land that contains railroad tracks and a commercial/industrial property (metal scrap yard). The Site is bordered to the south by vacant land and then Seldon Avenue.

Physiography, Topography, and Regional Geology/Hydrogeology

The Site is located within the Pittsburgh Low Plateau Section of the Appalachian Plateaus Physiographic Province. The Pittsburgh Low Plateau Section consists of a rolling upland surface cut by numerous, narrow, relatively shallow valleys.

The topography of the Site is relatively flat with an approximate elevation of 746 feet above mean sea level and a gentle slope to the north. The Site is located at the base of a local southwest/northeast trending valley which slopes to the southwest.

According to the Geologic Map of Pennsylvania and the Greater Pittsburgh Region Geologic Map and Cross Sections, bedrock underlying the Site is identified as the Pennsylvanian-aged Glenshaw Formation. The Glenshaw Formation is the base unit of the Conemaugh Group and is characterized by cyclic sequences of sandstone, shale, red beds, and thin limestone and coal beds.

The Site is located within the Plum Creek Watershed of the Lower Allegheny River Basin. Plum Creek flows west where it enters the Allegheny River, approximately 1,500 feet west/southwest of the Site. The Plum Creek and Lower Allegheny River basin has a water use protection designation of WWF (Warm Water Fishes).

Site Geology/Hydrogeology

Based on information obtained during previous environmental characterization activities (discussed below), soil at the Site consists of fill materials (asphalt with underlying brown silty clay, cobbles, and rock/wood fragments) ranging from ground surface to approximately 7.5 feet below grade (fbg), underlain by clayey sand ranging to depths of 15.5 to 26.5 fbg. The clayey sand is primarily underlain by clayey to sandy gravel to depths of 24-30 fbg, which is discontinuously underlain by two to seven feet of clayey sand. At depths of 24-29 fbg, shale bedrock was encountered in twelve boreholes (SB-1 through SB-5; SB-9 through SB-13; SB-17 and SB-21; Figure 3 in Attachment 3a) drilled in the southeastern portion of the site. In deep boring SB-23 (Figure 3 in Attachment 3a), clayey to sandy gravel was encountered from approximately 15.5-18 fbg. The clayey to sandy gravel was underlain by clayey sand to 25 fbg and a lower clayey gravel layer to the maximum depth at 50 fbg. Bedrock was not encountered in boring SB-23. Based on the soil boring logs prepared by Letterle and Associate (Letterle), bedrock beneath the site exists at a minimum depth of approximately 24 fbg (SB-5) and maximum depth of greater than 50 fbg (SB-23). Soil boring logs are provided in Letterle's July 2014 Site Characterization Report (SCR) and the September 2015 Addendum to Environmental Site Characterization Report included as Attachments 3b and 3c, respectively.

Based on historical groundwater gauging data, the depth-to-groundwater within the soil groundwater monitoring wells has ranged from approximately 15-24 fbg. The general direction of groundwater flow in soil at the site is to the north-northwest. Based on slug tests conducted in MW-1, MW-5, MW-7 and MW-8 and calculations performed by Letterle, the arithmetic mean hydraulic conductivity at the site is approximately one foot per day. This value is within the range of published hydraulic conductivity values for this soil type. Historic groundwater elevation contour maps, slug testing data, as well as Quick Domenico models for fate and transport analyses, are provided in the July 2014 SCR (included as Attachment 3b).

Nature of Confirmed Release and Subsequent Corrective Action Activities

According to the June 29, 2013 UST Closure Report prepared by Letterle (included as an attachment to the July 2014 SCR), a hole was observed in the bottom of Tank 001, and a two-inch diameter hole was observed directly beneath the fill port on Tank 002. During the UST removal, groundwater and separate-phase liquid (SPL) were observed in both excavations and approximately 4,800 gallons of groundwater and SPL were reportedly removed with a vacuum truck for off-site disposal. According to the Notification of Reportable Release (NORR), dated May 8, 2013, more than 250 gallons of SPL was reportedly released to the environment. According to Letterle, approximately 260 tons of petroleum-impacted soil was removed during the

UST closure for off-site disposal. Figure 3 in Attachment 3a provides a general layout of the former UST systems, the approximate excavation boundaries, underground utilities in the area of the former USTs, and other pertinent site features.

In written correspondence dated July 8, 2013, the PADEP acknowledged receipt of the NORR and notified Lamagna Cheese of their Corrective Action Process obligations. Letterle was subsequently retained by Lamagna Cheese to characterize the petroleum contamination.

Between September 2013 and April 2014, Letterle drilled twenty-four soil borings (SB-1 through SB-24) and twenty-one groundwater monitoring wells (MW-1 through MW-21) for the purpose of characterizing impacts to soil and groundwater. The locations of the soil borings and monitoring wells are shown on Figure 3 in Attachment 3a. From the twenty-four soil borings, thirty-three soil samples were collected for laboratory analysis. Subsequent to their development, groundwater samples were collected from each of the groundwater monitoring wells for laboratory analysis. All soil and groundwater samples were analyzed for the substances listed on the PADEP's short list for diesel fuel (benzene, toluene, ethylbenzene, methyl tert-butyl ether (MTBE), isopropylbenzene (cumene), naphthalene, 1,2,4-trimethylbenzene (124TMB) and 1,3,5-trimethylbenzene (135TMB)).

During groundwater elevation gauging and sampling events performed as part of site characterization, SPL was observed in monitoring wells MW-2, MW-3, MW-4, MW-6, MW-8, and MW-11. SPL thicknesses ranged from 0.01 feet (MW-6) to 0.79 feet (MW-4). SPL was removed from these wells by hand bailing and absorbent socks.

In January 2014, three soil vapor sampling points were installed at the Site (VP-1, VP-2, and VP-3; Figure 3 in Attachment 3a). The soil vapor sampling points were sampled in January and July 2014 and the samples were analyzed for the substances listed on the PADEP's short list for diesel fuel.

The results of the soil, groundwater, and vapor characterization were presented in Letterle's July 2014 SCR. The July 2014 SCR also included a sensitive receptor survey, a groundwater usage evaluation, aquifer slug testing results, details on SPL removal, an exposure pathway analysis, Quick Domenico groundwater fate and transport modelling results, and a remedial options evaluation. The SCR, which specified attainment of the Residential Used Aquifer (RUA) Statewide Health Standard (SHS) Medium Specific Concentrations (MSCs) for diesel fuel substances in soil and groundwater as the remedial goal, was approved by the PADEP on October 10, 2014.

