SUNOCO PIPELINE
An ENERGY TRANSFER Partnership

June 14, 2025

Via Electronic Mail

C. David Brown, P.G.
Environmental Program Manager
Environmental Cleanup and Brownfields
Pennsylvania Department of Environmental Protection
Southeast Regional Office
2 East Main Street
Norristown, PA 19401
cdbrown@pa.gov

Re: Response to Letter of Deficiency for the Vapor Intrusion Progress Report
eFACTS PF No. 881609
eFACTS Activity No. 60986
Twin Oaks – Newark 14"-Diameter Pipeline
Upper Makefield Township, Bucks County

Dear David:

Sunoco Pipeline LP ("SPLP") provides this response to the Letter of Deficiency that SPLP received via email on April 30, 2025 (the "Letter") for the Vapor Intrusion Progress Report that SPLP submitted to the Department on April 2, 2025, in accordance with paragraph 1.i of the Department's March 6, 2025 Administrative Order (the "Order").

Please note that SPLP disputes that its Vapor Intrusion Progress Report was deficient, as the Department suggests in the Letter, and nothing in this letter should be construed as an admission of any such deficiencies. Indeed, and in accordance with the Order, the Vapor Intrusion Progress Report was a progress report "describing activities to date, results, mitigation measures (if appliable), plans for further evaluation, and a schedule for mitigation and evaluation" consistent with the Act 2 Technical Guidance Manual ("TGM"). The Vapor Intrusion Progress Report provided this information to the Department and fully complied with the requirements of the Order. Nevertheless, SPLP is responding to each of the comments provided in the Department's Letter below.

Department Comment:

1. Section 3 – Indoor Air Sampling: Please provide indoor air sample collection logs and pre-sampling survey results for each property sampled.

   SPLP Response: SPLP acknowledges the Department's comment. The chain of custody for each of the respective indoor air samples was attached to the last page of the laboratory reports that were previously provided to the Department. The indoor air pre-sampling

surveys, which reflect information regarding private residential properties, will be provided to the Department via secure sharefile transfer.

Department Comment:

2. Section 3.4 - Indoor Air Sampling, Results: Please provide a table including all analytical results. Tabulated results and laboratory reports should be included as attachments to ensure all data is available in a single document for review. For results that were not detected (ND), please include the laboratory reporting limit (RL) of each analyte to ensure the RLs are less than applicable screening values.

   SPLP Response: SPLP did provide a table in the original Vapor Intrusion Progress Report that included the analytical results available as of the date of the report, which consisted of the first round of indoor air sampling performed at six (6) properties on Glenwood Drive, Walker Road, and Spencer Road, that occurred on February 25 and 26, 2025, and March 15 to 16, 2025 (*see* Table 1 – Summary of Preliminary Air Sampling Results). As indicated in the report, a second round of indoor air samples was scheduled to be performed in early April 2025, and in fact did occur on April 8 and 21, 2025 at the same six (6) properties. SPLP has added a table (*see* Table 2) that summarizes the indoor air sampling data for the second round of sampling and the corresponding laboratory reports, which is included in an updated version of the report that is attached. *See* **Attachment 1**. Both tables also reflect results that have not been detected as less than the laboratory method detection limit (“MDL”). The laboratory reports for each round of indoor air sampling (which were previously provided to the Department on March 17, 2025 and May 5, 2025), contain information regarding private residential properties, and therefore are not included as attachments to the revised report.

Department Comment:

3. Section 3.4 - Indoor Air Sampling, Results: Following the receipt of each round of indoor air or sub-slab sampling results, SPLP should perform inhalation risk calculations for any properties that exceed DEP’s site-specific standard vapor intrusion screening values. The sample data, lab reports, and risk calculations should be submitted to DEP within 30 days of receipt of the results.

   SPLP Response: SPLP acknowledges the Department’s comment, and notes that SPLP already provided this information to the Department via email on March 24, 2025 and May 6, 2025.

Department Comment:

4. Section 3.5 - Indoor Air Sampling, Additional Planned Activities, General: DEP recommends that SPLP perform sub-slab soil gas sampling at homes in the vicinity of

identified or anticipated soil and groundwater contamination. Sub-slab sampling is not subject to seasonal limitations or interference from indoor and outdoor sources; it provides a more definitive indication of vapor intrusion.

SPLP Response: SPLP acknowledges the Department's comment and notes that sub-slab sampling was proposed as a potential form of vapor-intrusion sampling in Section 3.5 of the Site Characterization Work Plan, which was submitted to the Department on April 18, 2025. In addition, SPLP has developed a Sub-Slab Soil Gas Sampling and Analysis Plan, which was submitted to the Department on June 2, 2025. A first round of sub-slab sampling was performed at specific properties on June 12, 2025, which is also reflected in the updated Vapor Intrusion Progress Report. *See* **Attachment 1**.

Department Comment:

5. Section 3.5 - Indoor Air Sampling, Additional Planned Activities, 1st Paragraph: Data quality issues identified during Stage IV data validation should be communicated to both DEP and the property owner. Please provide a reference to the document containing the Data Quality Objectives (DQOs) or Quality Assurance Project Plan (QAPP) that will be used during the validation process. Please also indicate when the final, validated analytical results/summary table and laboratory reports will be provided to DEP.

   SPLP Response: SPLP acknowledges the Department's comment and has updated the text of Section 3.5 of the report. *See* **Attachment 1**. The data quality objectives, which include the process for data analysis and decision making for indoor air sampling are included in Section 5.2 of the Indoor Air Sampling and Analysis Plan, which was previously provided to the Department. Final validated analytical results/summary table will be provided to property owners and the Department when the results are received.

Department Comment:

6. Section 3.5 - Indoor Air Sampling, Additional Planned Activities, 3rd Paragraph: Please see Comment #3 regarding inhalation risk calculations. In addition, please define and describe the conditions/circumstances under which the indoor air sampling results "may be used to calculate estimates of lifetime cancer risk and noncancer hazard quotient for the inhalation exposure pathway", as well as the conditions/circumstances that would negate the need to perform these calculations.

   SPLP Response: SPLP performed the calculations for all locations sampled to date and has revised the language in this section of the report accordingly to reflect that the estimates will be calculated, regardless of any conditions/circumstances that may apply. *See* **Attachment 1**.

Department Comment:

7. Section 4.3 Methods: Please include the Laboratory's Certificate and Scope of Accreditation that include target analytes via Method TO-17. Note COC list differs to indoor air COC list.

   SPLP Response: SPLP acknowledges the Department's comment and is providing the requested laboratory certificate and accreditation for Beacon Environmental Services, Inc. *See* **Attachment 2**. Text has also been added to the progress report explaining the reason why the constituents of concern were different between passive soil gas sampling and indoor air sampling. *See* **Attachment 1**.

Department Comment:

8. Section 4.4 - Passive Soil Gas Sampling, Results: Please provide a table including all analytical results. Though the preliminary results were provided to DEP via email on April 1, 2025, tabulated results and laboratory analytical reports should be included as attachments to ensure all data is available in a single document for review. For results that were ND, please include the laboratory RL of each result to ensure RLs are less than applicable screening values.

   SPLP Response: SPLP acknowledges the Department's comment and has updated the text of Section 4.4 of the report. *See* **Attachment 1**. Also, SPLP previously provided the Passive Soil Gas Summary Report (dated April 11, 2025) to the Department. The requested updated summary results table is included in the revised Vapor Intrusion Progress Report, which has been updated to reflect results that have not been detected as less than the laboratory limit of quantification ("LOQ"). *See* **Attachment 1**.

Department Comment:

9. Section 4.5 - Passive Soil Gas Sampling, Additional Planned Activities, 1st Paragraph: Data quality issues identified during Stage IV data validation should be communicated to both DEP and the property owner. Please provide a reference to the document containing the DQOs and/or QAPP that will be used during the validation process. Please also indicate when the final, validated analytical results/summary table and laboratory reports will be provided to DEP.

   SPLP Response: SPLP acknowledges the Department's comment and has updated the text of Section 4.5 of the report. *See* **Attachment 1.** Data validation is not planned or necessary for passive soil gas sampling, because that sampling was performed solely for field screening purposes, and is not intended to be used for final site characterization.

Department Comment:

10. Section 5 – External Well Water Sampling: Section 5.1 notes that samples were collected from potable wells on three properties. Section 5.3 implies that a "HydraSleeve or equivalent no-purge groundwater sampling device" was used to collect the sample, and that field personnel calculated the "proper sampling depth" based on depth to water prior to sampling. Please provide field logs for these samples detailing the type of sampler used, the collection depth, and how the collection depth was calculated.

    SPLP Response: SPLP acknowledges the Department's comment and has updated the text of Section 5 of the report. *See* **Attachment 1**. As noted in the updated report, because the sampling methodology has changed, the remainder of this comment is no longer relevant.

Department Comment:

11. Section 5.4 - External Well Water Sampling, Results: Please provide a table including all analytical results. Though the preliminary results were provided to DEP via email on April 1, 2025, tabulated results and laboratory analytical reports should be included as attachments to ensure all data is available in a single document for review. For results that were ND, please include the laboratory RL of each result to ensure RLs are less than applicable screening values.

    SPLP Response: A table of the analytical results is included in Table 5 of the updated report. *See* **Attachment 1**. The table has been updated to reflect results that have not been detected as less than the laboratory MDL, rather than with a dashed line or "ND" reference. The laboratory and analytical reports for each location where this sampling was performed were previously provided in the weekly transmittals of all water sampling results via secure sharefile transfer to the Department.

Department Comment:

12. Section 5.5 - External Well Water Sampling, Additional Planned Activities, 1st Paragraph: Data quality issues identified during Stage IV data validation should be communicated to both DEP and the property owner. Please provide a reference to the document containing the DQOs and/or QAPP that will be used during the validation process. Please also indicate when the final, validated analytical results/summary table and laboratory reports will be provided to DEP.

    SPLP Response: SPLP acknowledges the Department's comment and has updated Section 5.5 of the report. *See* **Attachment 1**. SPLP previously provided the Well Water Sampling and Analysis Plan (version 1.1, dated April 10, 2025), and the Quality Assurance Project Plan (QAPP) for Well Water Sampling and Analysis Plan (version 1.0,

dated April 13, 2025, to the Department. Final validated analytical results will be provided to the Department when they are received

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Thank you,

Gus Borkland
Sr. Director- Environmental Compliance and Asset Security
Energy Transfer

List of Attachments

1. Vapor Intrusion Progress Report (rev. June 13, 2025)
2. Beacon Environmental Services, Inc. Laboratory Certificate

ATTACHMENT 1

SUNOCO PIPELINE LP

VAPOR INTRUSION PROGRESS REPORT

Upper Makefield Response

Washington Crossing, Pennsylvania

PROJ-051861

Submitted April 2, 2025

Revised June 13, 2025

1.0 INTRODUCTION

This Vapor Intrusion Progress Report (Report) was prepared by CTEH, LLC (CTEH) on behalf of Sunoco Pipeline LP (Sunoco Pipeline) in relation to the Upper Makefield Response in Washington Crossing, Pennsylvania. This Report has been prepared to address item 1-i (page 9) of the Administrative Order issued to Sunoco Pipeline by the Commonwealth of Pennsylvania Department of Environmental Protection (PA DEP) on March 6, 2025. This revised version (dated June 13, 2025) supersedes the original Report submitted on April 2, 2025 and addresses the comments provided by PA DEP on April 30, 2025.

A release from a pipeline that transports refined petroleum products, including jet fuel, was identified in January 2025. The GPS coordinates for the approximate location of the release site (Site) are: 40.271184, -74.875953. A map of the incident location is provided in Attachment A. Environmental consultants, including personnel from CTEH and Groundwater & Environmental Services, Inc. (GES), on behalf of Sunoco Pipeline, have conducted several activities to investigate the nature and extent of potential impacts to residences near the incident location, including impacts to potable well water supplies and impacts to residences via vapor intrusion.

This Report summarizes the investigation activities conducted to date, the preliminary (i.e., unvalidated) results of those investigation activities, plans for further investigation and evaluation, and the projected schedule for future planned investigation and evaluation activities.

2.0 SUMMARY OF INVESTIGATION ACTIVITIES

Vapor intrusion investigation activities (including those conducted to date and those currently underway and/or planned) have been designed and conducted based on technical guidance for assessing vapor intrusion published by the PA DEP[1].

As of the date of this Report, an investigation into the potential for vapor intrusion related to the incident has been conducted and/or is underway. To date, these investigation activities have included:

1. Indoor air sampling at six (6) residences on Glenwood Drive, Walker Road, and Spencer Road (initial sampling events on February 25 to 26, 2025 and March 15 to 16, 2025; second sampling events on April 8 to 9, 2025 and April 21 to 22, 2025);
2. Passive soil gas sampling at 22 properties on Glenwood Drive, Walker Road, and Spencer Road (February 25 to March 14, 2025);
3. Water sampling from external wells at three (3) properties in the Mt. Eyre Manor neighborhood (March 24, 27, and 28, 2025); and

[1] PA DEP. Land Recycling Program Technical Guidance Manual (TGM) Section IV: Vapor Intrusion into Buildings from Groundwater and Soil. 261-0300-101. March 2021.

4. Sub-slab soil gas sampling at six (6) residences on Glenwood Drive, Walker Road, and Spencer Road (initial sampling event on June 12, 2025).

Additional investigation activities are underway and/or planned. These activities include a second sub-slab soil gas sampling event at six (6) residences on Glenwood Drive, Walker Road, and Spencer Road.

3.0 INDOOR AIR SAMPLING

3.1 Progress to Date

As of the date of this Report, indoor air sampling has been conducted at six residences on Glenwood Drive, Walker Road, and Spencer Road, in accordance with the Indoor Air Sampling and Analysis Plan (SAP) prepared by CTEH personnel, dated February 21, 2025. The initial indoor air sampling events were conducted by CTEH personnel from February 25 to 26, 2025 and March 15 to 16, 2025. Preliminary results from five initial indoor air sampling events conducted from February 25 to 26, 2025 were provided to each property owner on March 15, 2025 and shared with the PA DEP on March 17, 2025.

Follow-up indoor air sampling events at each residence were conducted by CTEH personnel from April 8 to 9, 2025 and April 21 to 22, 2025. Preliminary results from the second indoor air sampling events conducted from April 8 to 9, 2025 and April 21 to 22, 2025 were provided to each property owner on May 5, 2025.

The preliminary air sampling results from both the first and second rounds of indoor air sampling were shared with the PA DEP via ShareFile on May 5, 2025.

3.2 Strategy

Residences eligible for the first phase of indoor air sampling were selected based on the results of potable well water sampling conducted at the residence by GES personnel. Specifically, residences were eligible for indoor air sampling if water sampling results at the residence indicated detections of one or more volatile target analytes at a concentration above the Residential groundwater Statewide health standard vapor intrusion screening values (Residential SV_{GW}) established by the PA DEP, or if light non-aqueous phase liquid (LNAPL) was present in the potable water well at the residence. A total of six residences were selected for the first phase of indoor air sampling.

The objectives of the indoor air sampling program are to:

1. Collect indoor air samples from discrete locations inside residences to evaluate potential impacts to indoor air related to the volatile constituents of refined petroleum products, including jet fuel; and

2. Collect outdoor air samples from discrete locations outside residences to evaluate the presence of these constituents in the ambient environment and the potential influence of these constituents on indoor air.

3.3 Methods

Prior to the air sampling event, it was requested that residents remove potential sources of volatile organic compounds (VOCs) (e.g., fuel containers, paints, cleaning products, personal care products, candles) from the air sampling locations at least 24 hours prior to deployment of the air sample. On the day of air sample deployment, a pre-sampling survey was conducted with one resident from each residence, which included a questionnaire for the resident about building-specific factors that could potentially influence the concentration of VOCs in indoor air. During the pre-sampling survey, a visual and air monitoring assessment of accessible portions of the lowest level and first floor of the residence were also conducted to identify any items within the residence that could be potential sources of VOCs.

Air samples were then deployed at three locations: 1) on the lowest level of the residence (e.g., basement); 2) on the first floor of the residence; and 3) outside (and near) the residence. The air sample collected on the lowest level was generally located in an area where vapors may be expected to enter or in an area with the greatest potential for vapor intrusion impact (often near the installed Point-of-Entry Treatment [POET] system). The air sample collected on the first floor was generally centrally located in an area of typical occupancy and/or high activity (e.g., living and/or family room). The air sample collected outside the residence was located in an area that is representative of ambient conditions outside the residence (e.g., backyard).

Each air sample consisted of a 1.4-liter evacuated canister with a 24-hour regulator. Air samples were collected for a duration of approximately 24 hours at a height representative of the breathing zone (i.e., the canister inlet was located four to six feet above the ground). After the air sampling period, air samples were sent under chain-of-custody to Pace Analytical National Center for Testing & Innovation (Pace Analytical) in Mt. Juliet, Tennessee, a National Environmental Laboratory Accreditation Program (NELAP)-accredited laboratory, for analysis of target analytes via United States Environmental Protection Agency (US EPA) Method TO-15[2].

Target analytes were selected based on analytical requirements for soil and/or water testing related to refined petroleum products, including jet fuel, as outlined in the Short List of Petroleum Products in the Land Recycling Program Technical Guidance Manual established by the PA DEP. Specifically, all volatile parameters related to refined petroleum products, including jet fuel, were selected as target analytes for air sampling. Hexane and cyclohexane were additionally selected based on their listing on the safety data

[2] Benzene, naphthalene, 1,2-dichloroethane, and 1,2-dibromoethane were analyzed using US EPA Method TO-15 in Selective Ion Monitoring (SIM) mode to achieve lower detection limits.

sheet (SDS) for one of the products (unleaded gasoline) that traveled through the impacted pipeline. Target analytes were the following VOCs: benzene, toluene, ethylbenzene, total xylenes (calculated by adding the concentrations of m&p-xylene and o-xylene), isopropylbenzene, methyl tert-butyl ether (MTBE; also known as methyl tertiary butyl ether), naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 1,2-dichloroethane (EDC), 1,2-dibromoethane (EDB; also known as ethylene dibromide), hexane, and cyclohexane.

A post-sampling survey and a visual and air monitoring assessment of accessible portions of the lowest level and first floor of the residence were also conducted at the end of the air sampling period.

The PA DEP Land Recycling Program Technical Guidance Manual outlines that, for vapor intrusion assessment, a minimum of two air sampling events should occur at least 45 days apart. In addition, both air sampling events should occur when the daily average outdoor temperature is at least 15 degrees Fahrenheit below the minimum indoor temperature in the occupied space. In accordance with this guidance, a follow-up air sampling event occurred at the six residences on April 8 to 9, 2025 and April 21 to 22, 2025. The second air sampling event was conducted in the same manner as the first air sampling event.

3.4 Results

Indoor air sampling results were compared to one-tenth (1/10) of the Residential indoor air Statewide health standard vapor intrusion screening values (Residential SV_{IA}) established by the PA DEP.

A summary of the preliminary air sampling results collected during the first indoor air sampling event is provided in **Table 1**. Analytes detected in at least one indoor air sample at a concentration above one-tenth of the Residential SV_{IA} were benzene (12 of 12 samples), ethylbenzene (5 of 12 samples), xylenes (1 of 12 samples), naphthalene (9 of 12 samples)[3], and 1,2-dichloroethane (9 of 12 samples). Several analytes were also detected in at least one outdoor air sample. Preliminary results for the five indoor air sampling events conducted from February 25 to 26, 2025 were provided to each respective property owner on March 15, 2025. These preliminary result packages included a Summary of Air Sampling Results letter and the preliminary laboratory report issued by Pace Analytical. These preliminary result packages were subsequently shared with the PA DEP on March 17, 2025.

A summary of the preliminary air sampling results collected during the second indoor air sampling event is provided in **Table 2**. Analytes detected in at least one indoor air sample at a concentration above one-tenth of the Residential SV_{IA} were benzene (12 of 12 samples), ethylbenzene (2 of 12 samples), xylenes

[3] The laboratory method detection limit (MDL) for naphthalene is higher than one-tenth of the Residential SV_{IA} for naphthalene. Therefore, any detection of naphthalene is above one-tenth of the Residential SV_{IA} for naphthalene.

(1 of 12 samples), naphthalene (10 of 12 samples)[4], 1,2,4-trimethylbenzene (1 of 12 samples), and 1,2-dichloroethane (11 of 12 samples). Several analytes were also detected in at least one outdoor air sample. Preliminary results for the follow-up indoor air sampling events conducted from April 8 to 9, 2025 and April 21 to 22, 2025 were provided to each respective property owner on May 5, 2025. These preliminary result packages included a Summary of Air Sampling Results letter and the preliminary laboratory report issued by Pace Analytical. These preliminary result packages were subsequently shared with the PA DEP via ShareFile on May 5, 2025.

During the second indoor air sampling event, two additional outdoor air samples were collected at the request of the PA DEP to further characterize ambient conditions. The two additional outdoor air samples were collected on Upper Makefield Township property, located west of Glenwood Drive. A summary of the preliminary air sampling results for the two additional outdoor air samples is provided in **Table 3**.

[4] The laboratory method detection limit (MDL) for naphthalene is higher than one-tenth of the Residential SV_{IA} for naphthalene. Therefore, any detection of naphthalene is above one-tenth of the Residential SV_{IA} for naphthalene.

Table 1. Summary of Preliminary Air Sampling Results | First Sampling Event

Analyte	1/10 PA DEP Residential SV_{IA} (µg/m³)	Number of Indoor Samples	Number of Indoor Detections	Range of Indoor Detections (µg/m³)	Number Detected Above 1/10 Residential SV_{IA}	Number of Outdoor Samples	Number of Outdoor Detections	Range of Outdoor Detections (µg/m³)
Benzene	0.31	12	12	0.604 – 3.55	12	6	6	0.562 – 1.53
Toluene	520	12	12	2.66 – 19.6	0	6	6	0.987 (J) – 26.7
Ethylbenzene	0.97	12	11	0.38 (J) – 4.11	5	6	1	1.74
m&p-Xylene	10*	12	10	1.14 (J) – 9.19	1	6	2	0.941 (J) – 4.08
o-Xylene		12	10	0.46 (J) – 3.82		6	2	0.46 (J) – 2.01
Isopropylbenzene	42	12	5	0.404 (J) – 1.68	0	6	1	0.424 (J)
Methyl tert-butyl ether	9.4	12	0	< 0.293	0	6	0	< 0.293
Naphthalene	0.072	12	9	0.134 (J) – 0.357	9	6	0	< 0.13
1,2,4-Trimethylbenzene	6.3	12	10	0.643 (J) – 5.25	0	6	1	0.736 (J)
1,3,5-Trimethylbenzene	6.3	12	6	0.496 (J) – 2.66	0	6	0	< 0.419
1,2-Dichloroethane	0.094	12	12	0.0705 (J) – 1.13	9	6	6	0.0595 (J) – 0.115
1,2-Dibromoethane	0.0041	12	0	< 0.0961	0	6	0	< 0.0961
Hexane	73	12	11	1.33 (J) – 10.7	0	6	3	0.582 (J) – 1.7
Cyclohexane	630	12	5	0.802 – 11.5	0	6	1	2.74

µg/m³ = micrograms per cubic meter. Laboratory non-detections are reported as less than (<) the laboratory Method Detection Limit (MDL). Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are as follows. J: Result is estimated between the laboratory method detection limit and reporting limit.
* The PA DEP Residential SV_{IA} is established for total xylenes. The concentration of total xylenes is calculated by adding the concentrations of m&p-xylene and o-xylene.

Table 2. Summary of Preliminary Air Sampling Results | Second Sampling Event

Analyte	1/10 PA DEP Residential SV_{IA} (µg/m³)	Number of Indoor Samples	Number of Indoor Detections	Range of Indoor Detections (µg/m³)	Number Detected Above 1/10 Residential SV_{IA}	Number of Outdoor Samples	Number of Outdoor Detections	Range of Outdoor Detections (µg/m³)
Benzene	0.31	12	12	0.348 – 9.20	12	6	6	0.399 – 1.30
Toluene	520	12	12	1.11 (J) – 31.9	0	6	6	0.689 (J) – 8.10
Ethylbenzene	0.97	12	8	0.394 (J) – 11.2	2	6	0	< 0.337
m&p-Xylene	10*	12	8	1.33 (J) – 25.4	1	6	0	< 0.754
o-Xylene		12	8	0.564 (J) – 10.7		6	0	< 0.385
Isopropylbenzene	42	12	3	0.418 (J) – 2.07	0	6	0	< 0.355
Methyl tert-butyl ether	9.4	12	0	< 1.10+	0	6	0	< 0.293
Naphthalene	0.072	12	10	0.133 (J) – 0.486	10	6	1	0.181
1,2,4-Trimethylbenzene	6.3	12	9	0.506 (J) – 8.00	1	6	0	< 0.455
1,3,5-Trimethylbenzene	6.3	12	3	0.496 (J) – 2.65	0	6	0	< 0.419
1,2-Dichloroethane	0.094	12	11	0.132 – 0.700	11	6	6	0.0919 – 0.138
1,2-Dibromoethane	0.0041	12	0	< 0.360^	0	6	0	< 0.0961
Hexane	73	12	8	0.620 (J) – 26.5	0	6	1	0.814 (J)
Cyclohexane	630	12	2	3.48 – 29.6	0	6	0	< 0.585

µg/m³ = micrograms per cubic meter. Laboratory non-detections are reported as less than (<) the laboratory Method Detection Limit (MDL). Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are as follows. J: Result is estimated between the laboratory method detection limit and reporting limit.

* The PA DEP Residential SV_{IA} is established for total xylenes. The concentration of total xylenes is calculated by adding the concentrations of m&p-xylene and o-xylene.

+ One of the twelve samples was diluted by the laboratory due to sample volume, yielding an MDL of 1.10 µg/m³. The MDL for the remaining eleven samples was 0.293 µg/m³.

^ One of the twelve samples was diluted by the laboratory due to sample volume, yielding an MDL of 0.360 µg/m³. The MDL for the remaining eleven samples was 0.0961 µg/m³.

Table 3. Summary of Preliminary Air Sampling Results | Two Additional Outdoor Air Samples

Analyte	Number of Outdoor Samples	Number of Outdoor Detections	Range of Outdoor Detections (µg/m³)
Benzene	2	2	0.479 – 5.17
Toluene	2	2	1.37 (J) – 6.86
Ethylbenzene	2	0	< 0.337
m&p-Xylene	2	0	< 0.754
o-Xylene	2	0	< 0.385
Isopropylbenzene	2	1	1.96
Methyl tert-butyl ether	2	0	< 0.293
Naphthalene	2	0	< 0.13
1,2,4-Trimethylbenzene	2	0	< 0.455
1,3,5-Trimethylbenzene	2	0	< 0.419
1,2-Dichloroethane	2	2	0.0988 – 0.136
1,2-Dibromoethane	2	0	< 0.0961
Hexane	2	1	0.955 (J)
Cyclohexane	2	0	< 0.585

µg/m³ = micrograms per cubic meter. Laboratory non-detections are reported as less than (<) the laboratory Method Detection Limit (MDL). Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are as follows. J: Result is estimated between the laboratory method detection limit and reporting limit.

3.5 Additional Planned Activities

The preliminary air sampling results collected during both the first and second indoor air sampling events are undergoing Stage IV data validation by Environmental Standards, Inc. (Environmental Standards). If any issues with data quality are identified during data validation, Sunoco Pipeline personnel will notify the respective property owner and the PA DEP.

After the results of both the first and second indoor air sampling events have undergone Stage IV data validation, the indoor air sampling results will be used to calculate estimates of lifetime cancer risk and noncancer hazard quotient for the inhalation exposure pathway. Preliminary estimates based on the preliminary results of the first and second indoor air sampling events were provided to the PA DEP on March 24, 2025 (first sampling event) and May 6, 2025 (second sampling event).

As of the date of this Report, no additional properties are scheduled for indoor air sampling. However, any residences that previously did not meet the eligibility criteria for the first phase of indoor air sampling but have now met the criteria (i.e., since selection for the first phase of indoor air sampling, LNAPL has been found in the potable water well at the residence or water sampling results collected at the residence have indicated detections of one or more volatile target analytes at a concentration above the Residential SV_{GW} established by the PA DEP) continue to be eligible for indoor air sampling.