On October 13, 2014, Letterle collected a sample of the SPL present in monitoring well MW-3 to be analyzed by TestAmerica Laboratories, Inc. (TestAmerica) for Gasoline Range Organics (GRO) and Diesel Range Organics (DRO). A copy of TestAmerica's laboratory analytical report is included as Attachment 3d. As shown in Attachment 3d, the SPL sample contained 420,000 mg/kg of GRO and 610,000 mg/kg of DRO. Based on the analytical results of the SPL sample, ICF revised their initial eligibility determination in correspondence dated March 10, 2016. In the

March 10, 2016 correspondence ICF concluded that, subject to an applicable deductible, PAUSTIF Claim 2013-0066(l) was also eligible for funding corrective action costs associated with the release of gasoline from former Tank 001. Subsequent to ICF's March 10, 2016 correspondence, Lamagna Cheese has met all applicable deductibles for funding of corrective action costs associated with releases of unleaded gasoline and diesel fuel from Tanks 001 and 002.

To facilitate the preparation of this RFB, the PAUSTIF requested that Letterle gather additional characterization information. Between January 2015 and April 2015, Letterle drilled eight soil borings (SB-25 through SB-30, SB-30A, and SB-21) and five groundwater monitoring wells (MW-22 through MW-26) for the purpose of collecting additional soil and groundwater characterization data. The locations of the soil borings and monitoring wells are shown on Figure 3 in Attachment 3a. From the eight soil borings, eight soil samples were collected for laboratory analysis. Subsequent to their development, groundwater samples were collected from each of the eight groundwater monitoring wells as well as from monitoring wells MW-1 through MW-21 for laboratory analysis. All soil and groundwater samples were analyzed for the substances listed on the PADEP's short list for diesel fuel.

During the additional characterization work, SPL was observed in monitoring wells MW-2, MW-3, MW-4, MW-6, MW-8, MW-11, and MW-23. The SPL was removed from these wells by hand bailing and absorbent socks.

The results of the additional characterization work were presented to the PADEP in Letterle's September 2015 Addendum to Environmental Site Characterization Report (included as Attachment 3c). Included in the September 2015 report were details on three high vacuum extraction events (vac-outs), conducted on January 3, 2015, February 10, 2015, and March 10, 2015, performed with a vacuum truck. During each vac-out event a vacuum was applied for at least 2 hours on each well that contained measurable SPL at the time of the vac-out event. The volume of SPL and water recovered from each well ranged from 50 gallons (MW-2 on January 13, 2015) to 394 gallons (MW-6 on March 10, 2015) with a cumulative total of 841 gallons of SPL and water removed during the January and March events (the total volume that was removed during the February vac-out event was not documented due to the absence of a totalizer on the vacuum truck).

On June 26, 2017, Letterle conducted the second quarter 2017 groundwater sampling event. In addition to the substances listed on the PADEP's short list for diesel fuel, the groundwater samples were analyzed for the substances listed on the PADEP's short list for unleaded gasoline.

Soil, Groundwater, and Soil Vapor Conditions at the Site

Between October 2013 and July 2015, Letterle drilled and sampled 32 soil borings (SB-1 through SB-30, SB-30A, and SB-31) to characterize the reported diesel fuel release at the Site. From the

soil borings, 41 soil samples were collected and analyzed for the substances on the PADEP's diesel fuel short list. The location of the soil borings are shown on Figure 3 in Attachment 3a and the results of the soil samples are shown on the soil sampling data tables presented in Letterle's July 2014 SCR and September 2015 Addendum to Environmental Site Characterization Report included as Attachments 3b and 3c, respectively. A soil concentration map showing concentrations of diesel fuel substances relative to the RUA SHS MSCs is attached as Figure 4 in Attachment 3a. As shown on Figure 4, diesel fuel short list substances in soil above the RUA SHS MSCs are delineated to the west, south, and east. Although concentrations of benzene, MTBE, and 124TMB are not delineated immediately to the north of soil boring SB-30 (installed inside the Lamagna Cheese factory building), due to accessibility issues associated with the presence of the Lamagna Cheese factory building, the PADEP has agreed that, for the purposes of site characterization and corrective actions, diesel fuel short list substances in soil are delineated at the Site. No soil samples collected from the Site have been analyzed for the PADEP's complete list of unleaded gasoline substances. For this reason, a soil boring investigation will be required as part of this RFB.

There are currently twenty-six groundwater monitoring wells (MW-1 through MW-26) and three soil vapor monitoring points (VP-1 through VP-3) located at the site. The locations of the monitoring wells and soil vapor points are shown on Figure 3 in Attachment 3a.

Groundwater tables, provided by Letterle, showing the most recent groundwater elevation data, dissolved-phase groundwater concentrations of diesel fuel substances, and separate phase liquid data is included in Attachment 3e as Tables 3, 4, and 6 respectively.

As shown on Table 3 in Attachment 3e, depth-to-groundwater at the Site has historically ranged from 14.62 fbg (MW-14) to 24.80 fbg (MW-23). A groundwater elevation contour map, prepared for the most recent groundwater gauging event (June 26, 2017) is presented as Figure 5 in Attachment 3a. Although historic groundwater elevations suggest a localized mounding effect in the vicinity of the former USTs, the general direction of groundwater flow at the Site is to the northwest.

As shown on Table 4 in Attachment 3e, dissolved-phase concentrations of diesel fuel short list substances have consistently been reported above the RUA SHS MSC in monitoring wells located in the vicinity of the former USTs (MW-1, MW-5, and MW-7). Due to the presence of SPL, groundwater samples have not been collected consistently from monitoring wells MW-2, MW-3, MW-4, MW-6, MW-11, MW-23, and MW-26 (also located in the vicinity of the former USTs). Historic dissolved-phase concentrations and the presence of SPL in these wells suggest that dissolved-phase concentrations of diesel fuel short list substances are likely consistently above the RUA SHS MSCs in these wells.