In addition to the first phase of indoor air sampling, which included six residences selected as outlined in Section 3.2, a second phase of indoor air sampling for additional selected residences in the Mt. Eyre Manor neighborhood may also occur, as determined by the results of sub-slab soil gas sampling conducted at the six residences. If conducted, residences included in the second phase of indoor air sampling will be selected based on inferred fracture trace from electrical resistivity imaging and will include additional residences on Glenwood Drive, Walker Road, and Spencer Road. If conducted, the second phase of indoor air sampling will occur in the same manner as outlined in Section 3.3, including a follow-up sampling event at least 45 days after the first air sampling event.

4.0 PASSIVE SOIL GAS SAMPLING

4.1 Progress to Date

As of the date of this Report, passive soil gas sampling has been conducted at 22 properties on Glenwood Drive, Walker Road, and Spencer Road. The passive soil gas sampling events were conducted by GES personnel from February 25 to March 14, 2025. Preliminary results packages were prepared and provided to each property owner on April 1, 2025. The preliminary results were also shared with the PA DEP on April 1, 2025.

4.2 Strategy

Properties eligible for passive soil gas sampling were selected based on electrical resistivity imaging, and the locations of sampling were influenced by property access limitations. A total of 22 properties were selected for passive soil gas sampling.

The objective of the passive soil gas sampling program is to collect passive soil gas samples from discrete locations on residential properties to evaluate the potential plume footprint along electrical resistivity transects and identify areas where constituents of refined petroleum products, including jet fuel, may exist in the subsurface.

4.3 Methods

Passive soil gas samples were collected at one to nine discrete locations on each property, depending on electrical resistivity transects and property size. Each soil gas sample consisted of a Beacon Passive Sampler installed at a depth of approximately 30 inches below the soil surface using a hand tool. Soil gas samples were collected for a duration of approximately one week. After the soil gas sampling period, the passive soil gas samples were sent under chain-of-custody to Beacon Environmental Services, Inc. (Beacon Environmental) in Bel Air, Maryland, a United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP)-accredited laboratory, for analysis of target analytes via US EPA Method TO-17.

Target analytes were selected based on analytical requirements for soil and/or water testing related to refined petroleum products, including jet fuel, as outlined in the Short List of Petroleum Products in the Land Recycling Program Technical Guidance Manual established by the PA DEP. Specifically, all volatile parameters related to refined petroleum products, including jet fuel, were selected as target analytes for passive soil gas sampling. Target analytes were the following VOCs: benzene, toluene, ethylbenzene, total xylenes (calculated by adding the concentrations of m&p-xylene and o-xylene), isopropylbenzene, methyl tert-butyl ether (MTBE; also known as methyl tertiary butyl ether), naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 1,2-dichloroethane (EDC), and 1,2-dibromoethane (EDB; also known as ethylene dibromide). Passive soil gas sampling did not include hexane or cyclohexane, as these compounds are not included on the Short List of Petroleum Products for soil testing related to refined petroleum products; however, these compounds were included in the indoor air sampling program due to their listing on the SDS for one of the products (unleaded gasoline) that traveled through the impacted pipeline.

4.4 Results

Passive soil gas sampling results were compared to the Residential sub-slab soil gas Statewide health standard vapor intrusion screening values (Residential SV_{SS}) established by the PA DEP. However, it is

important to note that the soil gas samples were not collected underneath the slabs of residences; rather, they were collected at other permeable locations on the properties (e.g., in grassy areas).

A summary of the preliminary passive soil gas sampling results is provided in **Table 4**. No analytes were detected in any sample at a concentration above the Residential SV_{SS}.

Preliminary results, including a Passive Soil Gas Survey Results letter and the preliminary laboratory report issued by Beacon Environmental, were provided to each respective property owner on April 1, 2025. The preliminary results were also shared with the PA DEP on April 1, 2025.

Table 4. Summary of Preliminary Passive Soil Gas Sampling Results

Analyte	PA DEP Residential SV_{SS} ($\mu g/m^3$)	Number of Samples	Number of Detections	Range of Detections ($\mu g/m^3$)	Number Detected Above Residential SV_{SS}
Benzene	120	47	1	3.63	0
Toluene	200,000	47	17	5.20 – 28.5	0
Ethylbenzene	370	47	0	< 3.00	0
m&p-Xylene	4,000*	47	0	< 2.90	0
o-Xylene		47	0	< 2.90	
Isopropylbenzene	16,000	47	0	< 3.07	0
Methyl tert-butyl ether	3,600	47	0	< 5.10	0
Naphthalene	28	47	0	< 1.28	0
1,2,4-Trimethylbenzene	2,400	47	0	< 3.07	0
1,3,5-Trimethylbenzene	2,400	47	0	< 3.07	0
1,2-Dichloroethane	36	47	0	< 1.82	0
1,2-Dibromoethane	1.6	47	0	< 2.62	0

$\mu g/m^3$ = micrograms per cubic meter. Laboratory non-detections are reported as less than (<) the laboratory Limit of Quantification (LOQ). The LOQ varies depending on sampling duration. Analytes with no detections are reported as < the highest LOQ among the samples.
* The PA DEP Residential SV_{SS} is established for total xylenes. The concentration of total xylenes is calculated by adding the concentrations of m&p-xylene and o-xylene.

4.5 Additional Planned Activities

As of the date of this Report, no additional properties are scheduled for passive soil gas sampling. However, additional passive soil gas samples may be collected at additional residences in the Mt. Eyre Manor neighborhood based on inferred fracture trace from electrical resistivity imaging.

5.0 WELL WATER SAMPLING

5.1 Progress to Date

As of the date of this Report, water sampling directly from the well column has been conducted at three properties in the Mt. Eyre Manor neighborhood, in accordance with the Well Water Sampling and Analysis Plan (SAP) prepared by CTEH personnel, originally dated March 20, 2025 and revised April 10, 2025. The well water sampling events were conducted by GES personnel on March 24, 27, and 28, 2025. Preliminary results were provided to each property owner between March 27 and April 2, 2025 and shared with the PA DEP on April 1, 2025.

5.2 Strategy

Water samples were collected directly from the well column at selected domestic wells in the Mt. Eyre Manor neighborhood. As of the date of this Report, a total of three properties have been sampled. Water sampling from additional selected wells in the Mt. Eyre Manor neighborhood may be conducted.

The objectives of the well water sampling program are to:

1. Conduct air monitoring of well headspace as screening for VOCs;
2. Collect water samples directly from the well column at select residences to evaluate potential impacts to domestic wells, including the potential for vapor intrusion impacts to residences, related to refined petroleum products, including jet fuel; and
3. Generate data from select domestic wells in the Mt. Eyre Manor neighborhood that can be used to guide or support future characterization and/or remediation activities.

5.3 Methods

Prior to the water sampling event, air monitoring of the well headspace using a photoionization detector (PID) is used as a field screening tool. The well headspace is screened by slowly lifting the well cover and placing the inlet of the PID into the well headspace. The peak reading for VOCs is recorded. Headspace air monitoring is conducted using a properly calibrated PID with a 10.6 electron volt (eV) lamp (e.g., RAE Systems by Honeywell MultiRAE or MiniRAE 3000+, ION Science Tiger XT; detection limit = 0.1 parts per million [ppm]). Regardless of whether VOCs are detected in the well headspace, an aliquot of water is then drawn from the well for observation (as accessible) using approved materials (i.e., single-use bailer). Observations of product and/or odor, or lack thereof, are made (e.g., visual observation of separate phase liquids, color, and clarity; character and strength of odor).

A single-use bailer is then used to draw water directly from the well column[5]. After retrieval to the surface, the drawn well water is transferred to laboratory-provided sample containers. The retrieval of the bailer to the surface and filling of sample containers with drawn well water is conducted in a manner that minimizes potential volatilization of VOCs from the water sample (e.g., each sample container will be properly filled with water and immediately sealed; a sample container will not be half-filled and left open while additional water is drawn from the well).

Samples are then sent to Pace Analytical in Westborough, Massachusetts for analysis of target analytes via US EPA Method 524.2 (for select VOCs), US EPA Method 504.1 (for 1,2-dibromoethane), and US EPA Method 200.8 (for lead)[6]. Pace Analytical in Westborough, Massachusetts is accredited for analysis of the target VOCs in drinking water via US EPA Method 524.2 and is accredited for analysis of EDB in drinking water via US EPA Method 504.1. The Westborough laboratory is not accredited for analysis of lead in drinking water; therefore, the Westborough laboratory sends the water sample collected for lead analysis to Pace Analytical in Mansfield, Massachusetts, and the sample is analyzed for lead by the Mansfield laboratory, which is accredited for analysis of lead in drinking water via US EPA Method 200.8.

Target analytes were selected based on analytical requirements for water testing related to refined petroleum products, including jet fuel, as outlined in the Short List of Petroleum Products in the Land Recycling Program Technical Guidance Manual established by the PA DEP. Target analytes are the following VOCs: benzene, toluene, ethylbenzene, total xylenes (calculated by adding the concentrations of m&p-xylene and o-xylene), isopropylbenzene, methyl tert-butyl ether (also known as methyl tertiary butyl ether or MTBE), naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, and 1,2-dichloroethane (also known as ethylene dichloride or EDC); 1,2-dibromoethane (also known as ethylene dibromide or EDB); and lead (dissolved). Well water sampling did not include hexane or cyclohexane, as these compounds are not included on the Short List of Petroleum Products for water testing related to refined petroleum products; however, these compounds were included in the indoor air sampling program due to their listing on the SDS for one of the products (unleaded gasoline) that traveled through the impacted pipeline.

[5] The three well water sampling events conducted to date have been performed using varied methodologies. Version 1.0 of the SAP outlined collection of well water using a HydraSleeve or equivalent no-purge groundwater sampling device. Due to technical limitations and the existence of alternative methodologies, the SAP was updated (Version 1.1) to outline collection of well water using a single-use bailer.

[6] The well water sample at one of the three properties sampled to date was analyzed only for VOCs via US EPA Method 524.2. Analysis of 1,2-dibromoethane and lead via US EPA Methods 504.1 and 200.8, respectively, was not conducted.

5.4 Results

To evaluate potential vapor intrusion impacts to residences, well water sampling results were compared to the Residential groundwater Statewide health standard vapor intrusion screening values (Residential SV_{GW}) established by the PA DEP.

A summary of the preliminary well water sampling results is provided in **Table 5**. Aside from one detection of lead, no analytes were detected in any sample.

Preliminary results, including a cover letter and the preliminary laboratory report issued by Pace Analytical, were provided to each respective property owner between March 27 and April 2, 2025. The preliminary results were also shared with the PA DEP on April 1, 2025.

Table 5. Summary of Preliminary Well Water Sampling Results

Analyte	PA DEP Residential SV_{GW} (µg/L)	Number of Samples	Number of Detections	Range of Detections (µg/L)	Number Detected Above Residential SV_{GW}
Benzene	23	3	0	< 0.19	0
Toluene	34,000	3	0	< 0.19	0
Ethylbenzene	700	3	0	< 0.13	0
m&p-Xylene	10,000*	3	0	< 0.3	0
o-Xylene		3	0	< 0.19	
Isopropylbenzene	1,900	3	0	< 0.13	0
Methyl tert-butyl ether	6,300	3	0	< 0.13	0
Naphthalene	100	3	0	< 0.14	0
1,2,4-Trimethylbenzene	510	3	0	< 0.13	0
1,3,5-Trimethylbenzene	360	3	0	< 0.15	0
1,2-Dichloroethane	34	3	0	< 0.15	0
1,2-Dibromoethane	2.9	2	0	< 0.005	0
Lead	N/A	2	1	0.0007 (J) mg/L	N/A

µg/L = micrograms per liter. mg/L = milligrams per liter. N/A = No Residential SV_{GW} has been established for the analyte. Laboratory non-detections are reported as less than (<) the laboratory Method Detection Limit (MDL). Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are as follows. J: Result is estimated between the laboratory method detection limit and reporting limit.

* The PA DEP Residential SV_{GW} is established for total xylenes. The concentration of total xylenes is calculated by adding the concentrations of m&p-xylene and o-xylene.

5.5 Additional Planned Activities

The preliminary well water sampling results are undergoing data validation by Environmental Standards. All sampling results are undergoing Stage II data validation, and 10% of the sampling results are

undergoing Stage IV data validation. If any issues with data quality are identified during data validation, Sunoco Pipeline personnel will notify the respective property owner and the PA DEP.

As of the date of this Report, no additional properties are scheduled for well water sampling. However, water sampling from additional selected wells in the Mt. Eyre Manor neighborhood may be conducted.

6.0 SUB-SLAB SOIL GAS SAMPLING

6.1 Progress to Date

As of the date of this Report, sub-slab soil gas sampling has been conducted at six residences on Glenwood Drive, Walker Road, and Spencer Road, in accordance with the Sub-Slab Soil Gas Sampling and Analysis Plan prepared by Verdantas personnel, dated June 2, 2025. The initial sub-slab soil gas sampling event was conducted by GES personnel on June 12, 2025. The preliminary results of the initial sub-slab soil gas sampling event have not yet been received.

6.2 Strategy

Residences selected for sub-slab soil gas sampling included the six residences previously selected for indoor air sampling. These residences were previously selected based on the results of potable well water sampling conducted at the residence by GES personnel. Specifically, residences were selected if water sampling results at the residence indicated detections of one or more volatile target analytes at a concentration above the Residential SV_{GW} established by the PA DEP, or if LNAPL was present in the potable water well at the residence. A total of six residences were selected for sub-slab soil gas sampling.

The objective of the sub-slab soil gas sampling program is to collect soil gas samples from beneath the slab (basement or slab-on-grade) of selected residences to use:

1. As an additional line of evidence for the evaluation of sampling results from indoor air samples collected in accordance with the Indoor Air Sampling and Analysis Plan; and
2. To evaluate potential vapor intrusion into inhabited buildings from soil and/or groundwater contamination associated with the pipeline release, including associated LNAPL.

6.3 Methods

Approximately 24 hours prior to the sub-slab soil gas sampling event, stainless steel Vapor Pin sampling devices were installed at two locations in the lowest level of each residence. Sampling locations were determined based on the specific characteristics of the building and were at least five feet from perimeter foundation walls and away from footers, large floor cracks, and slab penetrations (e.g., sumps, floor drains).

The Vapor Pin sampling device was installed by using a rotary hammer drill to drill a hole of 5/8-inch diameter through the slab. A wet/dry vacuum was used to remove cuttings from the hole, and the Vapor Pin sampling device was assembled and placed into the hole with the conical end down. The installation/extraction tool was then used to tap the Vapor Pin sampling device into place using a dead blow hammer while protecting the barb fitting of the Vapor Pin sampling device from damage. The Vapor Pin cap was placed on the Vapor Pin sampling device, and the sub-slab soil gas conditions were allowed to equilibrate for approximately 24 hours prior to the sub-slab soil gas sampling event.

Prior to the sub-slab soil gas sampling event, it was requested that residents remove potential sources of VOCs (e.g., fuel containers, paints, cleaning products, personal care products, candles) from the sampling location (lowest occupied level of the structure) at least 24 hours prior to sampling. On the day of sample collection, a pre-sampling survey was conducted with one resident from each residence, which included a questionnaire for the resident about building-specific factors that could potentially influence the concentration of VOCs in indoor air and sub-slab soil gas. During the pre-sampling survey, a visual and air monitoring assessment of accessible portions of the lowest level of the residence were also conducted to identify any items within the residence that could be potential sources of VOCs.

Sub-slab soil gas samples were then collected by attaching a 2.7-liter passivated stainless steel canister with a 30-minute regulator to the Vapor Pin sampling device using polytetrafluoroethylene (PTFE) tubing. Prior to initiating the sampling, the sampling train was purged of at least one sampling train volume using a graduated syringe connected to the sampling train. A hydrostatic test was performed during the sampling event to test the seal between the concrete slab and the Vapor Pin sampling device for leaks. Sub-slab soil gas samples were collected for a duration of approximately 15-30 minutes. After the sampling period, sub-slab soil gas samples were sent under chain-of-custody to Pace Analytical in Mansfield, Massachusetts, a National Environmental Laboratory Accreditation Program (NELAP)-accredited laboratory, for analysis of target analytes via US EPA Method TO-15[7].

Target analytes were selected based on analytical requirements for soil and/or water testing related to refined petroleum products, including jet fuel, as outlined in the Short List of Petroleum Products in the Land Recycling Program Technical Guidance Manual established by the PA DEP. Specifically, all volatile parameters related to refined petroleum products, including jet fuel, were selected as target analytes for air sampling. Hexane and cyclohexane were additionally selected, as they were previously selected for indoor air sampling based on their listing on the SDS for one of the products (unleaded gasoline) that traveled through the impacted pipeline. Target analytes were the following VOCs: benzene, toluene, ethylbenzene, total xylenes (calculated by adding the concentrations of m&p-xylene and o-xylene), isopropylbenzene, methyl tert-butyl ether (MTBE; also known as methyl tertiary butyl ether),

[7] Benzene, naphthalene, 1,2-dichloroethane, and 1,2-dibromoethane were analyzed using US EPA Method TO-15 in Selective Ion Monitoring (SIM) mode to achieve lower detection limits, consistent with the indoor air sampling program.

naphthalene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 1,2-dichloroethane (EDC), 1,2-dibromoethane (EDB; also known as ethylene dibromide), hexane, and cyclohexane.

6.4 Results

The preliminary results of the initial sub-slab soil gas sampling event have not yet been received.

6.5 Additional Planned Activities

The preliminary sub-slab soil gas sampling results will undergo Stage IV data validation by Environmental Standards. If any issues with data quality are identified during data validation, Sunoco Pipeline personnel will notify the respective property owner and the PA DEP.

The PA DEP Land Recycling Program Technical Guidance Manual outlines that, for vapor intrusion assessment, a minimum of two sampling events should occur at least 45 days apart. In accordance with this guidance, a follow-up sub-slab soil gas sampling event is planned at the six residences sampled during the initial sub-slab soil gas sampling event. The second sampling event will be conducted in the same manner as the first sampling event and using the Vapor Pin sampling devices that were installed prior to the first sampling event. The second sub-slab soil gas sampling event is estimated to occur on or after July 27, 2025 (i.e., 45 days after the first sub-slab soil gas sampling event that occurred on June 12, 2025). The preliminary sub-slab soil gas sampling results collected during the second sampling event will also undergo Stage IV data validation by Environmental Standards.

In addition to the first phase of sub-slab soil gas sampling, which included six residences selected as outlined in Section 6.2, sub-slab soil gas sampling at additional selected residences in the Mt. Eyre Manor neighborhood may be conducted. If conducted, residences will be selected based on horizontal and vertical proximity distances of soil or groundwater with concentrations above the applicable Statewide health standard (SHS) screening values or identified LNAPL.

7.0 MITIGATION MEASURES

Vapor intrusion mitigation measures may be implemented and may include (but are not limited to) the inspection of pre-existing radon mitigation systems and the installation of sub-slab depressurization systems at select residences. If implemented, the installation of new vapor intrusion mitigation measures will be employed after adequate data is collected and validated to support decision making (e.g., after both the first and second indoor air sampling and sub-slab soil gas sampling events have been conducted and the data validated).

In the meantime, product recovery from groundwater is ongoing via recovery wells that were installed near the Site.

Attachment A

Site Location Map

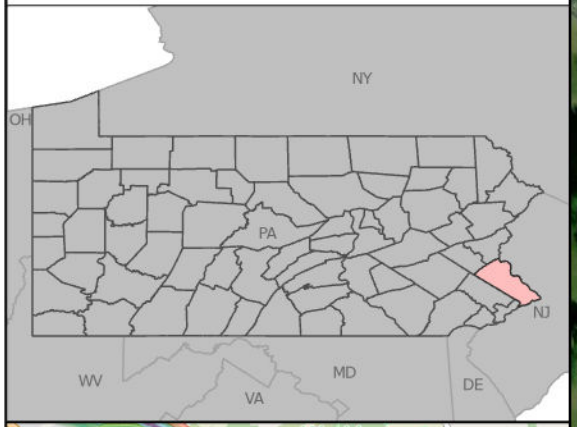
CTEH®

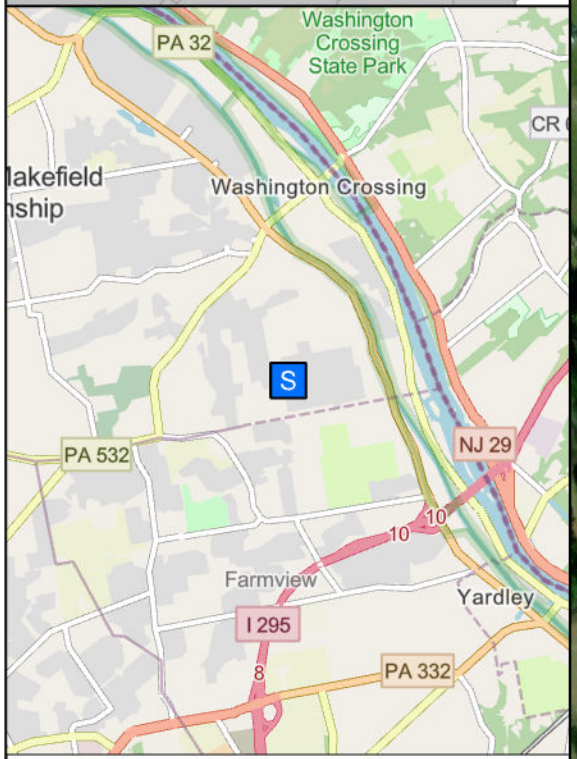
Upper Makefield Response

Incident Location

Washington Crossing, PA | Bucks County

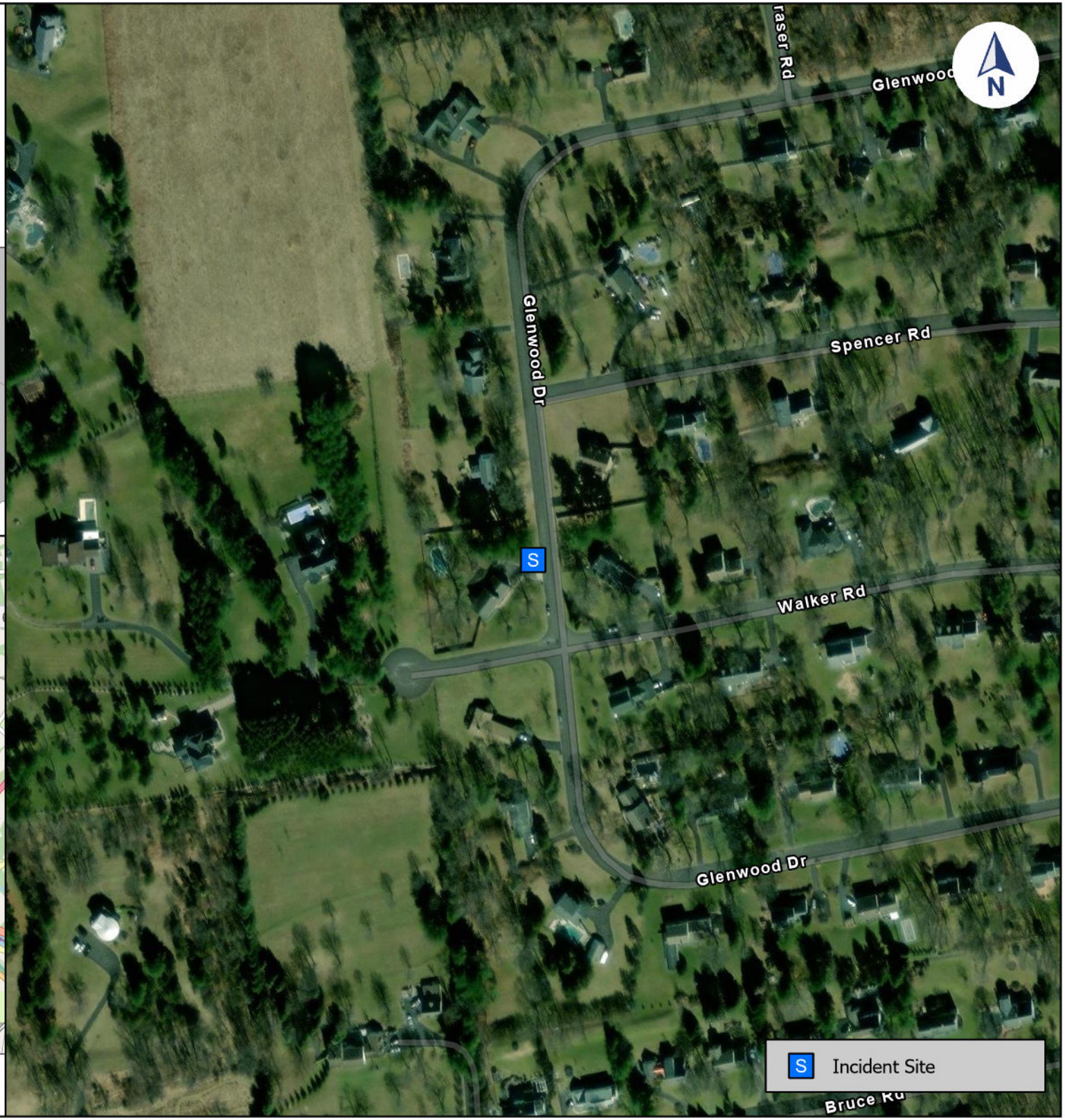
PROJ-051861





Updated At: 2/15/2025 4:18 PM

Projection: NAD 1983 2011 StatePlane Pennsylvania South FIPS 3702 Ft US



ATTACHMENT 2

PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc.
has assessed the Organization of:

Beacon Environmental Services, Inc.
526 Underwood Lane, Bel Air, MD 21014

(Hereinafter called the Organization) and hereby declares that Organization has met the requirements of
ISO/IEC 17025:2017 General Requirements for the competence of Testing and Calibration Laboratories and the United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP) requirements identified within the DoD/DOE Quality Systems Manual (DoD/DOE QSM) Version 6.0 December 2023 and is accredited in accordance with the:

United States Department of Defense
Environmental Laboratory Accreditation Program
(DoD-ELAP)

This accreditation demonstrates the technical competence for the defined scope and the operation of a laboratory quality management system
(as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

Environmental Testing
(As detailed in the supplement)

Accreditation claims for such activities shall only be made from the addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation Body's duty to observe and comply with the said rules.