The substance with the most wide-spread distribution in groundwater is MTBE. As shown on Table 4 in Attachment 3e, dissolved-phase concentrations of MTBE have historically been reported above the RUA SHS MSCs in monitoring wells MW-1 through MW-8, MW-11, MW-12,

MW-13, MW-15, MW-16, MW-17, MW-24, MW-25, and MW-26. The most recent groundwater sampling data (June 26, 2017), which shows dissolved-phase concentrations of MTBE in cross-gradient monitoring wells MW-12 and MW-18 and down-gradient monitoring wells MW-15, MW-16, MW-17, and MW-20 below the RUA SHS MSC, suggest that the dissolved-phase MTBE plume is stable or shrinking.

A figure showing the extent of dissolved-phase diesel fuel short list substances above the PADEP's RUA SHS MSCs during the June 26, 2017 groundwater sampling event is provided as Figure 6 in Attachment 3a. As shown on Figure 6, concentrations of all dissolved-phase diesel fuel short list substances are delineated to the PADEP's RUA SHS MSCs in all directions. Additionally, as shown on Figure 6, although concentrations of all dissolved-phase unleaded gasoline and diesel fuel short list substances are below the PADEP's RUA SHS MSCs in all down-gradient POC monitoring wells, concentrations of some dissolved-phase diesel fuel short list substances are above the PADEP's RUA SHS MSCs in POC wells MW-5, MW-7, and MW-8.

As shown on Table 6 in Attachment 3e, SPL has been measured in monitoring wells MW-2, MW-3, MW-4, MW-6, MW-8, MW-11, MW-23, and MW-26 within the last year. During the June 26, 2017 SPL gauging event, monitoring wells MW-2, MW-3, MW-6, and MW-23 contained SPL at thicknesses of 0.12 feet, 0.02 feet, 0.02 feet, and 0.07 feet respectively. Figures 7 through 14 in Attachment 3a show the extent of the measurable SPL between September 2016 and March 2017. As shown on Figures 7 through 14, the extent of SPL is in the former UST area (including up-gradient POC well MW-8) and beneath the southern end of the building. Since the 2013 reportable release, Letterle has removed SPL passively (absorbent socks) and actively (hand bailing and vacuum truck). According to Letterle's Table 6, included in Attachment 3e, approximately 100 gallons of SPL have been removed from the Site using absorbent socks and hand bailing.

Considering that 1) concentrations of diesel fuel short list substances are present in soil above the RUA SHS MSCs in many locations (including under the building), 2) dissolved-phase diesel fuel short list substances are present in several POC wells (MW-5, MW-7, and MW-8), and 3) SPL has been present in POC well MW-8 recently, the remedial goal for soil and groundwater at the site is the SSS.

The groundwater samples collected by Letterle in June 2017 were analyzed for the substances listed on the PADEP's short lists of diesel fuel and unleaded gasoline. All groundwater samples collected as part of this RFB shall be analyzed for the substances listed on the PADEP's short list for diesel fuel and unleaded gasoline.

Each of the three soil vapor sampling points installed by Letterle as part of site characterization activities have been sampled twice. The results of the soil vapor sampling are presented in Letterle's July 2014 SCR included in Attachment 3b. Although the laboratory results for all analyzed substances from the two rounds of soil vapor samples were below the soil vapor MSCs applicable at the time, the soil vapor sampling points are not constructed in accordance with the

PADEP's revised technical guidance document (Land Recycling Program Technical Guidance Manual for Vapor Intrusion into Buildings from Groundwater and Soil under Act 2) which became effective on January 18, 2017 (PADEP VI TGM) and the samples were not analyzed for the complete list of unleaded gasoline substances. For these reasons, a revised vapor intrusion evaluation will be required as part of this RFB.

Property Ownership

While the subject Site is not formally for sale, Lamagna is in informal negotiations with a third party to sell the property. There is currently no Agreement for Sale that has been executed. Given the potential for a property sale to occur during the term of the Remediation Agreement, the Site Specific Assumptions portion of Exhibit A of the Remediation Agreement has been modified to address this situation.

Scope of Work (SOW)

This RFB seeks competitive bids from qualified contractors to perform the activities in the SOW specified herein. The Technical Contact has discussed the remedial approach contained within this RFB with Mr. Michael Hartley, the PADEP Case Manager assigned to this Site. Based on correspondence with the PADEP, the vac-out events proposed in this RFB are an acceptable remedial plan to address the presence of SPL.

The Solicitor has selected the SSS for soil and groundwater by demonstrating pathway elimination and/or no complete exposure pathway. The Solicitor has agreed to placing an Environmental Covenant on the property to ensure that the contaminated soil at the Site is managed and potential exposure pathways to the contaminated soil and groundwater are controlled.

Objective

The objective of this RFB is to execute the defined SOW that will further remediate the Site and allow for Site closure. This solicitation requests a fixed price to prepare a Remedial Action Plan (RAP) that details the removal of SPL and soil vapor by performing vac-outs, performing SPL and soil vapor vac-outs, quarterly groundwater sampling to gather additional groundwater quality data, the installation and sampling of sub-slab soil vapor sampling points, and the preparation of an Environmental Covenant and a Remedial Action Completion Report (RACR). The RACR shall demonstrate that SPL has been removed from the Site to the maximum extent practicable (MEP) and seek relief from liability for the release of unleaded gasoline and diesel fuel short list substances using the SSS for soil and groundwater (including the vapor intrusion pathway). The strategy to address SPL in the SOW will satisfy the PADEP that SPL has been removed to the MEP, based on a conversation with Mr. Hartley. The RFB was provided to the PADEP for review and comment and no comments were received.

Constituents of Concern (COCs)

The COCs for this site are the constituents identified on the unleaded gasoline and diesel fuel parameter short lists provided in the PADEP's December 15, 2012 Technical Document (Technical Guidance Number 263-4500-601) *Closure Requirements for Underground Storage Tank Systems*. Specifically, the COCs are benzene, toluene, ethylbenzene, total xylenes, cumene, naphthalene, MTBE, 124TMB, and 135TMB.

General SOW Requirements

The Milestones presented below are separated into two categories; Base Scope of Work Milestones and Optional Milestones. The Base Scope of Work Milestones (Milestones A through J) represent the level of effort deemed reasonable to successfully complete the corrective action process and obtain relief from liability for the Site. The Optional Milestones (Milestone K through R) represent additional activities that may be necessary to obtain additional data that may be necessary to supplement the work specified in the Base Scope of Work. **The initiation of any of the Optional Milestones will require approval from the Solicitor and PAUSTIF.**

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 statutes, regulations, guidance, and published 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.
- Uniform Environmental Covenants Act (Act 68 of 2007)

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

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

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

Site-Specific Guidelines

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

Scheduling: The selected bidder shall provide a schedule for which each milestone is expected to be completed (i.e., within 30 days from the execution of the Remediation Agreement).