Initial Accreditation Date:	*Issue Date:*	*Expiration Date*
September 07, 2012	November 02, 2024	December 31, 2026

For PJLA

Tracy Szerszen
President

Accreditation No:	*Certificate No:*
72690	L24-851

Perry Johnson Laboratory Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: **www.pjlabs.com**

Certificate of Accreditation: Supplement

Beacon Environmental Services, Inc.
526 Underwood Lane, Bel Air, MD 21014
Contact Name: Pete Kelly Phone: 410-838-8780

Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA 325B by Gas Chromatography Mass Spectrometry (GC/MS)	10277437
Air	
1,3-Butadiene	9318
Benzene	4375
Carbon Tetrachloride	4455
Chloroprene (2-Chloro-1,3-Butadiene)	4525
Ethylbenzene	4765
m,p-Xylene	5240
o-Xylene (1,2-Xylene)	5250
Toluene	5140
EPA 8260C by Gas Chromatography Mass Spectrometry (GC/MS)	10307003
Air	
1,1,1,2-Tetrachloroethane	5105
1,1,1-Trichloroethane	5160
1,1,2,2-Tetrachloroethane	5110
1,1,2-Trichloro-1,2,2-Trifluoroethane (Trichlorotrifluoroethane, Freon 113)	5185
1,1,2-Trichloroethane	5165
1,1-Dichloroethane	4630
1,1-Dichloroethylene	4640
1,1-Dichloropropene	4670
1,2,3-Trichlorobenzene	5150
1,2,3-Trichloropropane (TCP)	5180
1,2,4-Trichlorobenzene	5155
1,2,4-Trimethylbenzene	5210
1,2-Dibromo-3-Chloropropane (DBCP)	4570
1,2-Dibromoethane (EDB, Ethylene Dibromide)	4585
1,2-Dichloro-1,1,2,2-Tetrafluoroethane (Freon 114, 1,2-Dichlorotetrafluoroethane)	4695
1,2-Dichlorobenzene	4610
1,2-Dichloroethane (Ethylene Dichloride, EDC)	4635
1,2-Dichloropropane	4655
1,3,5-Trimethylbenzene	5215
1,3-Butadiene	9318
1,3-Dichlorobenzene (1,3-DCB)	4615
1,3-Dichloropropane	4660
1,4-Dichlorobenzene	4620
1,4-Dioxane (1,4-Diethyleneoxide, p-Dioxane)	4735
1-Methylnaphthalene	6380
2,2-Dichloropropane	4665

Certificate of Accreditation: Supplement

Beacon Environmental Services, Inc.
526 Underwood Lane, Bel Air, MD 21014
Contact Name: Pete Kelly Phone: 410-838-8780

Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA 8260C by Gas Chromatography Mass Spectrometry (GC/MS)	10307003
Air	
2-Butanone (Methyl Ethyl Ketone, MEK)	4410
2-Chlorotoluene	4535
2-Methylnaphthalene	6385
4-Chlorotoluene (p-Chlorotoluene)	4540
4-Ethyltoluene (p-Ethyltoluene, 1-Ethyl-4-Methylbenzene)	4542
4-Isopropyltoluene (p-Isopropyltoluene, p-Cymene)	4910
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone (MIBK), Hexone)	4995
Acenaphthene	5500
Acenaphthylene	5505
Acetone	4315
Anthracene	5555
Benzene	4375
Benzo(a)Anthracene	5575
Benzyl Chloride	5635
Biphenyl	6703
Bromobenzene	4385
Bromochloromethane	4390
Bromodichloromethane	4395
Bromoform	4400
Carbazole	5680
Carbon Disulfide	4450
Carbon Tetrachloride	4455
Chlorobenzene	4475
Chlorodibromomethane (Dibromochloromethane)	4575
Chloroethane (Ethyl chloride)	4485
Chloroform	4505
Chloroprene (2-Chloro-1,3-Butadiene)	4525
cis-1,2-Dichloroethylene	4645
cis-1,3-Dichloropropene	4680
Cyclohexane	4555
Dibenzofuran	5905
Dibromomethane (Methylene Bromide)	4595
Dichlorodifluoromethane (Freon 12)	4625
Ethanol	4750
Ethyl Acetate	4755
Ethylbenzene	4765

Certificate of Accreditation: Supplement

Beacon Environmental Services, Inc.
526 Underwood Lane, Bel Air, MD 21014
Contact Name: Pete Kelly Phone: 410-838-8780

Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA 8260C by Gas Chromatography Mass Spectrometry (GC/MS)	10307003
Air	
Fluorene	6270
Hexachlorobutadiene	4835
Hexachloroethane	4840
Isopropyl Alcohol (IPA, 2-Propanol, Isopropanol)	4895
Isopropylbenzene (Cumene)	4900
m,p-Xylene	5240
Methyl Bromide (Bromomethane)	4950
Methyl Chloride (Chloromethane)	4960
Methyl tert Butyl Ether (MTBE)	5000
Methylene Chloride (Dichloromethane)	4975
Naphthalene	5005
n-Butylbenzene	4435
n-Heptane (1-Heptane, Heptane)	4825
n-Hexane	4855
n-Propylbenzene (1-phenylpropane)	5090
o-Xylene (1,2-Xylene)	5250
PCB-1 (2-Chlorobiphenyl, 2-Monochlorobiphenyl)	8915
Phenanthrene	6615
Propylene (as Propene)	4836
Pyrene	6665
sec-Butylbenzene	4440
Styrene	5100
tert-Butylbenzene	4445
Tetrachloroethene (Perchloroethene, PCE)	5115
Tetrahydrofuran (THF)	5120
Toluene	5140
trans-1,2-Dichloroethylene	4700
trans-1,3-Dichloropropylene	4685
Trichloroethene (TCE, Trichloroethylene)	5170
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	5175
Vinyl Chloride (Chloroethene)	5235
Xylenes (Total)	5260
EPA 8260D by Gas Chromatography Mass Spectrometry (GC/MS)	10307127
Air	
1,1,1,2-Tetrachloroethane	5105
1,1,1-Trichloroethane	5160

Certificate of Accreditation: Supplement

Beacon Environmental Services, Inc.
526 Underwood Lane, Bel Air, MD 21014
Contact Name: Pete Kelly Phone: 410-838-8780

Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA 8260D by Gas Chromatography Mass Spectrometry (GC/MS)	10307127
Air	
1,1,2,2-Tetrachloroethane	5110
1,1,2-Trichloro-1,2,2-Trifluoroethane (Trichlorotrifluoroethane, Freon 113)	5185
1,1,2-Trichloroethane	5165
1,1-Dichloroethane	4630
1,1-Dichloroethylene	4640
1,1-Dichloropropene	4670
1,2,3-Trichlorobenzene	5150
1,2,3-Trichloropropane (TCP)	5180
1,2,4-Trichlorobenzene	5155
1,2,4-Trimethylbenzene	5210
1,2-Dibromo-3-Chloropropane (DBCP)	4570
1,2-Dibromoethane (EDB, Ethylene Dibromide)	4585
1,2-Dichloro-1,1,2,2-Tetrafluoroethane (Freon 114, 1,2-Dichlorotetrafluoroethane)	4695
1,2-Dichlorobenzene	4610
1,2-Dichloroethane (Ethylene Dichloride, EDC)	4635
1,2-Dichloropropane	4655
1,3,5-Trimethylbenzene	5215
1,3-Butadiene	9318
1,3-Dichlorobenzene (1,3-DCB)	4615
1,3-Dichloropropane	4660
1,4-Dichlorobenzene	4620
1,4-Dioxane (1,4-Diethyleneoxide, p-Dioxane)	4735
1-Methylnaphthalene	6380
2,2-Dichloropropane	4665
2-Butanone (Methyl Ethyl Ketone, MEK)	4410
2-Chlorotoluene	4535
2-Methylnaphthalene	6385
4-Chlorotoluene (p-Chlorotoluene)	4540
4-Ethyltoluene (p-Ethyltoluene, 1-Ethyl-4-Methylbenzene)	4542
4-Isopropyltoluene (p-Isopropyltoluene, p-Cymene)	4910
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone (MIBK), Hexone)	4995
Acenaphthene	5500
Acenaphthylene	5505
Acetone	4315
Anthracene	5555
Benzene	4375

Certificate of Accreditation: Supplement

Beacon Environmental Services, Inc.
526 Underwood Lane, Bel Air, MD 21014
Contact Name: Pete Kelly Phone: 410-838-8780

Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA 8260D by Gas Chromatography Mass Spectrometry (GC/MS)	10307127
Air	
Benzo(a)Anthracene	5575
Benzyl Chloride	5635
Biphenyl	6703
Bromobenzene	4385
Bromochloromethane	4390
Bromodichloromethane	4395
Bromoform	4400
Carbazole	5680
Carbon Disulfide	4450
Carbon Tetrachloride	4455
Chlorobenzene	4475
Chlorodibromomethane (Dibromochloromethane)	4575
Chloroethane (Ethyl chloride)	4485
Chloroform	4505
Chloroprene (2-Chloro-1,3-Butadiene)	4525
cis-1,2-Dichloroethylene	4645
cis-1,3-Dichloropropene	4680
Cyclohexane	4555
Dibenzofuran	5905
Dibromomethane (Methylene Bromide)	4595
Dichlorodifluoromethane (Freon 12)	4625
Ethanol	4750
Ethyl Acetate	4755
Ethylbenzene	4765
Fluorene	6270
Hexachlorobutadiene	4835
Hexachloroethane	4840
Isopropyl Alcohol (IPA, 2-Propanol, Isopropanol)	4895
Isopropylbenzene (Cumene)	4900
m,p-Xylene	5240
Methyl Bromide (Bromomethane)	4950
Methyl Chloride (Chloromethane)	4960
Methyl tert Butyl Ether (MTBE)	5000
Methylene Chloride (Dichloromethane)	4975
Naphthalene	5005
n-Butylbenzene	4435

Certificate of Accreditation: Supplement

Beacon Environmental Services, Inc.
526 Underwood Lane, Bel Air, MD 21014
Contact Name: Pete Kelly Phone: 410-838-8780

Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA 8260D by Gas Chromatography Mass Spectrometry (GC/MS)	10307127
Air	
n-Heptane (1-Heptane, Heptane)	4825
n-Hexane	4855
n-Propylbenzene (1-phenylpropane)	5090
o-Xylene (1,2-Xylene)	5250
PCB-1 (2-Chlorobiphenyl, 2-Monochlorobiphenyl)	8915
Phenanthrene	6615
Propylene (as Propene)	4836
Pyrene	6665
sec-Butylbenzene	4440
Styrene	5100
tert-Butylbenzene	4445
Tetrachloroethene (Perchloroethene, PCE)	5115
Tetrahydrofuran (THF)	5120
Toluene	5140
trans-1,2-Dichloroethylene	4700
trans-1,3-Dichloropropylene	4685
Trichloroethene (TCE, Trichloroethylene)	5170
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	5175
Vinyl Chloride (Chloroethene)	5235
Xylenes (Total)	5260
EPA TO-15 by Gas Chromatography Mass Spectrometry (GC/MS)	10248803
Air	
1,1,1,2-Tetrachloroethane	5105
1,1,1-Trichloroethane	5160
1,1,2,2-Tetrachloroethane	5110
1,1,2-Trichloro-1,2,2-Trifluoroethane (Trichlorotrifluoroethane, Freon 113)	5185
1,1,2-Trichloroethane	5165
1,1-Dichloroethane	4630
1,1-Dichloroethylene	4640
1,1-Dichloropropene	4670
1,2,3-Trichlorobenzene	5150
1,2,3-Trichloropropane (TCP)	5180
1,2,4-Trichlorobenzene	5155
1,2,4-Trimethylbenzene	5210
1,2-Dibromo-3-Chloropropane (DBCP)	4570
1,2-Dibromoethane (EDB, Ethylene Dibromide)	4585

Certificate of Accreditation: Supplement

Beacon Environmental Services, Inc.
526 Underwood Lane, Bel Air, MD 21014
Contact Name: Pete Kelly Phone: 410-838-8780

Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA TO-15 by Gas Chromatography Mass Spectrometry (GC/MS)	10248803
Air	
1,2-Dichloro-1,1,2,2-Tetrafluoroethane (Freon 114, 1,2-Dichlorotetrafluoroethane)	4695
1,2-Dichlorobenzene	4610
1,2-Dichloroethane (Ethylene Dichloride, EDC)	4635
1,2-Dichloropropane	4655
1,3,5-Trimethylbenzene	5215
1,3-Dichlorobenzene (1,3-DCB)	4615
1,3-Dichloropropane	4660
1,4-Dichlorobenzene	4620
1,4-Dioxane (1,4-Diethyleneoxide, p-Dioxane)	4735
1-Methylnaphthalene	6380
2,2-Dichloropropane	4665
2-Butanone (Methyl Ethyl Ketone, MEK)	4410
2-Chlorotoluene	4535
2-Methylnaphthalene	6385
4-Chlorotoluene (p-Chlorotoluene)	4540
4-Ethyltoluene (p-Ethyltoluene, 1-Ethyl-4-Methylbenzene)	4542
4-Isopropyltoluene (p-Isopropyltoluene, p-Cymene)	4910
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone (MIBK), Hexone)	4995
Acetone	4315
Benzene	4375
Benzyl Chloride	5635
Bromobenzene	4385
Bromochloromethane	4390
Bromodichloromethane	4395
Bromoform	4400
Carbon Disulfide	4450
Carbon Tetrachloride	4455
Chlorobenzene	4475
Chlorodibromomethane (Dibromochloromethane)	4575
Chloroform	4505
cis-1,2-Dichloroethylene	4645
cis-1,3-Dichloropropene	4680
Cyclohexane	4555
Dibromomethane (Methylene Bromide)	4595
Dichlorodifluoromethane (Freon 12)	4625
Ethanol	4750

Certificate of Accreditation: Supplement

Beacon Environmental Services, Inc.
526 Underwood Lane, Bel Air, MD 21014
Contact Name: Pete Kelly Phone: 410-838-8780

Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA TO-15 by Gas Chromatography Mass Spectrometry (GC/MS)	10248803
Air	
Ethyl Acetate	4755
Ethylbenzene	4765
Hexachlorobutadiene	4835
Hexachloroethane	4840
Isopropyl Alcohol (IPA, 2-Propanol, Isopropanol)	4895
Isopropylbenzene (Cumene)	4900
m,p-Xylene	5240
Methyl Bromide (Bromomethane)	4950
Methyl Chloride (Chloromethane)	4960
Methyl tert Butyl Ether (MTBE)	5000
Methylene Chloride (Dichloromethane)	4975
Naphthalene	5005
n-Butylbenzene	4435
n-Heptane (1-Heptane, Heptane)	4825
n-Hexane	4855
n-Propylbenzene (1-phenylpropane)	5090
o-Xylene (1,2-Xylene)	5250
Propylene (as Propene)	4836
sec-Butylbenzene	4440
Styrene	5100
tert-Butylbenzene	4445
Tetrachloroethene (Perchloroethene, PCE)	5115
Tetrahydrofuran (THF)	5120
Toluene	5140
trans-1,2-Dichloroethylene	4700
trans-1,3-Dichloropropylene	4685
Trichloroethene (TCE, Trichloroethylene)	5170
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	5175
Vinyl Chloride (Chloroethene)	5235
Xylenes (Total)	5260
EPA TO-17 by Gas Chromatography Mass Spectrometry (GC/MS)	10312206
Air	
1,1,1,2-Tetrachloroethane	5105
1,1,1-Trichloroethane	5160
1,1,2,2-Tetrachloroethane	5110
1,1,2-Trichloro-1,2,2-Trifluoroethane (Trichlorotrifluoroethane, Freon 113)	5185

Certificate of Accreditation: Supplement

Beacon Environmental Services, Inc.
526 Underwood Lane, Bel Air, MD 21014
Contact Name: Pete Kelly Phone: 410-838-8780

Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA TO-17 by Gas Chromatography Mass Spectrometry (GC/MS)	10312206
Air	
1,1,2-Trichloroethane	5165
1,1-Dichloroethane	4630
1,1-Dichloroethylene	4640
1,1-Dichloropropene	4670
1,2,3-Trichlorobenzene	5150
1,2,3-Trichloropropane (TCP)	5180
1,2,4-Trichlorobenzene	5155
1,2,4-Trimethylbenzene	5210
1,2-Dibromo-3-Chloropropane (DBCP)	4570
1,2-Dibromoethane (EDB, Ethylene Dibromide)	4585
1,2-Dichloro-1,1,2,2-Tetrafluoroethane (Freon 114, 1,2-Dichlorotetrafluoroethane)	4695
1,2-Dichlorobenzene	4610
1,2-Dichloroethane (Ethylene Dichloride, EDC)	4635
1,2-Dichloropropane	4655
1,3,5-Trimethylbenzene	5215
1,3-Butadiene	9318
1,3-Dichlorobenzene (1,3-DCB)	4615
1,3-Dichloropropane	4660
1,4-Dichlorobenzene	4620
1,4-Dioxane (1,4-Diethyleneoxide, p-Dioxane)	4735
1-Methylnaphthalene	6380
2,2-Dichloropropane	4665
2-Butanone (Methyl Ethyl Ketone, MEK)	4410
2-Chlorotoluene	4535
2-Methylnaphthalene	6385
4-Chlorotoluene (p-Chlorotoluene)	4540
4-Ethyltoluene (p-Ethyltoluene, 1-Ethyl-4-Methylbenzene)	4542
4-Isopropyltoluene (p-Isopropyltoluene, p-Cymene)	4910
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone (MIBK), Hexone)	4995
Acenaphthene	5500
Acenaphthylene	5505
Acetone	4315
Anthracene	5555
Benzene	4375
Benzo(a)Anthracene	5575
Benzyl Chloride	5635

Certificate of Accreditation: Supplement

Beacon Environmental Services, Inc.
526 Underwood Lane, Bel Air, MD 21014
Contact Name: Pete Kelly Phone: 410-838-8780

Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA TO-17 by Gas Chromatography Mass Spectrometry (GC/MS)	10312206
Air	
Biphenyl	6703
Bromobenzene	4385
Bromochloromethane	4390
Bromodichloromethane	4395
Bromoform	4400
Carbazole	5680
Carbon Disulfide	4450
Carbon Tetrachloride	4455
Chlorobenzene	4475
Chlorodibromomethane (Dibromochloromethane)	4575
Chloroethane (Ethyl chloride)	4485
Chloroform	4505
Chloroprene (2-Chloro-1,3-Butadiene)	4525
cis-1,2-Dichloroethylene	4645
cis-1,3-Dichloropropene	4680
Cyclohexane	4555
Dibenzofuran	5905
Dibromomethane (Methylene Bromide)	4595
Dichlorodifluoromethane (Freon 12)	4625
Ethanol	4750
Ethyl Acetate	4755
Ethylbenzene	4765
Fluorene	6270
Hexachlorobutadiene	4835
Hexachloroethane	4840
Isopropyl Alcohol (IPA, 2-Propanol, Isopropanol)	4895
Isopropylbenzene (Cumene)	4900
m,p-Xylene	5240
Methyl Bromide (Bromomethane)	4950
Methyl Chloride (Chloromethane)	4960
Methyl tert Butyl Ether (MTBE)	5000
Methylene Chloride (Dichloromethane)	4975
Naphthalene	5005
n-Butylbenzene	4435
n-Heptane (1-Heptane, Heptane)	4825
n-Hexane	4855

Certificate of Accreditation: Supplement

Beacon Environmental Services, Inc.
526 Underwood Lane, Bel Air, MD 21014
Contact Name: Pete Kelly Phone: 410-838-8780

Accreditation is granted to the facility to perform the following testing:

	Code
Organic	
EPA TO-17 by Gas Chromatography Mass Spectrometry (GC/MS)	10312206
Air	
n-Propylbenzene (1-phenylpropane)	5090
o-Xylene (1,2-Xylene)	5250
PCB-1 (2-Chlorobiphenyl, 2-Monochlorobiphenyl)	8915
Phenanthrene	6615
Propylene (as Propene)	4836
Pyrene	6665
sec-Butylbenzene	4440
Styrene	5100
tert-Butylbenzene	4445
Tetrachloroethene (Perchloroethene, PCE)	5115
Tetrahydrofuran (THF)	5120
Toluene	5140
trans-1,2-Dichloroethylene	4700
trans-1,3-Dichloropropylene	4685
Trichloroethene (TCE, Trichloroethylene)	5170
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	5175
Vinyl Chloride (Chloroethene)	5235
Xylenes (Total)	5260

No Preparation methods on scope

Footnotes:

> Method codes are typically based on The NELAC Institute (TNI) Laboratory Accreditation Management System (LAMS) and are used to compare to the laboratory reported Performance Test (PT) results. Although the method code may not represent the specific method version, it is the method code used to represent the method/technology used to report PTs. (NC = No Code)

PERRY JOHNSON LABORATORY ACCREDITATION, INC.

Certificate of Accreditation

Perry Johnson Laboratory Accreditation, Inc. has assessed the Organization of:

Beacon Environmental Services, Inc.

526 Underwood Lane, Bel Air, MD 21014

(Hereinafter called the Organization) and hereby declares that Organization has met the requirements of ISO/IEC 17025:2017 "General requirements for the competence of testing and calibration laboratories" and the Field Sampling and Measurement Organization Sector Volume 1 "General Requirements for Field Sampling and Measurement Organizations" (FSMO-V1-2014) and is accredited in accordance with the:

TNI National Environmental Field Activities Program (NEFAP)

This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system
(as outlined by the joint ISO-ILAC-IAF Communiqué dated April 2017):

This accreditation demonstrates the technical competence for the defined scope:

Environmental Field Sampling (Air and Emissions)

(As detailed in the supplement)

Accreditation claims for such activities shall only be made from the addresses referenced within this certificate. This Accreditation is granted subject to the system rules governing the Accreditation referred to above, and the Organization hereby covenants with the Accreditation Body's duty to observe and comply with the said rules.

For PJLA:

draft
Tracy Szerszen
President

Perry Johnson Laboratory
Accreditation, Inc. (PJLA)
755 W. Big Beaver, Suite 1325
Troy, Michigan 48084

Initial Accreditation Date:	*Issue Date:*	*Expiration Date:*
September 07, 2012	November 01, 2024	December 31, 2026

Accreditation No.:	*Certificate No.:*
72690	L24-846

The validity of this certificate is maintained through ongoing assessments based on a continuous accreditation cycle. The validity of this certificate should be confirmed through the PJLA website: www.pjlabs.com

Certificate of Accreditation: Supplement

Beacon Environmental Services, Inc.

526 Underwood Lane, Bel Air, MD 21014
Contact Name: Mr. Pete Kelly Phone: 410-838-8780

Accreditation is granted to the facility to perform the following sampling/field measurement:

FIELD OF SAMPLING/TEST	ITEMS, MATERIALS, OR PRODUCTS SAMPLED/TESTED	COMPONENT, CHARACTERISTIC, PARAMETER SAMPLED/TESTED	SPECIFICATION OR STANDARD METHOD	TECHNOLOGY OR TECHNIQUE USED
Passive Soil Gas Sampling[O]	Air	Volatile Organic Compounds	Beacon SOP 10 – Collection and Return Shipment of Passive Soil Gas Samplers SOP 1 PSG Sampler Manufacturing SOP 4 PSG Sampler Shipment	Field Sampling for GC/MS Analysis
Passive Indoor/Ambient Air Sampling[O]			Beacon SOP 11 - Passive Diffusion Samplers with Sorbent Tubes SOP 6 Sorbent Tube Shipment SOP 16 Sorbent Tube Preparation	
Fugitive and Area Sources Sampler[O]			Method 325A- Deployment and VOC Sample Collection	
Soil Gas and Indoor/Ambient Air Sampling with Pumps or Syringes[O]		Volatile and Semi-Volatile Organics	Thermal Desorption GC/MSD, EPA Method TO-17	

1. The presence of a superscript O means that the laboratory performs testing of the indicated parameter onsite at customer locations.

State of Utah

Department of Health and Human Services

Environmental Laboratory Certification Program

Accreditation is hereby granted to

Beacon Environmental Services, Inc.

526 Underwood Lane
Bel Air, MD 21014

Has conformed with the
2016 TNI Standard
Scope of accreditation is limited to the
State of Utah accredited fields that accompany
this Certificate

EPA Number: MD01091
Expiration Date: 12/31/2025
Certificate Number: MD010912024-16

Kristin Brown
Program Manager

NELAP RECOGNIZED TNI ACCREDITATION BODY

Continued accredited status depends on successful ongoing participation in the program.

Utah Department of Health & Human Services

State of Utah
SPENCER J. COX
Governor
DEIDRE HENDERSON
Lieutenant Governor

Department of Health Human Services
TRACY S. GRUBER
Executive Director
NATE CHECKETTS
Deputy Director
DR. MICHELLE HOFMANN
Executive Medical Director
DAVID LITVAK
Deputy Director
NATE WINTERS
Deputy Director

EPA Number: *MD01091* **Attachment to Certificate Number: MD010912024-16**

Beacon Environmental Services, Inc.

Program/Matrix: *Air & Emissions (Air & Emissions)*

	Start Date	Expires	AB
Method EPA 325B	**Year: 2013**	**Method Code: 10277437**	
1,1,1-Trichloroethane	12/18/23	12/31/25	UT
1,1,2-Trichloroethane	12/18/23	12/31/25	UT
1,1-Dichloroethylene	12/18/23	12/31/25	UT
1,2-Dichloroethane (Ethylene dichloride)	12/18/23	12/31/25	UT
1,2-Dichloropropane	12/18/23	12/31/25	UT
1,3-Butadiene	01/01/23	12/31/25	UT
Benzene	01/01/23	12/31/25	UT
Carbon tetrachloride	12/18/23	12/31/25	UT
Chlorobenzene	12/18/23	12/31/25	UT
Chloroprene (2-Chloro-1,3-butadiene)	01/01/23	12/31/25	UT
Ethylbenzene	01/01/23	12/31/25	UT
m+p-xylene	01/01/23	12/31/25	UT
o-Xylene	01/01/23	12/31/25	UT
Styrene	12/18/23	12/31/25	UT
Tetrachloroethylene (Perchloroethylene)	12/18/23	12/31/25	UT
Toluene	01/01/23	12/31/25	UT
Trichloroethene (Trichloroethylene)	12/18/23	12/31/25	UT
Method EPA 8260C	**Year: 2006**	**Method Code: 10307003**	
1,1,1,2-Tetrachloroethane	01/01/23	12/31/25	UT
1,1,1-Trichloroethane	01/01/23	12/31/25	UT
1,1,2,2-Tetrachloroethane	01/01/23	12/31/25	UT
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	01/01/23	12/31/25	UT
1,1,2-Trichloroethane	01/01/23	12/31/25	UT
1,1-Dichloroethane	01/01/23	12/31/25	UT
1,1-Dichloroethylene	01/01/23	12/31/25	UT
1,1-Dichloropropene	01/01/23	12/31/25	UT
1,2,3-Trichlorobenzene	01/01/23	12/31/25	UT
1,2,3-Trichloropropane	01/01/23	12/31/25	UT
1,2,4-Trichlorobenzene	01/01/23	12/31/25	UT
1,2,4-Trimethylbenzene	01/01/23	12/31/25	UT
1,2-Dibromo-3-chloropropane (DBCP)	12/18/23	12/31/25	UT
1,2-Dibromoethane (EDB, Ethylene dibromide)	01/01/23	12/31/25	UT
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-114)	01/01/23	12/31/25	UT
1,2-Dichlorobenzene (o-Dichlorobenzene)	01/01/23	12/31/25	UT
1,2-Dichloroethane (Ethylene dichloride)	01/01/23	12/31/25	UT

Beacon Environmental Services, Inc.

	Start Date	Expires	AB
Program/Matrix: ***Air & Emissions (Air & Emissions)***			
1,2-Dichloropropane	01/01/23	12/31/25	UT
1,3,5-Trimethylbenzene	01/01/23	12/31/25	UT
1,3-Butadiene	01/01/23	12/31/25	UT
1,3-Dichlorobenzene	01/01/23	12/31/25	UT
1,3-Dichloropropane	01/01/23	12/31/25	UT
1,4-Dichlorobenzene	01/01/23	12/31/25	UT
1,4-Dioxane (1,4- Diethyleneoxide)	01/01/23	12/31/25	UT
1-Methylnaphthalene	01/01/23	12/31/25	UT
1-Propene (Propylene)	01/01/23	12/31/25	UT
2,2-Dichloropropane	01/01/23	12/31/25	UT
2-Butanone (Methyl ethyl ketone, MEK)	01/01/23	12/31/25	UT
2-Chlorobiphenyl (BZ-1)	01/01/23	12/31/25	UT
2-Chlorotoluene	01/01/23	12/31/25	UT
2-Methylnaphthalene	01/01/23	12/31/25	UT
4-Chlorotoluene	01/01/23	12/31/25	UT
4-Ethyltoluene	01/01/23	12/31/25	UT
4-Isopropyltoluene (p-Cymene,p-Isopropyltoluene)	01/01/23	12/31/25	UT
4-Methyl-2-pentanone (MIBK)	01/01/23	12/31/25	UT
Acenaphthene	01/01/23	12/31/25	UT
Acenaphthylene	01/01/23	12/31/25	UT
Acetone	01/01/23	12/31/25	UT
Anthracene	01/01/23	12/31/25	UT
Benzene	01/01/23	12/31/25	UT
Benzo(a)anthracene	01/01/23	12/31/25	UT
Benzyl chloride	01/01/23	12/31/25	UT
Biphenyl	01/01/23	12/31/25	UT
Bromobenzene	01/01/23	12/31/25	UT
Bromochloromethane	01/01/23	12/31/25	UT
Bromodichloromethane	01/01/23	12/31/25	UT
Bromoform	01/01/23	12/31/25	UT
Carbazole	01/01/23	12/31/25	UT
Carbon disulfide	01/01/23	12/31/25	UT
Carbon tetrachloride	01/01/23	12/31/25	UT
Chlorobenzene	01/01/23	12/31/25	UT
Chlorodibromomethane	01/01/23	12/31/25	UT
Chloroethane (Ethyl chloride)	01/01/23	12/31/25	UT
Chloroform	01/01/23	12/31/25	UT
Chloroprene (2-Chloro-1,3-butadiene)	01/01/23	12/31/25	UT
cis-1,2-Dichloroethylene	01/01/23	12/31/25	UT
cis-1,3-Dichloropropene	01/01/23	12/31/25	UT
Cyclohexane	01/01/23	12/31/25	UT
Dibenzofuran	01/01/23	12/31/25	UT
Dibromomethane (Methylene bromide)	01/01/23	12/31/25	UT
Dichlorodifluoromethane (Freon-12)	01/01/23	12/31/25	UT
Ethanol	01/01/23	12/31/25	UT
Ethyl acetate	01/01/23	12/31/25	UT
Ethylbenzene	01/01/23	12/31/25	UT
Fluorene	01/01/23	12/31/25	UT

Beacon Environmental Services, Inc.