Field Activities: The selected bidder shall provide a 72-hour notification of all pending on-site work to the Solicitor. All work should be conducted during normal business days and hours (Monday through Friday, from 8:00 AM to 5:00 PM) unless work outside of these normal business days and hours is authorized by the Solicitor.

Responsibility: Upon execution of the Remediation Agreement, the selected bidder shall become the consultant of record for the Site and the Solicitor. It shall be expected that the selected bidder will represent the interest of the Solicitor and PAUSTIF during the execution of all aspects of the project associated with this RFB.

Milestones Requiring Approval Prior to Initiation: The SOW contained within this RFB includes optional milestones that may not be reasonable and necessary to perform based on the information gathered by the selected bidder upon completion of the base scope of work milestones. For this reason, the selected bidder shall be required to obtain approval from the Solicitor and PAUSTIF prior to initiating any of the Optional Milestones (listed below) and any sub-milestone to the Optional Milestones. The Optional Milestones are:

- Optional Milestone K – Additional Sub-Slab Soil Gas Sampling
- Optional Milestone L – Supplemental Soil Sampling
- Optional Milestone M – Indoor Air Sampling
- Optional Milestone N – Supplemental Groundwater Sampling
- Optional Milestone O – Supplemental SPL Removal Event
- Optional Milestone P – SPL and Contaminated Groundwater Disposal
- Optional Milestone Q – Monitoring Well Repairs
- Optional Milestone R – Water Supply Well Abandonment Cost Adder
- Optional Milestone S – Preparation of Remedial Action Progress Report

BASE SCOPE OF WORK MILESTONES

Milestone A: Sub-Slab Soil Gas Sampling

All bidders are required to provide in Attachment 2 the cost to install and sample twice, four sub-slab soil gas sampling points. Two of the four sub-slab soil gas sampling points shall be installed in the slab-on-grade section of the Lamagna Cheese factory building and two of the four sub-slab soil gas sampling points shall be installed in the basement of the Lamagna Cheese factory building. Although the approximate locations of the sub-slab soil gas sampling points are shown on Figure 3 in Attachment 3a, the actual locations of the sub-slab sampling points shall be determined by the selected bidder based on professional judgment and in accordance with the PADEP VI TGM. All bidders are required to provide in their bid response document a description of how the sub-slab soil gas sampling points would be installed, purged, and sampled. The QA/QC actions associated with the collection of the sub-slab soil gas samples shall also be described. The soil gas samples shall be analyzed for the substances in the COC Section of this RFB. The selected bidder shall complete Milestone A within 75 days of the execution of the Remediation Agreement.

Milestone B: Pre-Remedial Action Plan Groundwater Sampling

All bidders shall provide in Attachment 2, the cost to perform one groundwater sampling event at the Site. The groundwater sampling event shall include the following:

- The comprehensive collection of SPL elevation and thickness measurements from monitoring wells that have historically contained SPL (monitoring wells MW-2, MW-3, MW-4, MW-6, MW-8, MW-11, MW-23, and MW-26). SPL elevation and SPL thickness measurements shall be made using an electronic conductance-type interface probe with a 0.01 foot resolution.
- The comprehensive collection of groundwater elevation measurements from monitoring wells that have not historically contained SPL (monitoring wells MW-1, MW-5, MW-7, MW-9, MW-10, MW-12 through MW-22, MW-24, and MW-25).
- The collection of groundwater samples from all monitoring wells that do not contain measurable SPL during the groundwater sampling event. For the purposes of completing Attachment 2 for this Milestone, all bidders shall assume that groundwater samples will be collected from the 18 groundwater monitoring wells that have not historically contained SPL. In the event that more or less than 18 groundwater monitoring wells are sampled as part of this Milestone (monitoring wells are inaccessible, one or more of the eight monitoring wells that have historically contained SPL does not contain SPL, etc.), the Milestone payout will be adjusted accordingly based on the per well sampling cost provided by all bidders as Optional Milestone N.

Groundwater elevation/SPL gauging, purging, sampling, and analysis shall be conducted in accordance with generally accepted practices as outlined in the PADEP's Groundwater Monitoring Guidance Manual, dated December 1, 2001 (Document #383-3000-001). The samples collected from the groundwater monitoring wells shall be collected in laboratory-provided containers and analyzed by EPA Method 8260B for the substances listed in the COC section of this RFB.

The selected bidder shall complete Milestone B within 30 days of the execution of the Remediation Agreement.

Milestone C: Soil Boring Installation and Sampling

All bidders are required to provide in Attachment 2 the cost to perform a soil investigation. The selected bidder shall perform a soil investigation to characterize the lateral and vertical extent of unleaded gasoline impacts to soil. Eleven soil borings (SB-101 through SB-111) are proposed to characterize soil conditions. The approximate locations of the eleven soil borings are shown on Figure 15 in Attachment 3a.

The selected bidder shall refer to the professional land survey and results of utility mark outs (i.e. PA One Call, etc.) and exercise professional judgement prior to advancing the prescribed soil borings to avoid subsurface utilities and ensure the soil borings are on the

Site property. In the event that any of the prescribed soil bring locations are to be modified significantly, the selected bidder shall notify ICF or PAUSTIF with justification to do so before proceeding.

Each soil boring shall be advanced to the depth that corresponds with the deepest prescribed sampling interval within that boring. Soil samples shall be screened at two-foot intervals with a photoionization detector (PID) (using headspace measurements). Continuous geological logs shall be prepared by a Professional Geologist licensed in the Commonwealth for each boring using a standard and consistent classification system procedure (Modified Burmister or USCS).

For the purpose of this RFB, the selected bidder shall assume that 16 soil samples shall be collected as part of this Milestone. For soil borings SB-101 through SB-111, the following samples shall be collected:

For Soil Boring SB-101 – One soil sample shall be collected from a depth between 17 and 19 fbg.

For Soil Boring SB-102 – One soil sample shall be collected from a depth between 15 and 17 fbg.

For Soil Boring SB-103 – One soil sample shall be collected from a depth between 15 and 17 fbg.

For Soil Boring SB-104 – One soil sample shall be collected from a depth between 13 and 15 fbg.

For Soil Boring SB-105 – One soil sample shall be collected from a depth between 13 and 15 fbg.

For Soil Boring SB-106 – One soil sample shall be collected from a depth between 10 and 12 fbg and one soil sample shall be collected from a depth between 14 and 15 fbg.

For Soil Boring SB-107 – One soil sample shall be collected from a depth between 10 and 12 fbg and one soil sample shall be collected from a depth between 15 and 17 fbg.

For Soil Boring SB-108 – One soil sample shall be collected from a depth between 14 and 15 fbg and one soil sample shall be collected from a depth between 17 and 19 fbg.

For Soil Boring SB-109 – One soil sample shall be collected from a depth between 17 and 19 fbg.

For Soil Boring SB-110 – One soil sample shall be collected from a depth between 10 and 12 fbg and one soil sample shall be collected from a depth between 14 and 15 fbg.

For Soil Boring SB-111 – One soil sample shall be collected from a depth between 9 and 10 fbg and one soil sample shall be collected from a depth between 15 and 17 fbg.

All soil samples shall be collected in laboratory-provided containers and analyzed by EPA Method 8260B for the substances listed in the COC section of this RFB.

The selected bidder shall complete Milestone C within 60 days of the execution of the Remediation Agreement.

Milestone D: Preparation of a Remedial Action Plan

All bidders are required to provide in Attachment 2 the cost to prepare a RAP. The RAP shall be prepared in accordance with 25 Pa Code §245.311 and other applicable statutes, regulations and guidance, and shall be signed and sealed by a Professional Geologist registered in the Commonwealth of Pennsylvania. The RAP shall include a summary of site characterization activities conducted at the Site, specify the use of vac-out events using a vacuum truck, twice per month for six months, to remove SPL and contaminated groundwater and soil vapor as the selected remedial method to achieve removal of SPL to the MEP. The RAP will also provide notice to the PADEP that the cleanup standard will be changed from the SHS to the SSS for soil and groundwater by demonstrating pathway elimination and/or no complete exposure pathway. Details on the vac-out events are provided in Milestone E.

The RAP shall include the results of the work performed as part of Milestones A, B, and C as well as specify the use of an Environmental Covenant to maintain the activity and use limitations necessary to ensure that exposure pathways to contaminated soil and groundwater at the Site will be maintained. The bidder shall provide an outline of the activity and use limitations that it believes will be necessary for soil and groundwater.

The RAP shall be prepared in draft form for review and comment by the Solicitor and the PAUSTIF. The selected bidder shall complete Milestone C within 90 days of the execution of the Remediation Agreement. The timeframe for the completion of this Milestone shall provide two weeks for the Solicitor's and PAUSTIF's review and the selected bidder shall address all of the comments received from the Solicitor and the PAUSTIF before submission of the RAP to the PADEP.

Tables, figures, and other attachments (tables containing historic groundwater data, in Excel format, will be provided to the selected bidder) that support the text shall include, but not be limited to, the following:

- Updated comprehensive historical groundwater elevation data (including SPL elevations and thickness where applicable);
- Updated comprehensive groundwater and soil analytical data;

- Site map(s) showing site boundaries, pertinent site features, existing soil borings and monitoring well locations, and new sub-slab soil vapor sampling locations (a copy of the previous licensed surveyor's work will be provided to the selected bidder);
- Groundwater elevation contour map for the comprehensive groundwater gauging performed as part of Milestone B;
- Groundwater concentration contour maps for all constituents found to be above the RUA MSCs in any sample collected as part of Milestone B;
- SPL Maps (similar to Figures 7 through 14 in Attachment 3a);
- Logs for soil borings; advanced as part of Milestone C; and
- Laboratory analytical reports, chains of custody, and relevant field sampling documentation for all samples collected since the execution of the Remediation Agreement

Milestones E1 – E12: SPL Removal

All bidders shall provide in Attachment 2 the cost to perform semi-monthly (twice per month) SPL removal events for a period of six months. Each SPL removal event should be performed approximately two weeks following the previous SPL removal event. For the purposes of this bid, assume that each of the twelve SPL removal events will include a pre-SPL removal Site visit followed by the SPL removal event within 72 hours of the pre-SPL Site visit. Each SPL removal event shall include the application of a vacuum to the subsurface using a vacuum truck with a minimum capacity of 2,000 gallons. A minimum of 6 hours of vacuum shall be applied to the subsurface during each SPL removal event. The protocol for SPL removal (via vac-out and possibly manual bailing) is included as Attachment 3f. The costs included as part of Milestones E1 through E12 should not include the disposal costs for SPL and contaminated groundwater removed as part of the SPL removal vacuum events. The cost for the disposal of the SPL and contaminated groundwater shall be provided by all bidders as part of Optional Milestone P and will be used to modify the reimbursement of each SPL removal event accordingly.

The first of the twelve SPL removal events shall commence within 30 days of the PADEP's approval of the RAP. All bidders shall assume for the purposes of this RFB that the RAP will be approved as submitted within 90 days of its submission.

Milestones F1 – F2: Quarterly Groundwater Sampling and Reporting During Remediation

All bidders shall provide in Attachment 2, the cost to perform two quarterly groundwater sampling events at the Site that will occur during the two quarters in which the SPL Removal activities described in Milestone F will occur. Each of the two quarterly groundwater sampling events shall be scheduled so that they occur between one and two weeks following a SPL removal event and shall include the following:

- The comprehensive collection of SPL elevation and thickness measurements from monitoring wells that have historically contained SPL (monitoring wells MW-2, MW-

3, MW-4, MW-6, MW-8, MW-11, MW-23, and MW-26). SPL elevation and SPL thickness measurements shall be made using an electronic conductance-type interface probe with a 0.01 foot resolution.

- The comprehensive collection of groundwater elevation measurements from the remaining monitoring wells that have not historically contained SPL.
- The collection of groundwater samples from all monitoring wells (including the eight monitoring wells that have historically contained SPL). The monitoring wells that have historically contained SPL (monitoring wells MW-2, MW-3, MW-4, MW-6, MW-8, MW-11, MW-23, and MW-26) shall be purged via low-flow (minimal drawdown) sampling techniques and sampled using the tubing that was set in the well upon completion of the SPL removal event performed prior to the sampling event. As discussed in the SPL removal protocol, tubing will be placed in these monitoring wells (well below the water table) following the SPL removal event (to minimize contamination to the tubing) so that the tubing can be used for purging and sampling.