	Start Date	Expires	AB
Program/Matrix: *Air & Emissions (Air & Emissions)*			
Hexachlorobutadiene	01/01/23	12/31/25	UT
Hexachloroethane	01/01/23	12/31/25	UT
Isopropyl alcohol (2-Propanol, Isopropanol)	01/01/23	12/31/25	UT
Isopropylbenzene	01/01/23	12/31/25	UT
m+p-xylene	01/01/23	12/31/25	UT
Methyl bromide (Bromomethane)	01/01/23	12/31/25	UT
Methyl chloride (Chloromethane)	01/01/23	12/31/25	UT
Methyl tert-butyl ether (MTBE)	01/01/23	12/31/25	UT
Methylene chloride (Dichloromethane)	01/01/23	12/31/25	UT
Naphthalene	01/01/23	12/31/25	UT
n-Butylbenzene	01/01/23	12/31/25	UT
n-Heptane	01/01/23	12/31/25	UT
n-Hexane	01/01/23	12/31/25	UT
n-Propylbenzene	01/01/23	12/31/25	UT
o-Xylene	01/01/23	12/31/25	UT
Phenanthrene	01/01/23	12/31/25	UT
Pyrene	01/01/23	12/31/25	UT
sec-Butylbenzene	01/01/23	12/31/25	UT
Styrene	01/01/23	12/31/25	UT
tert-Butylbenzene	01/01/23	12/31/25	UT
Tetrachloroethylene (Perchloroethylene)	01/01/23	12/31/25	UT
Tetrahydrofuran (THF)	01/01/23	12/31/25	UT
Toluene	01/01/23	12/31/25	UT
trans-1,2-Dichloroethylene	01/01/23	12/31/25	UT
trans-1,3-Dichloropropylene	01/01/23	12/31/25	UT
Trichloroethene (Trichloroethylene)	01/01/23	12/31/25	UT
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	01/01/23	12/31/25	UT
Vinyl chloride (chloroethene)	01/01/23	12/31/25	UT
Xylene (total)	12/18/23	12/31/25	UT
Method EPA 8260D	**Year: 2018**	**Method Code: 10307127**	
1,1,1-Trichloro-2,2,2-trifluoroethane (Freon 113a)	12/18/23	12/31/25	UT
1,1,1,2-Tetrachloroethane	12/18/23	12/31/25	UT
1,1,1-Trichloroethane	12/18/23	12/31/25	UT
1,1,2,2-Tetrachloroethane	12/18/23	12/31/25	UT
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	12/18/23	12/31/25	UT
1,1,2-Trichloroethane	12/18/23	12/31/25	UT
1,1-Dichloroethane	12/18/23	12/31/25	UT
1,1-Dichloroethylene	12/18/23	12/31/25	UT
1,1-Dichloropropene	12/18/23	12/31/25	UT
1,2,3-Trichlorobenzene	12/18/23	12/31/25	UT
1,2,3-Trichloropropane	12/18/23	12/31/25	UT
1,2,4-Trichlorobenzene	12/18/23	12/31/25	UT
1,2,4-Trimethylbenzene	12/18/23	12/31/25	UT
1,2-Dibromo-3-chloropropane (DBCP)	12/18/23	12/31/25	UT
1,2-Dibromoethane (EDB, Ethylene dibromide)	12/18/23	12/31/25	UT
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-114)	12/18/23	12/31/25	UT
1,2-Dichlorobenzene (o-Dichlorobenzene)	12/18/23	12/31/25	UT
1,2-Dichloroethane (Ethylene dichloride)	12/18/23	12/31/25	UT

Beacon Environmental Services, Inc.

	Start Date	Expires	AB
Program/Matrix: ***Air & Emissions (Air & Emissions)***			
1,2-Dichloropropane	12/18/23	12/31/25	UT
1,3,5-Trichlorobenzene	12/18/23	12/31/25	UT
1,3,5-Trimethylbenzene	12/18/23	12/31/25	UT
1,3-Butadiene	12/18/23	12/31/25	UT
1,3-Dichlorobenzene	12/18/23	12/31/25	UT
1,3-Dichloropropane	12/18/23	12/31/25	UT
1,4-Dichlorobenzene	12/18/23	12/31/25	UT
1,4-Dioxane (1,4- Diethyleneoxide)	12/18/23	12/31/25	UT
1-Methylnaphthalene	12/18/23	12/31/25	UT
1-Propene (Propylene)	12/18/23	12/31/25	UT
2,2-Dichloropropane	12/18/23	12/31/25	UT
2-Butanone (Methyl ethyl ketone, MEK)	12/18/23	12/31/25	UT
2-Chlorobiphenyl (BZ-1)	12/18/23	12/31/25	UT
2-Chlorotoluene	12/18/23	12/31/25	UT
2-Hexanone	12/18/23	12/31/25	UT
2-Methylnaphthalene	12/18/23	12/31/25	UT
4-Chlorotoluene	12/18/23	12/31/25	UT
4-Ethyltoluene	12/18/23	12/31/25	UT
4-Isopropyltoluene (p-Cymene,p-Isopropyltoluene)	12/18/23	12/31/25	UT
4-Methyl-2-pentanone (MIBK)	12/18/23	12/31/25	UT
Acenaphthene	12/18/23	12/31/25	UT
Acenaphthylene	12/18/23	12/31/25	UT
Acetone	12/18/23	12/31/25	UT
Acrolein (Propenal)	12/18/23	12/31/25	UT
Acrylonitrile	12/18/23	12/31/25	UT
Anthracene	12/18/23	12/31/25	UT
Benzene	12/18/23	12/31/25	UT
Benzo(a)anthracene	12/18/23	12/31/25	UT
Benzyl chloride	12/18/23	12/31/25	UT
Biphenyl	12/18/23	12/31/25	UT
Bromobenzene	12/18/23	12/31/25	UT
Bromochloromethane	12/18/23	12/31/25	UT
Bromodichloromethane	12/18/23	12/31/25	UT
Bromoethane (Ethyl Bromide)	12/18/23	12/31/25	UT
Bromoform	12/18/23	12/31/25	UT
Carbazole	12/18/23	12/31/25	UT
Carbon disulfide	12/18/23	12/31/25	UT
Carbon tetrachloride	12/18/23	12/31/25	UT
Chlorobenzene	12/18/23	12/31/25	UT
Chlorodibromomethane	12/18/23	12/31/25	UT
Chloroethane (Ethyl chloride)	12/18/23	12/31/25	UT
Chloroform	12/18/23	12/31/25	UT
Chloroprene (2-Chloro-1,3-butadiene)	12/18/23	12/31/25	UT
cis-1,2-Dichloroethylene	12/18/23	12/31/25	UT
cis-1,3-Dichloropropene	12/18/23	12/31/25	UT
Cyclohexane	12/18/23	12/31/25	UT
Dibenzofuran	12/18/23	12/31/25	UT
Dibromomethane (Methylene bromide)	12/18/23	12/31/25	UT

Beacon Environmental Services, Inc.

	Start Date	Expires	AB
Program/Matrix: *Air & Emissions (Air & Emissions)*			
Dichlorodifluoromethane (Freon-12)	12/18/23	12/31/25	UT
Ethanol	12/18/23	12/31/25	UT
Ethyl acetate	12/18/23	12/31/25	UT
Ethylbenzene	12/18/23	12/31/25	UT
Fluorene	12/18/23	12/31/25	UT
Hexachlorobutadiene	12/18/23	12/31/25	UT
Hexachloroethane	12/18/23	12/31/25	UT
Isopropyl alcohol (2-Propanol, Isopropanol)	12/18/23	12/31/25	UT
Isopropylbenzene	12/18/23	12/31/25	UT
m+p-xylene	12/18/23	12/31/25	UT
Methyl bromide (Bromomethane)	12/18/23	12/31/25	UT
Methyl chloride (Chloromethane)	12/18/23	12/31/25	UT
Methyl tert-butyl ether (MTBE)	12/18/23	12/31/25	UT
Methylene chloride (Dichloromethane)	12/18/23	12/31/25	UT
m-Xylene	12/18/23	12/31/25	UT
Naphthalene	12/18/23	12/31/25	UT
n-Butylbenzene	12/18/23	12/31/25	UT
n-Heptane	12/18/23	12/31/25	UT
n-Hexane	12/18/23	12/31/25	UT
n-Propylbenzene	12/18/23	12/31/25	UT
o-Xylene	12/18/23	12/31/25	UT
Phenanthrene	12/18/23	12/31/25	UT
p-Xylene	12/18/23	12/31/25	UT
Pyrene	12/18/23	12/31/25	UT
sec-Butylbenzene	12/18/23	12/31/25	UT
Styrene	12/18/23	12/31/25	UT
tert-Butylbenzene	12/18/23	12/31/25	UT
Tetrachloroethylene (Perchloroethylene)	12/18/23	12/31/25	UT
Tetrahydrofuran (THF)	12/18/23	12/31/25	UT
Toluene	12/18/23	12/31/25	UT
trans-1,2-Dichloroethylene	12/18/23	12/31/25	UT
trans-1,3-Dichloropropylene	12/18/23	12/31/25	UT
Trichloroethene (Trichloroethylene)	12/18/23	12/31/25	UT
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	12/18/23	12/31/25	UT
Vinyl acetate	12/18/23	12/31/25	UT
Vinyl chloride (chloroethene)	12/18/23	12/31/25	UT
Xylene (total)	12/18/23	12/31/25	UT
Method EPA TO-17	**Revision: 2**	**Method Code: 10312206**	
1,1,1,2-Tetrachloroethane	01/01/23	12/31/25	UT
1,1,1-Trichloroethane	01/01/23	12/31/25	UT
1,1,2,2-Tetrachloroethane	01/01/23	12/31/25	UT
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	01/01/23	12/31/25	UT
1,1,2-Trichloroethane	01/01/23	12/31/25	UT
1,1-Dichloroethane	01/01/23	12/31/25	UT
1,1-Dichloroethylene	01/01/23	12/31/25	UT
1,1-Dichloropropene	01/01/23	12/31/25	UT
1,2,3-Trichlorobenzene	01/01/23	12/31/25	UT
1,2,3-Trichloropropane	01/01/23	12/31/25	UT

Beacon Environmental Services, Inc.

	Start Date	Expires	AB
Program/Matrix: ***Air & Emissions (Air & Emissions)***			
1,2,4-Trichlorobenzene	01/01/23	12/31/25	UT
1,2,4-Trimethylbenzene	01/01/23	12/31/25	UT
1,2-Dibromo-3-chloropropane (DBCP)	12/18/23	12/31/25	UT
1,2-Dibromoethane (EDB, Ethylene dibromide)	01/01/23	12/31/25	UT
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon-114)	01/01/23	12/31/25	UT
1,2-Dichlorobenzene (o-Dichlorobenzene)	01/01/23	12/31/25	UT
1,2-Dichloroethane (Ethylene dichloride)	01/01/23	12/31/25	UT
1,2-Dichloropropane	01/01/23	12/31/25	UT
1,3,5-Trimethylbenzene	01/01/23	12/31/25	UT
1,3-Butadiene	01/01/23	12/31/25	UT
1,3-Dichlorobenzene	01/01/23	12/31/25	UT
1,3-Dichloropropane	01/01/23	12/31/25	UT
1,4-Dichlorobenzene	01/01/23	12/31/25	UT
1,4-Dioxane (1,4- Diethyleneoxide)	01/01/23	12/31/25	UT
1-Methylnaphthalene	01/01/23	12/31/25	UT
1-Propene (Propylene)	01/01/23	12/31/25	UT
2,2-Dichloropropane	01/01/23	12/31/25	UT
2-Butanone (Methyl ethyl ketone, MEK)	01/01/23	12/31/25	UT
2-Chlorobiphenyl (BZ-1)	01/01/23	12/31/25	UT
2-Chlorotoluene	01/01/23	12/31/25	UT
2-Methylnaphthalene	01/01/23	12/31/25	UT
4-Chlorotoluene	01/01/23	12/31/25	UT
4-Ethyltoluene	01/01/23	12/31/25	UT
4-Isopropyltoluene (p-Cymene,p-Isopropyltoluene)	01/01/23	12/31/25	UT
4-Methyl-2-pentanone (MIBK)	01/01/23	12/31/25	UT
Acenaphthene	01/01/23	12/31/25	UT
Acenaphthylene	01/01/23	12/31/25	UT
Acetone	01/01/23	12/31/25	UT
Anthracene	01/01/23	12/31/25	UT
Benzene	01/01/23	12/31/25	UT
Benzo(a)anthracene	01/01/23	12/31/25	UT
Benzyl chloride	01/01/23	12/31/25	UT
Biphenyl	01/01/23	12/31/25	UT
Bromobenzene	01/01/23	12/31/25	UT
Bromochloromethane	01/01/23	12/31/25	UT
Bromodichloromethane	01/01/23	12/31/25	UT
Bromoform	01/01/23	12/31/25	UT
Carbazole	01/01/23	12/31/25	UT
Carbon disulfide	01/01/23	12/31/25	UT
Carbon tetrachloride	01/01/23	12/31/25	UT
Chlorobenzene	01/01/23	12/31/25	UT
Chlorodibromomethane	01/01/23	12/31/25	UT
Chloroethane (Ethyl chloride)	01/01/23	12/31/25	UT
Chloroform	01/01/23	12/31/25	UT
Chloroprene (2-Chloro-1,3-butadiene)	01/01/23	12/31/25	UT
cis-1,2-Dichloroethylene	01/01/23	12/31/25	UT
cis-1,3-Dichloropropene	01/01/23	12/31/25	UT
Cyclohexane	01/01/23	12/31/25	UT

Beacon Environmental Services, Inc.