As part of Milestones F1 and F2, all bidders shall prepare Remedial Action Progress Reports (RAPR) following each of the two groundwater sampling events. Each RAPR shall be prepared in accordance with 25 Pa Code §245.312. Groundwater elevation/SPL gauging, purging, sampling, and analysis shall be conducted in general accordance with generally accepted practices as outlined in the PADEP's Groundwater Monitoring Guidance Manual, dated December 1, 2001 (Document #383-3000-001).

The groundwater samples collected from the groundwater monitoring wells shall be collected in laboratory-provided containers and analyzed by EPA Method 8260B for the substances listed in the COC section of this RFB.

Milestones G1 – G8: Quarterly Post-Remediation Groundwater Sampling and Reporting

All bidders shall provide in Attachment 2, the cost to perform eight consecutive quarterly post-remediation groundwater sampling events to provide statistical evidence that groundwater concentrations are stable or declining and that the groundwater plumes at the Site are stable or shrinking. The first of the eight post-remediation groundwater sampling events shall occur during the calendar quarter following the last SPL removal event. Each of the quarterly post-remediation groundwater sampling events shall be performed in accordance with Milestone F1 and F2 and include the preparation of RAPRs. Each RAPR shall be prepared in accordance with 25 Pa Code §245.312.

Milestone H: Preparation of Remedial Action Completion Report

All bidders shall provide in Attachment 2 the cost to prepare a RACR that requests relief from liability for the substances listed in the COC section of this RFB in soil and groundwater at the Site via the SSS. The RACR shall be prepared in accordance with 25 Pa Code §245.313 and other applicable statutes, regulations and guidance, and shall be

signed and sealed by a Professional Geologist registered in the Commonwealth of Pennsylvania.

The RACR shall include a draft copy of an Environmental Covenant for Lot 3, designed to maintain the activity and use limitations necessary to ensure that potential exposure pathways to contaminated soil and groundwater at the Site will continue to be incomplete.

Text, tables, figures, and other attachments that support the relief from liability shall include, but not be limited to, the following:

- Assuming that vapor intrusion is not a concern, a full evaluation of the vapor intrusion pathway indicating that there are no unacceptable risks in accordance with the PADEP VI TGM;
- A receptor survey for potential future remedial actions that include, but is not limited to:
 1. A review of the PA Groundwater Information System (PAGWIS) records available from the PA Topographic and Geologic Survey website. This task shall include plotting all recorded wells within a ½-mile radius of the Site on a scaled map and including a copy of the database records for the search distance in an appendix to the SCR; and
 2. A review of the Pennsylvania Natural Diversity Inventory (PNDI) to evaluate for the presence of special concern species and resources.
- Comprehensive groundwater elevation data in table form;
- Comprehensive groundwater sampling results in table form;
- Comprehensive soil sampling results in table form;
- Comprehensive soil vapor and/or indoor air and/or sub-slab vapor sampling results in table form (if applicable);
- Scaled figures showing the location of monitoring wells, soil samples, and indoor air and/or vapor samples (if applicable);
- Scaled figures for each round of groundwater elevation data collection showing groundwater elevations, groundwater elevation contours, and inferred direction(s) of groundwater flow;
- Scaled figures for each analyte found to be above the Solicitor-selected remedial goal for each round of groundwater sampling. Each figure should show analyte concentrations in each well and inferred dissolved-phase analyte plume contours;
- A demonstration that SPL has been removed to the MEP (including time series graphs of SPL thicknesses);
- A statistical evaluation to demonstrate that dissolved-phase concentrations of the substances listed in the COC section of this RFB are stable or declining;
- A demonstration that the dissolved-phase plumes are stable or shrinking;

- Laboratory reports, chains of custody, and field sampling documentation for all media sampled as part of characterization;
- Logs for all soil borings and monitoring wells including well construction logs;

The RACR shall be prepared in draft form for review and comment by the Solicitor and the PAUSTIF. The selected bidder shall complete Milestone H within 60 days following the completion of the final post-remediation groundwater sampling event. The timeframe for the completion of this Milestone shall provide two weeks for the Solicitor's and PAUSTIF's review and the selected bidder shall address all of the comments received from the Solicitor and the PAUSTIF before submission of the RACR to the PADEP.

Milestone I: Finalize and File Environmental Covenant

All bidders shall provide in Attachment 2 the cost to finalize and file the Environmental Covenant. The fixed-price shall include all reasonable and necessary activities and required fees to finalize and file the Environmental Covenant for the Site with the local court house and other required entities. The successful bidder will be responsible for coordinating this work with the impacted property owner(s) and their legal counsel(s). Please note that legal fees incurred by the property owner(s) are not to be included in this RFB. PAUSTIF reimbursement of Client and/or third party legal fees will be considered outside of the executed Remediation Agreement. The fixed-price cost for this task shall also include the work necessary in petitioning PADEP for any relevant Environmental Covenant waivers (i.e., for the railroad property, if necessary).

Milestone J: Well Abandonment

All bidders shall provide in Attachment 2 the cost to abandon the twenty-six groundwater monitoring wells, the three previously installed soil vapor sampling points, the four sub-slab soil gas sampling points, and the water supply well. The groundwater and water supply wells shall be abandoned from the bottom to the top with grout delivered through a tremie pipe. All abandonments 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). With regard to the water supply well abandonment, all bidders shall assume the following:

- The well is covered by pavement and can be detected using conventional metal detecting equipment;
- The well is constructed of six-inch diameter steel casing and is 75 feet deep; and
- A submersible well pump, set on the bottom of the well, is connected to a pitless adapter with galvanized piping and shall be removed prior to abandonment.

OPTIONAL and COST ADDER MILESTONES

Optional Milestone K: Additional Sub-Slab Soil Gas Sampling

In the event that additional sub-slab soil gas samples are necessary to investigate vapor intrusion at the Site, all bidders are required to provide in Attachment 2 the cost to collect additional sub-slab soil gas samples. All sub-slab soil gas samples collected as part of Optional Milestones K1, K2, K3, and K4 shall be analyzed for the substances listed in the COC section of this RFB. The activation of Optional Milestones K1, K2, K3, and K4 will require the prior approval of ICF or PAUSTIF.

Optional Milestone K1 – All bidders shall provide in Attachment 2 the cost to complete an additional comprehensive sub-slab soil gas sampling event that includes the four sub-slab soil gas sampling points installed as part of Milestone A. The sub-slab soil gas samples collected as part of Optional Milestone K1 shall be collected in accordance with the procedures used to collect the samples in Milestone A. The costs associated with this optional milestone shall include, but not be limited to, mobilization, labor, equipment, subcontractors, waste, etc.

Optional Milestone K2 – All bidders shall provide in Attachment 2 the cost to install and sample once, an additional sub-slab soil gas sampling point. The sub-slab soil gas sampling point installation and sampling shall be performed in accordance with the procedures used in Milestone A. All bidders shall assume that Optional Milestone K2 will be performed as a stand-alone Optional Milestone, therefore the costs shall include, but not be limited to, mobilization, labor, equipment, subcontractors, waste, etc.

Optional Milestone K3 – All bidders shall provide in Attachment 2 the cost to install and sample once, an additional sub-slab soil gas sampling point as an add-on to Optional Milestone K2 (which already accounts for mobilization costs). The sub-slab soil gas sampling point installation and sampling shall be performed in accordance with the procedures used in Milestone A. The costs associated with this Optional Milestone shall include, but not be limited to, labor, equipment, subcontractors, waste, etc.

Optional Milestone K4 – All bidders shall provide in Attachment 2 the cost to collect an additional sub-slab soil gas sample from an existing sub-slab soil gas sampling point as an add-on to Milestone A and Optional Milestones K1 and/or K2 (which already account for mobilization costs). The sub-slab soil gas sample shall be collected in accordance with Milestone A. The costs associated with this optional milestone shall include, but not be limited to, labor, equipment, subcontractors, waste, etc. and will be used to modify as necessary the reimbursement for Milestone A and Optional Milestones K1 and K2 in the event that more or less sub-slab soil gas samples are collected.

Optional Milestone L: Supplemental Soil Sampling

The purpose of this milestone is to allow for the collection of additional soil data in the event that Milestone C does not sufficiently delineate unleaded gasoline impacts to soil. The activation of this optional milestone will require the prior approval of ICF or PAUSTIF.

For the purposes of this RFB, all bidders shall assume that the supplemental soil samples collected as part of this optional milestone shall be collected via direct-push soil borings advanced up to 20 fbg. All soil samples shall be collected in laboratory-provided containers and analyzed by EPA Method 8260B for the substances listed in the COC section of this RFB. Soil samples shall be screened at two-foot intervals with a PID (using headspace measurements) and continuous geological logs shall be prepared by a Professional Geologist for each boring using the same consistent classification system procedure described in Milestone C.

Optional Milestone L1 – All bidders shall provide in Attachment 2 the cost to complete one direct push soil boring with the collection and analysis of one soil sample. The costs shall include, but not be limited to, mobilization, labor, equipment, subcontractors, waste, etc.

Optional Milestone L2 – All bidders shall provide in Attachment 2 the cost to advance an additional soil boring with the collection and analysis of one soil sample as an add-on to Optional Milestone L1 (which accounts for mobilization costs). The costs shall include all subcontractors, labor, equipment, waste, etc.

Optional Milestone L3 – All bidders shall provide in Attachment 2 the cost for the collection and analysis of one additional soil sample from a soil boring accounted for in Optional Milestone L1 and L2 as a cost adder to Optional Milestone L1 and L2.

Optional Milestone M: Indoor Air Sampling

In the event that sub-slab soil gas sampling results indicate that indoor air sampling is warranted, all bidders are required to provide in Attachment 2 the cost to perform indoor air sampling. All bidders shall assume that indoor air samples will be collected in laboratory provided 6-liter Summa© canisters over an 8-hour period and analyzed for the substances listed in the COC section of this RFB. The indoor air samples shall be collected in general accordance with the PADEP VI TGM. All bidders are required to provide in their bid response document a description of how the indoor air samples would be collected and the QA/QC actions associated with the collection of the indoor air samples shall also be described. The activation of Optional Milestones M1 and M2 will require the prior approval of the Solicitor and PAUSTIF.

Optional Milestone M1 – All bidders shall provide in Attachment 2 the cost to collect two indoor air samples from the Site. All bidders shall assume that Optional Milestone M1 will be performed as a stand-alone Optional Milestone, therefore the costs shall include, but not be limited to, mobilization, labor, equipment, subcontractors, waste, etc.

Optional Milestone M2 – All bidders shall provide in Attachment 2 the cost to collect an additional indoor air sample from the Site as an add-on to Optional Milestone M1 (which

already accounts for mobilization costs). The costs associated with this optional milestone shall include, but not be limited to, labor, equipment, subcontractors, waste, etc. and will be used to modify as necessary the reimbursement for Optional Milestone M1 in the event that more or less indoor air samples are collected.

Optional Milestone N: Supplemental Groundwater Sampling

The purpose of this milestone is to allow for the collection of additional groundwater samples if deemed necessary. The activation of Optional Milestones N1 through N4 will require the prior approval of the Solicitor and PAUSTIF.

Optional Milestone N1 – All bidders shall provide in Attachment 2 the cost to complete one comprehensive sampling event in accordance with Milestone B (does not include the low flow purging and sampling of monitoring wells that have historically contained SPL). The costs shall include, but not be limited to, mobilization, labor, equipment, subcontractors, waste, etc.

Optional Milestone N2 – All bidders shall provide in Attachment 2 the cost to complete one comprehensive sampling event in accordance with Milestones F and G (includes the low flow purging and sampling of monitoring wells that have historically contained SPL). The costs shall include, but not be limited to, mobilization, labor, equipment, subcontractors, waste, etc.

Optional Milestone N3 – All bidders shall provide in Attachment 2 the cost to collect one sample from one groundwater monitoring well that has not historically contained SPL as an add-on to Milestones B, F, and G and Optional Milestones N1 and N2 (which account for mobilization costs). The costs shall include, but not be limited to, labor, equipment, subcontractors, waste, etc. and will be used to modify as necessary the reimbursement for Milestones B, F, and G and Optional Milestones N1 and N2 in the event that more or less groundwater monitoring wells are sampled.