	Start Date	Expires	AB
Program/Matrix: ***Air & Emissions (Air & Emissions)***			
Dibenzofuran	01/01/23	12/31/25	UT
Dibromomethane (Methylene bromide)	01/01/23	12/31/25	UT
Dichlorodifluoromethane (Freon-12)	01/01/23	12/31/25	UT
Ethanol	01/01/23	12/31/25	UT
Ethyl acetate	01/01/23	12/31/25	UT
Ethylbenzene	01/01/23	12/31/25	UT
Fluorene	01/01/23	12/31/25	UT
Hexachlorobutadiene	01/01/23	12/31/25	UT
Hexachloroethane	01/01/23	12/31/25	UT
Isopropyl alcohol (2-Propanol, Isopropanol)	01/01/23	12/31/25	UT
Isopropylbenzene	01/01/23	12/31/25	UT
m+p-xylene	01/01/23	12/31/25	UT
Methyl bromide (Bromomethane)	01/01/23	12/31/25	UT
Methyl chloride (Chloromethane)	01/01/23	12/31/25	UT
Methyl tert-butyl ether (MTBE)	01/01/23	12/31/25	UT
Methylene chloride (Dichloromethane)	01/01/23	12/31/25	UT
Naphthalene	01/01/23	12/31/25	UT
n-Butylbenzene	01/01/23	12/31/25	UT
n-Heptane	01/01/23	12/31/25	UT
n-Hexane	01/01/23	12/31/25	UT
n-Propylbenzene	01/01/23	12/31/25	UT
o-Xylene	01/01/23	12/31/25	UT
Phenanthrene	01/01/23	12/31/25	UT
Pyrene	01/01/23	12/31/25	UT
sec-Butylbenzene	01/01/23	12/31/25	UT
Styrene	01/01/23	12/31/25	UT
tert-Butylbenzene	01/01/23	12/31/25	UT
Tetrachloroethylene (Perchloroethylene)	01/01/23	12/31/25	UT
Tetrahydrofuran (THF)	01/01/23	12/31/25	UT
Toluene	01/01/23	12/31/25	UT
trans-1,2-Dichloroethylene	01/01/23	12/31/25	UT
trans-1,3-Dichloropropylene	01/01/23	12/31/25	UT
Trichloroethene (Trichloroethylene)	01/01/23	12/31/25	UT
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	01/01/23	12/31/25	UT
Vinyl chloride (chloroethene)	01/01/23	12/31/25	UT
Xylene (total)	12/18/23	12/31/25	UT

The Utah Environmental Laboratory Certification Program (ELCP) encourages clients and data users to verify the most current certification letter for the authorized method.

The analytes by method which a laboratory is authorized to perform at any given time will be those indicated in the most recent certificate letter. The most recent certification letter supersedes all previous certification or authorization letters. It is the certified laboratory's responsibility to review this letter for discrepancies. The certified laboratory must document any discrepancies in this letter and send notice to this bureau within 15 days of receipt. This certificate letter will be recalled in the event your laboratory's certification is revoked.

The State of Washington Department of Ecology

Beacon Environmental

Bel Air, MD

has complied with provisions set forth in Chapter 173-50 WAC and is hereby recognized by the Department of Ecology as an ACCREDITED LABORATORY for the analytical parameters listed on the accompanying Scope of Accreditation.

This certificate is effective May 24, 2025 and shall expire May 23, 2026.

Witnessed under my hand on May 19, 2025.

Rebecca Wood
Lab Accreditation Unit Supervisor

Laboratory ID
C1085

WASHINGTON STATE DEPARTMENT OF ECOLOGY

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

SCOPE OF ACCREDITATION

Beacon Environmental

Bel Air, MD

is accredited for the analytes listed below using the methods indicated. Full accreditation is granted unless stated otherwise in a note. EPA is the U.S. Environmental Protection Agency. SM is "Standard Methods for the Examination of Water and Wastewater." SM refers to EPA approved method versions. ASTM is the American Society for Testing and Materials. USGS is the U.S. Geological Survey. AOAC is the Association of Official Analytical Chemists. Other references are described in notes.

Matrix/Analyte	Method	Notes
Air		
1,1,1,2-Tetrachloroethane	EPA TO-17 Rev. 2 (1999)	1
1,1,1-Trichloroethane	EPA TO-17 Rev. 2 (1999)	1
1,1,2,2-Tetrachloroethane	EPA TO-17 Rev. 2 (1999)	1
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	EPA TO-17 Rev. 2 (1999)	1
1,1,2-Trichloroethane	EPA TO-17 Rev. 2 (1999)	1
1,1'-Biphenyl (BZ-0)	EPA TO-17 Rev. 2 (1999)	1
1,1-Dichloroethane	EPA TO-17 Rev. 2 (1999)	1
1,1-Dichloroethylene	EPA TO-17 Rev. 2 (1999)	1
1,1-Dichloropropene	EPA TO-17 Rev. 2 (1999)	1
1,2,3-Trichlorobenzene	EPA TO-17 Rev. 2 (1999)	1
1,2,3-Trichloropropane	EPA TO-17 Rev. 2 (1999)	1
1,2,4-Trichlorobenzene	EPA TO-17 Rev. 2 (1999)	1
1,2,4-Trimethylbenzene	EPA TO-17 Rev. 2 (1999)	1
1,2-Dibromo-3-chloropropane (DBCP)	EPA TO-17 Rev. 2 (1999)	1
1,2-Dibromoethane (EDB, Ethylene dibromide)	EPA TO-17 Rev. 2 (1999)	1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	EPA TO-17 Rev. 2 (1999)	1
1,2-Dichlorobenzene	EPA TO-17 Rev. 2 (1999)	1
1,2-Dichloroethane	EPA TO-17 Rev. 2 (1999)	1
1,2-Dichloropropane	EPA TO-17 Rev. 2 (1999)	1
1,3,5-Trimethylbenzene	EPA TO-17 Rev. 2 (1999)	1
1,3-Butadiene	EPA TO-17 Rev. 2 (1999)	1
1,3-Dichlorobenzene	EPA TO-17 Rev. 2 (1999)	1
1,3-Dichloropropane	EPA TO-17 Rev. 2 (1999)	1
1,4-Dichlorobenzene	EPA TO-17 Rev. 2 (1999)	1
1,4-Dioxane (1,4- Diethyleneoxide)	EPA TO-17 Rev. 2 (1999)	1
1-Methylnaphthalene	EPA TO-17 Rev. 2 (1999)	1

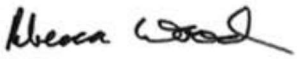
Matrix/Analyte	Method	Notes
Air		
2,2-Dichloropropane	EPA TO-17 Rev. 2 (1999)	1
2-Butanone (Methyl ethyl ketone, MEK)	EPA TO-17 Rev. 2 (1999)	1
2-Chlorobiphenyl	EPA TO-17 Rev. 2 (1999)	1
2-Chlorotoluene	EPA TO-17 Rev. 2 (1999)	1
2-Methylnaphthalene	EPA TO-17 Rev. 2 (1999)	1
4-Chlorotoluene	EPA TO-17 Rev. 2 (1999)	1
4-Ethyltoluene	EPA TO-17 Rev. 2 (1999)	1
4-Isopropyltoluene (p-Cymene)	EPA TO-17 Rev. 2 (1999)	1
4-Methyl-2-pentanone (MIBK)	EPA TO-17 Rev. 2 (1999)	1
Acenaphthene	EPA TO-17 Rev. 2 (1999)	1
Acenaphthylene	EPA TO-17 Rev. 2 (1999)	1
Acetone	EPA TO-17 Rev. 2 (1999)	1
Anthracene	EPA TO-17 Rev. 2 (1999)	1
Benzene	EPA TO-17 Rev. 2 (1999)	1
Benzo(a)anthracene	EPA TO-17 Rev. 2 (1999)	1
Benzyl chloride	EPA TO-17 Rev. 2 (1999)	1
Bromobenzene	EPA TO-17 Rev. 2 (1999)	1
Bromochloromethane	EPA TO-17 Rev. 2 (1999)	1
Bromodichloromethane	EPA TO-17 Rev. 2 (1999)	1
Bromoform	EPA TO-17 Rev. 2 (1999)	1
Carbazole	EPA TO-17 Rev. 2 (1999)	1
Carbon disulfide	EPA TO-17 Rev. 2 (1999)	1
Carbon tetrachloride	EPA TO-17 Rev. 2 (1999)	1
Chlorobenzene	EPA TO-17 Rev. 2 (1999)	1
Chlorodibromomethane	EPA TO-17 Rev. 2 (1999)	1
Chloroethane	EPA TO-17 Rev. 2 (1999)	1
Chloroform	EPA TO-17 Rev. 2 (1999)	1
cis & trans-1,2-Dichloroethene	EPA TO-17 Rev. 2 (1999)	1
cis-1,2-Dichloroethylene	EPA TO-17 Rev. 2 (1999)	1
cis-1,3-Dichloropropene	EPA TO-17 Rev. 2 (1999)	1
Cyclohexane	EPA TO-17 Rev. 2 (1999)	1
Dibenzofuran	EPA TO-17 Rev. 2 (1999)	1
Dibromomethane	EPA TO-17 Rev. 2 (1999)	1
Dichlorodifluoromethane	EPA TO-17 Rev. 2 (1999)	1
Ethanol	EPA TO-17 Rev. 2 (1999)	1
Ethyl acetate	EPA TO-17 Rev. 2 (1999)	1
Ethylbenzene	EPA TO-17 Rev. 2 (1999)	1

Matrix/Analyte	Method	Notes
Air		
Fluorene	EPA TO-17 Rev. 2 (1999)	1
Hexachlorobutadiene	EPA TO-17 Rev. 2 (1999)	1
Hexachloroethane	EPA TO-17 Rev. 2 (1999)	1
Isopropyl alcohol (2-Propanol)	EPA TO-17 Rev. 2 (1999)	1
Isopropylbenzene	EPA TO-17 Rev. 2 (1999)	1
m+p-xylene	EPA TO-17 Rev. 2 (1999)	1
Methyl bromide (Bromomethane)	EPA TO-17 Rev. 2 (1999)	1
Methyl chloride (Chloromethane)	EPA TO-17 Rev. 2 (1999)	1
Methyl tert-butyl ether (MTBE)	EPA TO-17 Rev. 2 (1999)	1
Methylene chloride	EPA TO-17 Rev. 2 (1999)	1
Naphthalene	EPA TO-17 Rev. 2 (1999)	1
n-Butylbenzene	EPA TO-17 Rev. 2 (1999)	1
n-Heptane	EPA TO-17 Rev. 2 (1999)	1
n-Hexane	EPA TO-17 Rev. 2 (1999)	1
n-Propylbenzene	EPA TO-17 Rev. 2 (1999)	1
o-Xylene	EPA TO-17 Rev. 2 (1999)	1
Phenanthrene	EPA TO-17 Rev. 2 (1999)	1
Pyrene	EPA TO-17 Rev. 2 (1999)	1
sec-Butylbenzene	EPA TO-17 Rev. 2 (1999)	1
Styrene	EPA TO-17 Rev. 2 (1999)	1
tert-Butylbenzene	EPA TO-17 Rev. 2 (1999)	1
Tetrachloroethylene (Perchloroethylene)	EPA TO-17 Rev. 2 (1999)	1
Tetrahydrofuran (THF)	EPA TO-17 Rev. 2 (1999)	1
Toluene	EPA TO-17 Rev. 2 (1999)	1
trans-1,2 Dichloroethylene	EPA TO-17 Rev. 2 (1999)	1
trans-1,3-Dichloropropylene	EPA TO-17 Rev. 2 (1999)	1
Trichloroethene (Trichloroethylene)	EPA TO-17 Rev. 2 (1999)	1
Trichlorofluoromethane	EPA TO-17 Rev. 2 (1999)	1
Vinyl chloride	EPA TO-17 Rev. 2 (1999)	1
Xylene (total)	EPA TO-17 Rev. 2 (1999)	1

Matrix/Analyte	Method	Notes

Accredited Parameter Note Detail

(1) Accreditation based in part on recognition of Utah NELAP accreditation. (2) Provisional accreditation pending submittal of acceptable Proficiency Testing (PT) results (WAC 173-50-110).



05/19/2025

Authentication Signature

Date

Rebecca Wood, Lab Accreditation Unit Supervisor

NEW YORK STATE DEPARTMENT OF HEALTH
WADSWORTH CENTER

Expires 12:01 AM April 01, 2026
Issued April 01, 2025

CERTIFICATE OF APPROVAL FOR LABORATORY SERVICE

Issued in accordance with and pursuant to section 502 Public Health Law of New York State

MR. STEVEN THORNLEY
BEACON ENVIRONMENTAL SERVICES
526 UNDERWOOD LANE
BEL AIR, MD 21014

NY Lab Id No: 12097

is hereby APPROVED as an Environmental Laboratory in conformance with the National Environmental Laboratory Accreditation Conference Standards (2016) for the category ENVIRONMENTAL ANALYSES AIR AND EMISSIONS
All approved analytes are listed below:

Polynuclear Aromatics	
Naphthalene	EPA TO-17
Purgeable Aromatics	
Benzene	EPA TO-17
Ethyl benzene	EPA TO-17
m/p-Xylenes	EPA TO-17
o-Xylene	EPA TO-17
Toluene	EPA TO-17
Purgeable Halocarbons	
1,1,1-Trichloroethane	EPA TO-17
1,1-Dichloroethane	EPA TO-17
1,1-Dichloroethene	EPA TO-17
1,2-Dichloroethane	EPA TO-17
Carbon tetrachloride	EPA TO-17
Chloroform	EPA TO-17
cis-1,2-Dichloroethene	EPA TO-17
Methylene chloride	EPA TO-17
Tetrachloroethene	EPA TO-17
trans-1,2-Dichloroethene	EPA TO-17
Trichloroethene	EPA TO-17
Vinyl chloride	EPA TO-17

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