Optional Milestone N4 – All bidders shall provide in Attachment 2 the cost to purge and sample via low flow sampling techniques one groundwater monitoring well that has detectable SPL as an add-on to Milestone B, F, and G and Optional Milestones N1 and N2 (which account for mobilization costs). The costs shall include, but not be limited to, labor, equipment, subcontractors, waste, etc. and will be used to modify as necessary the reimbursement for Milestones B, F, and G and Optional Milestones N1, and N2 in the event that more or less groundwater monitoring wells are sampled.

Optional Milestone O: Supplemental SPL Removal Events

The purpose of this milestone is to allow for three additional SPL removal events. The activation of Optional Milestone O shall require the presence of SPL in POC wells and prior approval of the Solicitor and PAUSTIF. The petition to activate Optional Milestone

O shall be made to the Solicitor and PAUSTIF within three months of the completion of Milestone E12 and the first of the three supplemental SPL removal events shall be performed within four months of the completion of Milestone E12. The second supplemental SPL removal event shall occur approximately two weeks following the first supplemental SPL removal event and the third supplemental SPL removal event shall occur approximately two weeks following the second supplemental SPL removal event.

All bidders shall provide in Attachment 2 the cost to perform three supplemental SPL removal events. Although each supplemental SPL removal event shall be performed in accordance with the procedures discussed in Milestone E, a pre-SPL removal Site visit shall not be performed as part of Optional Milestone O, and so bidders should not include the costs associated with a pre-SPL removal Site visit. The costs included as part of Optional Milestone O should not include the disposal costs for SPL and contaminated groundwater removed as part of Optional Milestone O. The cost for the disposal of the SPL and contaminated groundwater shall be provided by all bidders as part of Optional Milestone P.

Optional Milestone P: SPL and Contaminated Groundwater Disposal

All bidders shall provide in Attachment 2 the per gallon disposal cost for the SPL and contaminated groundwater in the vacuum truck that will be disposed of as part of Milestone E and Optional Milestone O. The per gallon disposal cost will be used to modify the reimbursement for the completion of Milestones E1 through E12 and Optional Milestone O based on the volume of SPL and contaminated groundwater disposed of following each event. For the purposes of this bid, assume 10 gallons of SPL and 1,900 gallons of water will be produced by each event.

Optional Milestone Q: Monitoring Well Repairs

The purpose of this milestone is to allow for minor and major monitoring well surface completion repairs.

All bidders are required to provide in Attachment 2, the cost to repair (Optional Milestone Q1) and replace (Optional Milestone Q2) one monitoring well surface completion. The activation of Milestones Q1 and Q2, will require the prior approval of the Solicitor and PAUSTIF.

Optional Milestone Q1 – All bidders shall provide in Attachment 2 the cost to perform one minor repair to one existing groundwater monitoring well surface completion. The minor repair shall include the costs associated with replacing the manhole lid bolts, manhole lid o-ring, lockable monitoring well “J” plug, and lock. All bidders shall assume that Optional Milestone Q1 can be completed as part of another milestone that incorporates mobilization costs. Costs for Optional Milestone Q1 shall include, but not be limited to, labor, equipment, subcontractors, waste, etc.

Optional Milestone Q2 – All bidders shall provide in Attachment 2 the cost to perform one major repair to one existing groundwater monitoring well surface completion. The major repair shall include the costs associated to remove, dispose of, and replace the concrete pad and manhole and the replacement of the “J” plug and lock. All bidders shall assume that Optional Milestone Q2 shall be performed as a stand-alone optional milestone, therefore the costs shall include, but not be limited to, mobilization, labor, equipment, subcontractors, waste, etc.

Optional Milestone Q3 – All bidders shall provide in Attachment 2 the cost to perform one major repair to one existing groundwater monitoring well surface completion as an add-on to Optional Milestone Q2 (which already accounts for mobilization costs). The major repair shall include the costs associated to remove, dispose of, and replace the concrete pad and manhole and the replacement of the “J” plug and lock. Costs for Optional Milestone Q3 shall include, but not be limited to, labor, equipment, subcontractors, waste, etc.

Optional Milestone R: Water Supply Well Abandonment Cost Adder

All bidders shall provide in Attachment 2 the per foot cost to abandon the water supply well by emplacing grout in the well from the bottom up using a tremie tube. The per foot cost provided in Attachment 2 will be used to adjust the reimbursement for Milestone J in the event that the water supply well is more or less than 75 feet deep.

Optional Milestone S: Preparation of Remedial Action Progress Report

The purpose of this milestone is to allow for the preparation and submission of a RAPR to convey post-RAP data associated with optional milestone(s) to the PADEP. The activation of Optional Milestone S will require the prior approval of the Solicitor and PAUSTIF.

All bidders shall provide in Attachment 2 the cost to prepare and submit to the PADEP a RAPR. Each RAPR shall be prepared in accordance with 25 Pa Code §245.312.

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 (for funding consideration). PADEP approval may also be required.

List of Attachments

1. Remediation Agreement
2. Bid Cost Spreadsheet
3. Site Information/Historic Documents
 - a. Figure 1 – Site Location Map
Figure 2 – Site Detail Map
Figure 3 – Expanded Site Map
Figure 4 – Soil Concentration Map
Figure 5 – Groundwater Elevation Contour Map, June 26, 2017
Figure 6 – Extent of Dissolved-Phase Constituents of Concern
Figure 7 – Extent of SPL Map, September 8, 2016
Figure 8 – Extent of SPL Map, October 20, 2016
Figure 9 – Extent of SPL Map, November 4, 2016
Figure 10 – Extent of SPL Map, December 9, 2016
Figure 11 – Extent of SPL Map, January 6, 2017
Figure 12 – Extent of SPL Map, February 10, 2017
Figure 13 – Extent of SPL Map, March 14, 2017
Figure 14 – Extent of SPL Map, June 26, 2017
Figure 15 – Proposed Soil Boring Location Map
 - b. July 2014 SCR (Letterle)
 - c. September 2015 Addendum to Environmental Site Characterization Report (Letterle)
 - d. SPL Analytical Laboratory Report
 - e. Data Tables (Letterle)
 - f. SPL Removal Protocol